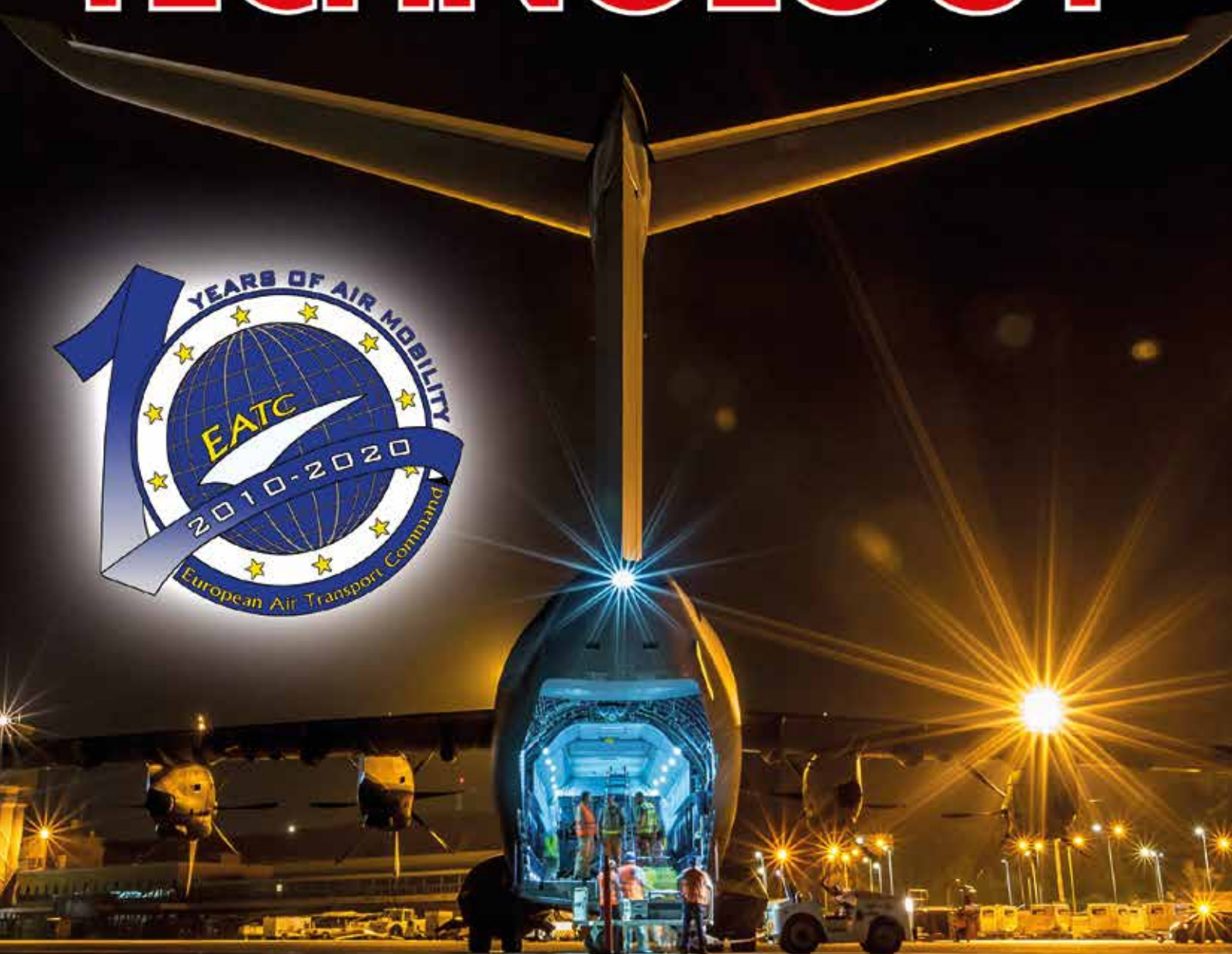


# MILITARY TECHNOLOGY



## EUROPEAN AIR TRANSPORT COMMAND

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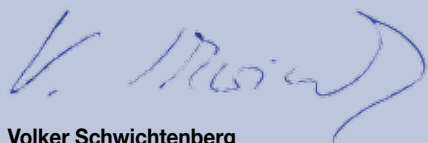
## Letter from the Publisher

Now, just a few weeks after the summer season started, and with data showing that the number of new coronavirus infections appears to be declining in many parts of the world, I am honoured to present to our worldwide readership our this year's MILITARY TECHNOLOGY Special "European Air Transport Command". The prefix 'EATC' stands for a unique command *par excellence*. What appeared in the media since about 2010 is that EATC evolved as a great success story. Last year, at the very beginning of the corona pandemic, EATC celebrated ten years of multinational air mobility, success and excellence.

During that period of exciting times, EATC proved as a crucial capability, with seven member states bundling their capacities – and joining a single command – to offer large and flexible operational options for air transport, medical evacuation and air-to-air refuelling.

In the course of the preparation of the Special Issue, key representatives at EATC HQ in Eindhoven provided most of the individual Chapters, with the information contained herein providing a deep insight into a challenging command and force.

I thank all those who were involved in this Special Issue for their kind assistance and support. A unique challenge, EATC herein provides its DNA with great detail and authenticity. I am convinced that the present Special Issue will offer our readership in NATO, EU and industry a well-profound database about a command that shows potential for extra opportunities in the years to come.

A handwritten signature in blue ink, reading 'V. Schwichtenberg'.

**Volker Schwichtenberg**  
Chief Executive Officer,  
Mönch Publishing Group





## Forewords



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Andreas Schick



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## On the cover:

The European Air Transport Command (EATC) celebrated its 10th anniversary in 2020. EATC is a single multinational command of seven member nations for air mobility, including air transport, air-to-air refuelling and aeromedical evacuation. The photo illustrates the preparation of an aeromedical evacuation mission in the wake of Hurricane “Irma” in 2017.  
(Photo: German Air Force)



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## Acronyms and Abbreviations

AAR	Air-to-Air Refuelling	ETAC	European Tactical Airlift Centre
ACATT	Advanced Combined Air Terminal Training	ETAP	European Tactical Airlift Programme
AE	Aeromedical Evacuation	EU	European Union
AECC	Aeromedical Evacuation Control Centre	EUMS	European Union Military Staff
AEW	Airborne Early Warning	ICAE	Intensive Care Aeromedical Evacuation
AMC	Air Mobility Command	ISAF	International Security Assistance Force
ARO	Air Refuelling Operator	JFAC	Joint Force Air Component
AT	Air Transport	MATraC	Multinational Air Transport Committee
ATARES	Air Transport, Air-to-Air Refuelling and Other Exchange of Services	MCCE	Movement Coordination Centre Europe
C2	Command and Control	MEAT	Management of European Air Transport
CAOC	Combined Air Operations Centre	MedEvac	Medical Evacuation
CATO	Combined Air Terminal Operation	NATO	North Atlantic Treaty Organization
CATT	Combined Air Terminal Training	NSPA	NATO Support and Procurement Agency
CIS	Communication and Information System	MMU	Multinational MRTT Unit
DARO	Disabled Aircraft Recovery Officer	MRTT	Multi-Role Tanker Transport
DART	Disabled Aircraft Recovery Training	NAARCC	National AAR Coordination Centre
EAC	European Airlift Centre	NMTCC	National Movement Transport Coordination Centre
EAG	European Air Group	OCCAR-EA	Organisation Conjointe de Coopération en Matière d'Armement – Executive Administration
EATC	European Air Transport Command	ORM	Operational Risk Management
EATF	European Air Transport Fleet	PESCO	Permanent Structured Cooperation
EART	European Air-to-Air Refuelling Training	RPAS	Remotely Piloted Aircraft System
EDA	European Defence Agency	SACEUR	Supreme Allied Commander Europe
EFH	Equivalent Flying Hour	SNR	Senior National Representative
EGOM	EATC Ground Operations Manual	TOA	Transfer of Authority
EMAR	European Military Airworthiness Requirements	VIP	Very Important Person



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**Major General  
Andreas Schick,**

## **Commander European Air Transport Command**

Today, EATC is the major command for air mobility in Europe. Seven nations operate their military air mobility assets under one command with one common set of rules and regulations. The foundation idea emerged in 1999 at the Washington NATO Summit and the EU Helsinki Summit. Both summits recognized that military air transport shortfalls need to be addressed and interoperability to be enhanced if operational challenges are to be met. France and Germany took up the initiative and laid the foundations for a common command. Soon, Belgium and the Netherlands joined this forward-looking project and EATC saw the light of day on 1 September 2010 at Eindhoven Air Base. Luxembourg joined in 2012. Two years later, in 2014, it was the turn of Spain and Italy to accede the club.

### **EATC's Main Objectives Are ...**

... laid down in our mission statement: EATC enhances the combined operational capabilities of the member nations, conducts air mobility missions, always keeping in mind to improve the effectiveness and efficiency, and increases interoperability. To ensure efficient operational control, EATC integrates all transferred national responsibilities and resources.

The member nations have transferred the authority of their air mobility assets to EATC. Across the seven nations, EATC has in its portfolio approximately 170 aircraft for air transport, air-to-air refuelling and aeromedical evacuation. These assets are stationed on 15 national air bases across the seven nations.

The integrated staff of currently 200+ persons handles the full process from planning and tasking to controlling of the fleet both in peacetime and in times of crisis. At any moment, EATC chooses the asset, which best fits to the requirements of the mission at hand. The diversity of the portfolio with more than 20 types of aircraft gives EATC a unique flexibility and effectiveness.

### **The Key to EATC's Success ...**

... is first of all political willingness, which was confirmed by the seven nations joining EATC. Yet to be successful, political willingness needs to be coupled to another required resource: mutual trust and confidence at all levels. Nations are only willing to pool and share assets and other resources if this condition is fulfilled.

Trust and confidence are not a given fact. It is a sustained, long-term effort.

The fact that our member nations integrated EATC into their Air Mobility Command and control structure clearly underlines the expectations they have placed in this concept and the organisation, up to the point that some nations completely disbanded their national Air Mobility Command, solely relying on the expertise and capacity of the EATC. Thus, and as a natural consequence, I as the commander of EATC have to report annually to the Air Chiefs in the so-called MATraC. This is our high-level steering body where we receive directions and guidance on the topics and challenges to tackle.

However, the national trust and confidence towards EATC relies also on the assurance that EATC honours at all moment the specific requirements from the member nations and ultimately their national sovereignty. The business model is a well-thought-out concept that assures the transfer of authority of the member nations' air transport assets. The fact that the transfer of assets can be unilaterally revoked at any given time and without explanation, safeguards possible national caveats. From the beginning, this built-in provision resulted in the vast majority of aircraft being transferred to the EATC. And in consequence, EATC delivers high-quality service, taking into account at all moment the needs of each member nation.

The credible relationship between the air forces is an important source of resilience among the nations. They share aircraft within EATC



framework offering each partner privileged access to their national assets. To be clear: we are not talking exclusively about basic access to partner nations' assets. The cooperative efforts among EATC nations involves more than that: if one nation is in need of air mobility assets, the partners support even if this leads to cancelling their own national missions. This may happen, for example, for operational urgencies or humanitarian assistance.

Another important basis for this fruitful cooperation is shared values and concepts. EATC excelled since 2010 in fostering standardisation of doctrines and procedures. Interoperability is the indispensable prerequisite to smoothly run our daily multinational operations and is considered the main objective during our multinational air mobility training and exercises activities. Enhancing interoperability also as early as during the ramp-up of fleets, evidently leads to increased mutual support, common operations and cross-national activities.

Over time, while constantly proofing the outstanding idea and the set-up of the concept, EATC developed into a recognised centre of expertise for air mobility in Europe. EATC has always been a 'blueprint' for European military cooperation. Today, it is the evidence of cooperative and coordinated efforts by seven nations translated into a successful pooling and sharing model.

### Reaching Out to Partners...

...to strengthen European and transatlantic security and defence. EATC and the seven members have a role to play. The basis has always been to draw on strong cooperation with other stakeholders in the air mobility domain. Over the years, EATC has confirmed its willingness to multiply cooperative efforts and set up partnerships to support multinational military operations. Each partner organisation has its own objectives. This does not hamper cooperation; on the contrary, the duality shows how we enhance one another.

Next to various cooperation agreements, we have established with EU and NATO military bodies, a distinguished example with civilian partners is the trilateral cooperation with EDA and OCCAR-EA. The three partners decided in 2018 to jointly optimise and develop the A400M capability, enhancing synergies and avoiding duplication of efforts.

Just across EATC's headquarters at Eindhoven Air Base is the Movement Coordination Centre Europe (MCCE). While EATC is a command whose core activities are air mobility missions and the strive for interoperability, the MCCE is a coordinating and brokering body encompassing the full spectrum of air, land and sea transportation. The permanent symbiotic relationship between the two entities lies among others in the ability to extend each other's actions in the effective use of the ATARES mechanism. MCCE is the pivot point of the ATARES exchanges. EATC on the other hand is an incubator of ATARES exchanges – a catalyst to boost the exchange among the nations.

**Major General Andreas Schick** was assigned to the post of EATC commander in September 2020. He joined EATC in Eindhoven as Chief of Staff in 2017. Major General Schick joined the German Air Force in 1980 and started with his officer training in 1982. After graduating from pilot training in 1985, he received weapon system training in the F-4F Phantom and the Eurofighter in 2007. Subsequent to the General Staff Course, Major General Schick fulfilled various command staff posts and took on several leadership assignments in the German Armed Forces, including an international posting at SHAPE as military assistant to SACEUR. He undertook operations assignments at ISAF HQ, Kabul (2008), and in Counter Daesh, Incirlik (2015-2016). Between 2013 and 2014, he filled the position of Branch Head Military Policy and Strategy Formulation at the German Ministry of Defence.

The prerequisite within EATC is that only EATC member nations can directly request air transport. This narrows of course the scope for optimisation and for cooperation – two important factors for EATC. Hence, EATC set up the "sponsor nation" concept. This concept offers that one (or more) of the EATC member nations stages as a sponsor to request a mission for the benefit of non-EATC nations or multinational entities such as NATO or the EU.

During the pandemic, the sponsor nation concept demonstrated its inestimable value in times of an unpredictable crisis and when urgency is asked for. Since January 2020, EATC member nations have staged as sponsor-nation for their EU partners, NATO and allies or countries such as Georgia, Tunisia, South Korea and Balkan states.

### My Priorities for the Next Years ...

...are impaired by the pandemic but offered unforeseen opportunities.

First of all, I will prepare the EATC IT for the requirements of this new decade. We have a long way in front of us, looking into cyber security and its increasing challenges. Next comes how to advance with our in-house developed and maintained command and control software application MEAT. At short term, we will establish the basis to set up modern and updated location-independent workplaces and document management capabilities.

Secondly, I intend to intensify the cross-certification acceptance between the nations as for the maintenance part and the aircrew side, thus fostering interoperability. This is the prerequisite to offer the member nations real synergy options for deploying truly combined operational detachments.

My third priority is to offer as soon as possible a reliable air network, with the special focus on increasing the efficiency of our missions, thus freeing assets for other priorities. EATC is to test the first step: the introduction of a shared inter-theatre shuttle system. Unfortunately, we had to delay our trial phase amongst others because of pandemic-induced operational constraints. We have reviewed our timelines with the long-term objective in mind: to combine the shuttle system with infrastructural and logistically improved main operating bases linked to land and/or sea transport solutions, the so-called hub-and-spoke system.

My fourth priority is a long-term project to better support the nations during the early planning and subsequent execution phase for air mobility missions in crisis situations, under short notice and high-peak demand. We need to "multinationalise" what is still a purely national responsibility and process, and EATC could play an important role to achieve better effectiveness and efficiency.

### Conclusion

My priorities are to direct EATC's focus in the next years, of course without losing sight of our daily tasks and missions and ongoing engagements. I will stay in close contact with the Air Chiefs or other national representatives to lead EATC into this new decade.

EATC is proud of its achievements. We proved the success of our vision, our commitment and the trust. We are today a recognized centre of expertise for air mobility because of the outstanding cooperative effort and innovative work of all people, air forces and other partners involved in our unique project.

Now, we will pick up the speed for the next decade. EATC has great potential to go beyond the basic principle to share scarce air mobility resources among seven nations. We will seize any opportunity to intensify the collaborative efforts with partners, from committing to close partnerships to enlarging our community if decided by our national authorities.

The pandemic strengthened our ability to deal swiftly in a crisis situation. Together with our member nations, we will continue to demonstrate the priceless value of our commonly shared capability in Europe!







(Photo: Royal Netherlands Air Force)

## Brigadier General Paul Desair

### Challenges – "Doing the Right Things Right" to Get Ready for the Next Decade

EATC proudly looks back on strong performances and great achievements over the last decade. Now, time has come to consolidate and establish a promising future for EATC. Since its creation in 2010, EATC "did the right things". We now need to ask ourselves if we 'do the right things right' to get ready for the next decade. Can we further improve effectiveness and efficiency? How do we integrate multinational units, reinforce cooperation with 'third parties' or strengthen the collaborative efforts with NATO and EU? We will be extremely attentive to the environmental changes. Unpredictable crisis and invisible challenges make us work, act and re-act in different ways. How flexible and adaptive was or is EATC in times of a pandemic? What about external initiatives and influences that we do not control? Indeed, multiple questions come our way, for which we have no clear answers yet. Further brainstorming, thinking and decision-making will be on our agenda in order to continuously shape and fine-tune EATC for its future tasks. The following lines provide a glimpse of what lies ahead for EATC.

### Interoperability, Effectiveness and Efficiency

Enhancing interoperability, optimising effectiveness and improving efficiency are the main drivers for bringing new ideas and projects forward within EATC. To live up to this objective, it is of utmost importance to carefully listen to the needs of the member nations, to study their air mobility requirements and to stay in constant contact with them. EATC

has perfected this approach in the past and will continue doing so in the future.

As such, in 2018, EATC identified a chance for pooling and sharing airlift on dedicated routes to mutual theatres of operation. From an initial idea to set up a shuttle system allowing efficient use of assets, EATC will continue conceptual thinking and in-depth planning with regard to the implementation of a so-called 'hub-and-spoke' system. The ultimate goal will be to combine the shuttle system with infrastructural and logistically improved main operating bases, linked to land and/or sea transport solutions.

Operations can only be effective and efficient if the operational process is well-tuned. In this context, Operational Risk Management (ORM) plays a particular role. Although ORM is ultimately a national responsibility, it is also high up on the priority list for EATC. In the future, EATC will concentrate on generating a more comprehensive intelligence picture. The output of the EATC intelligence branch will be further optimised in order to offer even better services to the nations. The ultimate goal being: to build an initial, all-encompassing intelligence picture as a basis for further analysis and mitigation of operational risks. EATC's focus will be on transparent and open exchange of information between the nations during all phases of a mission, from planning and tasking till execution and reporting.

### New Fleets, New Structures, New Ways of Working

Most of EATC's member nations go through a transformation process. Legacy fleets are replaced by modern platforms (A400M, A330 MRTT, C130J) that are multi-mission capable. This also requires multi-mission capable aircrew, handlers and service providers. Moreover, these new





assets are able to operate in the most challenging scenarios, covering the full spectrum from low- to high-intensity conflicts and crisis scenarios. Based on “you train as you fight,” EATC’s experts will tailor training objectives and exercise scenarios to the expectations of those, running future air campaigns (JFACs). Here, mutual understanding of aircrew capabilities and platform performances are key to success.

The introduction of multi-mission air mobility assets will influence the scope for EATC planners and taskers. Combining different missions into one makes it more flexible and efficient, but also more complex. An A400M executes both strategic and tactical missions, while it is also capable of providing Air-to-Air Refuelling (AAR). The MRTT can combine AAR with airlift, while being used as a flying hospital. The mix of different combinations will require adaptation of existing processes and a different mind-set for EATC planners and taskers. Interaction between EATC and planners at the operational command levels within NATO and EU gain importance. De-confliction and in-depth coordination of strategic airlift outside the Joint Operations’ Area (under EATC operational control) versus tactical assets flying inside the Joint Operations’ Area (under JFAC operational control) will be of vital importance during future conflicts or crisis.

Besides procuring new common platforms, nations also look into new ways of cooperation amongst them. Several multinational units have stood up in the last years: nations bundle their efforts to be more cost-efficient, while they look at EATC to remain in control for planning, tasking, executing and monitoring missions (transfer of authority). It is of utmost importance to integrate these multinational units into the existing EATC processes. Only thanks to these well-thought-out processes, EATC can offer an optimised and accurate service to the member nations, including their multinational units.

The newly set-up multinational units are not always limited to EATC nations only. This entails that EATC will indirectly operate with non-EATC nations. This is of course an unexpected challenge and opportunity for EATC. Third parties, members of these multinational units, offer innovative ways of cooperation for the future.

## Digital Development and Modernisation

Over the past ten years, digital technologies and communications have evolved in an accelerating way. The EATC Commander has thus put priority to adapting and preparing EATC’s IT set up to serve the requirements of this new decade. The challenge is multifaceted.

First of all, EATC needs highly qualified military IT personnel to translate the requirements into concrete results for cyber security, document management and ‘home office’ capabilities.

Secondly, growing digitisation and real-world cyber threats ask for secured networks and reliable communications systems. This is especially true for MEAT NG (Management of European Air Transport New Generation), EATC’s in-house designed and maintained Command and Control (C2) software application with more than 3,400 users within the EATC nations.

**Brigadier General Paul Desair** took over the position as Deputy Commander, EATC, on 28 September 2020. In 2004, he became Crisis Response Planner (J5) at Joint Staff level. Promoted Lieutenant Colonel, he was in charge of planning Belgian military assets in support of operations worldwide. In 2009, he became Colonel and took up responsibility as Chief Air Operations (A3). Whilst being fully involved in the restructuring of the Belgian Defence Staff, he was in charge for the readiness of the Belgian air assets, taking responsibility for the programming, planning and follow up of all Belgian air operations. In 2012, he became the 23rd Base Commander of the 10th Tactical Wing in Kleine-Brogel. On 3 July 2015, Colonel Desair left the 10th Tactical Wing and returned to the Defence Staff and became Chief of Cabinet to the Belgian Chief of Defence (2016-2020).

Lastly, there is the urgent need for a general review of IT requirements in the domains of digitisation and connectivity.

EATC is working with a multitude of multinational partners on a daily basis: units, air forces, third party nations, international organisations and the like. In order to develop the digitisation process, EATC will closely coordinate with all these actors to understand their functional requirements and develop means of “collaboration” across technology solutions. While doing so, EATC will interlink with the Dutch host nation. EATC, the Eindhoven Air Base and all other co-located international organisations will act in concert to identify synergy effects and prepare a modernised digital future.

## Reaching Out

Throughout the years, the EU has established permanent military structures and is now able to define policies and prepare coherent EU responses to crisis situations. EU is relying on PESCO projects to create and build “own defence capabilities”. Military Mobility is such a project, with EATC involved and acknowledged as a high valuable partner and as ‘centre of expertise’ for the sub-area of military air mobility. Furthermore, EATC, as Operational Command, has the potential to serve as an excellent tool in support of future EU military C2 structures.

Reasons enough for EATC to keep on engaging itself into this changing environment and, therefore, to focus on outreach: the defence community and all that lies beyond need to know who we are, what we stand for and what we do.

## ‘Lessons Learned’ From COVID-19

One of our main ‘lessons learned’ regards the revolution initiated by the COVID-19 pandemic to face remote work. The pandemic made us rethink how to operate and communicate. A transformation process will take place in the coming months and years, where the development of reliable home office capable IT solutions to ensure location-independent operation are key points. This will include remote work, as well as new ways of internal communication and external interaction.

Another main lesson learned confirmed that EATC structures and processes are able to cope with pandemic challenges. EATC showed resilience and the ability to adequately plan and task missions during the pandemic situation. Flexibility, standardisation and acquired interoperability among the EATC nations compensated for the multiple obstacles that EATC was confronted with. In order to transport COVID-19-infected patients, EATC quickly developed new guidelines and procedures that were also adopted by non-EATC nations. We will now look into the future to translate in particular aeromedical related challenges into multinational opportunities.

The pandemic, with the subsequent time pressure and operational urgency, strengthened the trust, cooperation and communication between EATC and the member nations. We are thus looking forward to seizing this momentum and ease the way for further standardisation of regulations and a common procurement of equipment.

## Conclusion

EATC is well on track to embark on this new decade, doing the right things right. Some processes will be long, some will be straightforward, but all will be approached with burning ambition and professional competence. We are looking forward to detecting unexplored opportunities and utilising them to make EATC more accessible, more efficient, resilient and capable of supporting a wide variety of air mobility missions. New environments, new fleets and new conceptual ideas will allow EATC to adapt to new ways of working, to remain a strong and reliable partner in air mobility, to increase interoperability and to prove itself as a ‘centre of expertise’ also for the next decade to come.





# Brigadier General Stéphane Gourg

## As Effective as Required, as Efficient as Possible

Ten years of existence, ten years of air mobility! EATC was designed as a multinational operational command and is undoubtedly one of the most successful pooling and sharing initiatives in Europe. In ten years of successful, safe and effective command of air mobility operations, it has also become a recognised centre of expertise in air mobility. Here is a brief history of ten years of key achievements.

## EATC is an Integrated Command...

From the outset, EATC was conceived as an integral part of national chains of command. This is a central feature of the command and one of the reasons for its success. There is no doubt in the minds of the EATC team that EATC is closely linked to each of the member nations' national chains of command, and that each nation looks at EATC as an extension of its own national chain of command. This founding principle is also reflected in the structure: the seven National Senior Representatives (NSRs) are integrated into the staff in key leadership positions, as well as in the operational planning processes as EATC-led missions are exclusively linked to member nations' requests.

In addition, EATC's software platform MEAT is key to integration. It is EATC's command and control tool *par excellence* that facilitates sharing operational information between nations and EATC. MEAT was designed and implemented in 2010, shortly after the creation of EATC. Like in the past, today the system links each national operational command, wing or squadron to EATC headquarters, located at Eindhoven Air Base. As such, MEAT is one of EATC's most valuable assets and its modernisation constitutes a priority for the command and the nations.

## ...Delivering High Quality Service on a Daily Basis...

The performance of an operational command is rated in the area of operations. The same goes for EATC. In this respect, EATC now generates nearly 8,000 air missions per year, including 500 AAR missions and 50,000 flight hours. This is reflected in the transport of about 260,000 passengers per year, the management of 1,500 patients to be evacuated, the dropping of 80,000 paratroopers and the transport of 22,000 tonnes of cargo. Over the past ten years our command reached substantial production volumes of almost industrial scale. This demonstrates the relevance of the EATC concept as a long-standing pooling and sharing initiative.

Besides the quantity, the quality of the services provided is even more important. EATC strives to meet military requirements and to adhere to five key principles: safety, security, effectiveness, reliability and efficiency.

- **Safety and security:** our daily business is aviation and support to military operations. Aeronautical and operational risk management is of course fully integrated into the operational processes. Each planned and tasked mission is subject to precise studies in this area. We check compliance with safety and employment rules, define mitigation measures and, if necessary, call on the national chains of command, which have the final decision. It is a shared responsibility with the nations and EATC has a pre-defined important role to play.
- **Effectiveness and reliability:** EATC is responsible for the planning, preparation, tasking and control of the execution of air mobility missions for the benefit of the member nations and for the best possible use of the fleet of 170 aircraft that the nations put under EATC's operational control. However, what is paramount is to deliver effective support to the military operations in which nations are engaged. EATC never lose sight of that priority.



- **Efficiency:** undoubtedly, one of the main expectations of our founding nations was the implementation of efficient management and operation of the airlift, AAR and aeromedical fleet. This is a task that we carry out in our operational processes every day, detecting and seizing all opportunities to pool missions and promoting the exchange of services between nations, where possible. This is now a reality: each week, assets from one nation are transporting personnel or cargo from another nation. While the volume of flight hours exchanged remains modest, the frequency is there. This is the most important point, as it reflects the dynamics of the exchange of services and the fact that nations have accepted the principle and become accustomed to it.

Furthermore, experience shows that when operational requirements increase – as is the case for the deployment of military operations – the volume of flight hours exchanged increases very quickly. In this respect, the years 2013 and 2014 were exceptional in terms of volume, when exchanged services reached almost 20% of the total flight hours managed by EATC. This is largely due to the start of military operations in the Middle East and Sahel, although the Afghan theatre was already mobilising some of our resources. That said, one of EATC's main objectives for the upcoming years is to introduce a shared inter-theatre shuttle system to areas of military operations. Apart from ensuring effective support to operations, this concept will offer better use of air mobility assets, structure the exchange of services between nations and free up resources for additional requirements, including training.





(Photo: EATC)

### ... Proving Flexibility and Responsiveness...

Another way to assess the effectiveness of a military organisation is to look at its contribution to crisis management. In this respect, the last ten years have been eventful. EATC has played its role and taken its place alongside and for the benefit of nations, proving its flexibility and responsiveness.

Let us recall that when EATC was created in 2010, it participated only months later in the repatriation of more than 1,000 European nationals from Libya.

**Brigadier General Stéphane Gourg** became the Chief of Staff of EATC in September 2020. He graduated from the French Air Force Academy in Salon de Provence in 1990 and completed undergraduate pilot training in 1992. He started as a command pilot at the Transport Squadron "ETEC" in Villacoublay, and has accumulated over 6,000 flying hours in his career on the Mirage 2000, Falcon 50, Falcon 900, Airbus 310 and Airbus 340. Brigadier General Gourg participated in multiple missions around the world, over the Balkans, African territories, Middle East and Afghanistan, providing strategic airlift and aeromedical operations. In 2014, he was Head of International Affairs at the French Military Aviation Authority in Villacoublay and three years later he was appointed the position of National Military Representative at EU, NATO and Eurocontrol in Brussels.

In 2013, when France launched Operation "Serval" in Mali, EATC's partners Germany, Belgium and the Netherlands provided important logistical air support through EATC.

In 2014 and 2015, EATC managed humanitarian air support operations in Iraqi Kurdistan and Nepal.

In 2017, when Hurricane Irma hit the Caribbean region, EATC seconded some of its staff to locally coordinate operations for assets under EATC command and control.

In 2020/2021, in the context of COVID-19, EATC was heavily involved in repatriating EU citizens, delivering pharmaceutical and medical supplies and organising numerous aeromedical evacuations.

These are just a few examples. What is important is that it is in the light of our past experiences, nations have asked EATC to study engagement scenarios, such as the evacuation of nationals, humanitarian operations or EU/NATO military operations. The aim is to anticipate and prepare a more coordinated and structured response in the field of military air mobility, taking advantage of an operational organisation that shows experience on a daily basis.

### ... While Fostering Interoperability

Alongside operations, improving interoperability is an important mission that has been entrusted to EATC from the outset. In this area, the progress made over the last ten years is astounding. There are four reasons for this success.

**First, necessity is the law.** Common operations require common rules. EATC is an operational command and as such was confronted with difficulties related to the lack of harmonisation between the nations. Thus, we began establishing common internal procedures in conjunction with the national chains of command, followed by rules for the use of crews. Progressively, our efforts resulted in the backbone of all our common documentation, the operations manuals.

**Second, no dogmatism, only pragmatism.** To illustrate, I will give you two examples: it was for the needs of a high altitude parachuting exercise of Belgian paratroopers from a French C130, that EATC started the harmonisation of the parachuting procedures in 2011. Similarly, in 2018, the transport of a French Puma helicopter on board a German A400M was the starting point for the harmonisation of loading and tie-down-procedures on A400Ms under the auspices of EATC.

**Third, overall coherence.** EATC strives to address all activities that contribute to the success of an air mobility operation. For the sake of simplification and effectiveness, EATC has been led to engage in the harmonisation of ground handling operations, diplomatic clearances requests, cross maintenance and dangerous goods transportation. Additionally, EATC strived to facilitate the implementation of harmonised procedures and techniques by leading or supporting trainings and Exercises for Tactical Operations (ETAP), Air-to-Air Refuelling Operations (EART) and Ground Handling Operations (CATT, DART) as soon as 2012.

**Fourth, expertise.** EATC is all about pooling and sharing, which means that nations have pooled much of their airlift, AAR and medical evacuation assets, but also expertise within EATC. In doing so, EATC has undoubtedly become a unique force for reflection and work in the field of air mobility in Europe. EATC is most competent, skilled and experienced to tackle common problems and bring nations together on combined proposals. In other words, EATC has a form of regulatory power through its expertise, without any regulatory transfer of national responsibilities, and it works perfectly.

In conclusion, I might say EATC is like a vintage champagne: it has a uniqueness that if aged increases in complexity and quality. Over the past ten years, we have proven that our integrated command combines all ingredients for a full taste: high-quality service and successful air mobility missions, flexibility and responsiveness, interoperability and harmonisation of procedures.

# Major General Thierry Dupont



**MT:** The European Air Transport Command presently consists of seven member countries. What was the reason to become a member of this unique organisation?

**Major General Thierry Dupont:** Following the end of the Cold War, Belgian Armed Forces have been gradually transformed in such a way they can be 'plugged in' as entities into multinational operations, either NATO/EU- or ad-hoc Coalition-led. Hence, interoperability has become a cornerstone of our operations.

With the creation of EATC, a single command, embracing interoperability by pooling and sharing of air transport assets was introduced. This matched seamlessly with our national policy of 'plugging in' into multinational cooperation to become more effective and efficient as a small nation. In essence, our participation to EATC came as a rather logic and sustainable development.

**Major General Thierry Dupont** became the fifth Air Component Commander and the 16th Belgian Air Chief on 17 September 2020. His previous positions included: Deputy Chief of Staff for Operations and Training of the Belgian Defence (2018); first Belgian Head of the Combined Air Operation Centre in Uedem (Germany) in 2016, where he was responsible for the integrated air and missile defence system of Northern Europe and for the support of operations led by Joint Forces Air Command in Ramstein (Germany); and 24th Commander of the 2nd Tactical Wing (2013). Major General Dupont graduated from the Combined Force Air Component Commander Course at Maxwell AFB (USA). He achieved a total of over 2,600 flying hours on 30 different types of aircraft.

That is also the reason why Belgium has allocated all of its air transport assets to the EATC pool. All partners can benefit from our capabilities when we have spare capacity, and we can use their [capabilities] whenever our needs exceed our capacity.

**MT:** Your organisation is represented within the EATC headquarters by an SNR. What does this entail?

**Major General Thierry Dupont:** His first task, which you might call operational, is to make sure the Belgian assets are planned according to national rules and caveats – a role as 'red card' holder. He also gives EATC formal approval for the use of Belgian assets as ATARES authoriser. This is the system through which all EATC nations exchange their services in a cashless manner. His second task is to act as Commander of the Belgian contingent at EATC and is more of a human resources manager role.

**MT:** Every member nation contributes to EATC's diverse multinational fleet of aircraft. How do you pool and share air transport capabilities both in peacetime and in times of crisis?

**Major General Thierry Dupont:** As already mentioned, Belgium has allocated all of its air transport assets to EATC's fleet. By default, we do not see a difference between pooling and sharing of assets, in times of crisis, as well as in peacetime. Today, the boundaries between the two concepts might often be blurred. Thus, it has become highly exceptional to transfer air transport assets back under national control. Belgium has joined the Multinational MRTT Unit (MMU), an international unit by design, for similar reasons while at the same time filling the historical capability gap in European air power, that is to say AAR.

**MT:** What does the future hold for your organisation's participation in EATC?

**Major General Thierry Dupont:** Today, the Belgian Air Component is going through an organisation-wide transition, which will last well into this new decade. The transformation affects combat, air mobility, rotary wing, RPAS [Remotely Piloted Aircraft Systems] and command & control capabilities. More than ever before, this requires us to act swiftly and plug into a networked environment to enable our operational output. Future conflict response and conflict management will also require redesigned force projection methods, training and, above all, resilient multinational cooperation. EATC will remain key in providing air mobility solutions in these evolving circumstances.

(Photo: Belgian Air Component)



# General Philippe Lavigne



Air Force General **Philippe Lavigne** is the Chief of Staff of the French Air and Space Force since 2018. He graduated as a fighter pilot in 1989, serving in operational units on Mirage 2000 as an air defence pilot, with more than 2,850 flying hours and 46 war missions during operations.

**MT:** The European Air Transport Command presently consists of seven member countries. What was the reason to become a member of this unique organisation?

**General Philippe Lavigne:** France was one of the four founding nations to inaugurate EATC in 2010, with the main objective to pool and share capabilities in the domains of air transport, air-to-air refuelling, paratroopers training and aeromedical evacuation. Meanwhile, EATC allows our nations to exchange experiences and to develop interoperability among our air forces through harmonisation and standardisation of procedures on our fleets such as A400M, C130J and MRTT. Therefore, EATC is a unique opportunity for our air forces in the air mobility domain, to collectively optimize our capabilities and to foster our interoperability for the success of our operations.

**MT:** Your organisation is represented within the EATC headquarters by an SNR. What does this entail?

**General Philippe Lavigne:** Our SNR is the main representative and is the voice of France in the dialogue with our partners. He also safeguards national caveats for the use of the French Air and Space Force assets transferred to EATC. Finally, he commands and administrates the 50 French airmen posted in EATC in Eindhoven and is an essential link between our French headquarters and EATC's executing level.

**MT:** Every member nation contributes to EATC's diverse multinational fleet of aircraft. How do you pool and share air transport capabilities both in peacetime and in times of crisis?

**General Philippe Lavigne:** To ensure efficient pooling and sharing during peacetime, France yearly transfers to EATC the authority to plan, prepare, task and control missions on a list of identified aircrafts of the French Air and Space Force. In addition, some other aircraft can be temporary transferred to EATC if needed. EATC personnel has the responsibility to optimize the use of these aircraft according to French caveats. In times of crisis, France can still rely on EATC or can fly missions under its own responsibility by simply revoking the above-mentioned transfer.

**MT:** What does the future hold for your organisation's participation in EATC?

**General Philippe Lavigne:** For ten years, EATC has proven its added value in the Air Mobility Domain and will still play a key role in the integration of new fleets such like the A330 MRTT and in the development of capacities of recent fleets (A400M and C130J). By ensuring harmonisation and standardisation of procedures, EATC will foster the interoperability of its partner nations and pave the way for future common engagements in peacetime or in times of crisis.

Photo: Armée de l'Air & de l'Espace

# Lieutenant General Ingo Gerhartz



(Photo: German Air Force)

**Lieutenant General Ingo Gerhartz** was appointed Chief of the Air Force (*Luftwaffe*) on 29 May 2018. Prior to this, from 1 October 2017, he served as Deputy Head of the Department for Strategy and Operations in the Ministry of Defence in Berlin. Lieutenant General Gerhartz acted as Head of the office of the Chief of Staff, Bundeswehr, General Volker Wiekert, from September 2015 to October 2017. From February 2009 to October 2009, he was deployed to Afghanistan as ISAF Kommodore "Einsatzgeschwader Mazar-e Sharif" and Base Commander.

**MT:** Your organisation is represented within the EATC headquarters by an SNR. What does this entail?

**Lieutenant General Ingo Gerhartz:** The SNR maintains close liaison with the EATC Commander and is responsible for disciplinary matters concerning German military headquarters personnel.

In addition to this formal task, however, the SNR also ensures the flow of information, close exchange and continuous communication. The importance of this task cannot be overestimated. It was precisely when rapid action was required as part of the COVID-19 pandemic response that the SNR played an extremely crucial role.

**MT:** Every member nation contributes to EATC's diverse multinational fleet of aircraft. How do you pool and share air transport capabilities both in peacetime and in times of crisis?

**Lieutenant General Ingo Gerhartz:** Germany has provided almost all of its military airlift capacity to EATC on a permanent basis. The airlift aircraft of the Luftwaffe fly under the authority of EATC and are only placed back under national control in case of specific national theatre operations or emergency situations. All participating states have the option of using the German capacities provided either in part ("part load") or in full ("dedicated") via ATARES. Germany, for its part, also uses the capacities provided by the other participating states via the ATARES programme, if required. The procedures and responsibilities mentioned for peacetime in principle also apply to times of crisis, in which Germany endeavours to continue to make a maximum contribution to "pooling and sharing".

**MT:** The European Air Transport Command presently consists of seven member countries. What was the reason to become a member of this unique organisation?

**Lieutenant General Ingo Gerhartz:** In September 2010, the founding nations Belgium, France, the Netherlands and Germany established EATC. At that time, visibly strengthening military cooperation was as much a goal as maximizing the outcome and saving on personnel and costs with a single EATC.

All these expectations have been fulfilled. EATC has helped to exploit military and financial synergies, connect resources and strengthen European interoperability and defence. Today, ten years later, the success story of EATC is a perfect example of the positive effects of close European cooperation. Even more: the founding of EATC has given new momentum to the multinational orientation of European forces.

I congratulate the EATC team for this outstanding success. Maintain your spirit with pride and continue this positive work.

**MT:** What does the future hold for your organisation's participation in EATC?

**Lieutenant General Ingo Gerhartz:** Germany will continue to strive for the ongoing development and improvement of its military air transport capabilities dedicated to EATC. With greater operational reach, speed and loading capacity, we are perfectly prepared for multinational deployments and all future challenges.

We are already paving the way for the consistent continuation of our multinational orientation. For example, we fully support the emerging idea of a 'lighthouse' project to foster interoperability amongst EATC A400M user nations by concentrating capabilities and resources in "Mobility Guardian 2023".

The multinational and, particularly, European orientation is a defining element for the Luftwaffe.



# Lieutenant General Alberto Rosso



**Lieutenant General Alberto Rosso** joined the Air Force Academy in 1978 and spent the majority of his operational career as an Air Defence fighter pilot. He was the 9th Fighter Squadron and the 4th Fighter Wing Commander. In his career, he served as Chief of Staff of the Air Force Logistic Command, Chief of the 4th Department of the Air Staff and Chief of the Logistic and Infrastructure Department of the Defence General Staff. In July 2016, he was appointed Chief of Cabinet of the Italian Defence Minister. Lieutenant General Rosso has been the Chief of Staff of the Italian Air Force since 31st October 2018.

**MT:** Your organisation is represented within the EATC headquarters by an SNR. What does this entail?

**Lieutenant General Alberto Rosso:** EATC, besides being a tactical command, is a Hub where every nation can bring its national capabilities, expertise and ambitions. The SNR is the guarantor of the national perspective, but at the same time is EATC member. This dual nature allows the harmonisation of efforts and needs resulting in increased effectiveness in the air mobility arena.

**MT:** Every member nation contributes to EATC's diverse multinational fleet of aircraft. How do you pool and share air transport capabilities both in peacetime and in times of crisis?

**Lieutenant General Alberto Rosso:** Italy participates to EATC with its air transport and air-to-air refuelling fleets: KC767A, (K)C-130J and C-27J. That means that we guarantee full spectrum capabilities in the air mobility environment. We share with EATC partners not only our platforms but also our expertise and experience resulting from decades of worldwide real operations. To EATC, we offer our state-of-the-art and innovative competence, like the bio-containment aeromedical evacuation capability, and we can benefit from other participating nations' experiences. The fight against the COVID-19 pandemic and the results that EATC brought to participating nations demonstrated that a common

**MT:** The European Air Transport Command presently consists of seven member countries. What was the reason to become a member of this unique organisation?

**Lieutenant General Alberto Rosso:** Italy has always shown its continuous and convinced commitment to European integration evolved through the constant and effective participation to European organisations working side by side with NATO. The requirements to face nowadays and future challenges impose to pool and share member nations' effort in order to maximise efficiency and effectiveness and EATC is a perfect tool (as well as PESCO, EDF, etc.) to improve national military capabilities. Shared goals and means will lead European nations to be more relevant in the regional and global environment.

command and control structure associated with shared fleets and procedures are key elements for successful operations.

**MT:** What does the future hold for your organisation's participation in EATC?

**Lieutenant General Alberto Rosso:** The Italian Air Force will maintain a strong commitment to EATC's structure and principles. We look forward to a continuing build-up of experience towards a common European air mobility culture. In the near future, we will be involved in further integration, especially in terms of common regulations and mission execution, knowing that EATC is a unique opportunity to operate safely and effectively in always more complex scenarios.

Photo: Italian Air Force



# Colonel Pascal Ballinger



Photo: Armée luxembourgeoise

**MT:** The European Air Transport Command presently consists of seven member countries. What was the reason to become a member of this unique organisation?

**Colonel Pascal Ballinger:** Luxembourg Defence was by tradition land focused even if during the 1960s the Army operated three small observation aircraft [Piper L-18C 95]. This focus changed in 2001 when the Ministers of Defence of Luxembourg and Belgium signed a cooperation agreement concerning the procurement and exploitation of A400M aircraft. So, when our next-door partners decided to create a multinational air transport command, it was beyond question that Luxembourg would support this unique endeavour and join EATC.

The interesting fact is that in 2012, our partners accepted Luxembourg as a new member and offered us privileged access to a large and diverse air mobility fleet, although Luxembourg did not have, at that time, any air assets to share with them. This is the core of European defence cooperative efforts: support each other when needed and trust and confidence among partners.

Today, the Luxembourg Armed Forces have built up a limited but unchallenged air expertise and we offer military and civilian contracted air mobility capabilities to our EATC partners. Luxembourg is proud to be a

**Colonel Pascal Ballinger** is Vice Chief of Defence.

He became liaison officer with the Air Component in Evre in Belgium and simultaneously liaison officer with EATC in Eindhoven in September 2013. In October 2017, Colonel Ballinger occupied the position of Capability Development and Concepts officer at the General Staff of the Army.

member of this exclusive and unique command, which shapes day-by-day Europe's future in the air mobility domain.

**MT:** Your organisation is represented within the EATC headquarters by an SNR. What does this entail?

**Colonel Pascal Ballinger:** The SNR is the pivotal link between the Luxembourg Defence and EATC. This senior representative coordinates on a day-by-day basis with his counterparts, liaises with EATC command group and assures compliance with national caveats. As the 'red Cardholder' and ATARES authoriser, the SNR has large responsibilities. But the Luxembourg SNR is also an important advisor to Luxembourg, supporting efforts for a comprehensive air expertise within the Luxembourg Defence.

**MT:** Every member nation contributes to EATC's diverse multinational fleet of aircraft. How do you pool and share air transport capabilities both in peacetime and in times of crisis?

**Colonel Pascal Ballinger:** Luxembourg shares military and civilian contracted assets with the EATC partner nations. In 2017, when EATC was short of aeromedical evacuation assets, Luxembourg offered highly professional civilian contracted assets to fill this gap.

Three years later, in April 2020, when the COVID-19 pandemic hit Europe, we completed our offer with civilian contracted cargo capabilities to respond to the increasing need to transport urgent medical supplies. These were followed at the end of 2020 by military assets: one A400M integrated into the Belgian-Luxembourg Unit stationed at Melsbroek (Belgium) and A330 MRTT capabilities integrated in the MMU stationed at Eindhoven (The Netherlands).

In return, Luxembourg needed capabilities from the EATC partners, for example to deploy and redeploy troops from operational theatres. But Luxembourg also pools assets from the partners, via the sponsor nation concept, to support multinational entities, such as NATO or EU.

Luxembourg is looking forward to EATC's ongoing study to better support nations in the planning and execution of air mobility missions when a crisis occurs. The outcome will support EATC's planning of operational commitments, in particular with regard to rapid-response projections and during high-peak demands.

**MT:** What does the future hold for your organisation's participation in EATC?

**Colonel Pascal Ballinger:** To some readers, the Luxembourg Defence-owned air mobility capabilities might seem to be quite limited. However, we have risen in only a few years to a serious provider of air mobility capabilities, not only within EATC but also with our EU and NATO partners. We will even reinforce these by 2025 with additional A330 MRTT flying hours.

It is time now for Luxembourg to consolidate its achievements. Nonetheless, we will always lend an ear to EATC and our partners if additional specialised capacities are highly needed. Luxembourg is and will always remain a strong supporter of EATC and the pooling and sharing concept on which this command is built upon.





# Lieutenant General Dennis Luyt



**Lieutenant General J.D. (Dennis) Luyt** was appointed Commander of the Royal Netherlands Air Force on 10 June 2016. His number one priority is to create and sustain an Air Force that is relevant, a 5th Generation Air Force. Prior to this, he was the Director of the Operational Readiness Directorate of the Defence Staff at the Ministry of Defence in The Hague in June 2014. In this position, he was the principal advisor to the Netherlands Chief of Defence on allocation subjects and planning of readiness training of the armed forces and supporting services. Lieutenant General Luyt was the Chairman of the MATraC from 2018-2020 that governs the EATC.

the partner nations according to their national needs. It is truly "Pooling and Sharing 2.0".

**MT:** Your organisation is represented within the EATC headquarters by an SNR. What does this entail?

**Lieutenant General Dennis Luyt:** The SNR is the national commanding officer of the Netherlands contingent within EATC. He takes care of the personnel's wellbeing, as well as ensuring that all requirements are met for everybody to perform their duties effectively according to the (national and international) rules and regulations. The SNR is also the primary link between EATC and the national line of command and advises me or my staff on EATC specifics. He oversees the balance in national demands vs national and international capabilities within EATC. As both ATARES authorizer and Red Card Holder, he is able to effectively manage cross-national exchange of services and ensures that operations are executed according to national regulations and caveats.

**MT:** Every member nation contributes to EATC's diverse multinational fleet of aircraft. How do you pool and share air transport capabilities both in peacetime and in times of crisis?

**Lieutenant General Dennis Luyt:** We have transferred the authority of our entire AT fleet to EATC with the intent to keep all assets under EATC command to the maximum extent feasible, in peacetime as well as in time of crises. Only in extreme nationally sensitive circumstances will we retransfer command to the national level. Reason being that we heavily rely on EATC's operational capacity, expertise and reliability. I firmly believe in the EATC concept that has proven itself clearly over the last ten years.

**MT:** The European Air Transport Command presently consists of seven member countries. What was the reason to become a member of this unique organisation?

**Lieutenant General Dennis Luyt:** When in 1999 the idea was born by France and Germany to build a multinational Air Transport Command Structure, the Netherlands did not hesitate to join this initiative and offered Eindhoven to be the host base. We also acknowledged that the Air Transport (AT) and Air-to-Air Refuelling (AAR) domain is extremely complex because the demands and expectations are high, especially at time of crisis or conflict, the operational tasks are diverse and specialized but the availability of resources is very limited. There is no European country that has the operational capability to fulfil all AT and AAR requirements by itself and each nation has its own different and/or unique but limited capabilities available. The strength of EATC is the ability to combine all these different multinational capabilities and distribute it effectively amongst

**MT:** What does the future hold for your organisation's participation in EATC?

**Lieutenant General Dennis Luyt:** I will continue to actively support EATC in its continuous ambition for efficiency and effectiveness in order to enhance the combined operational AT and AAR capability of all member nations, as well as everything that is required to accomplish this mission like harmonisation and standardisation of rules and regulations. This is one of the essential keys to success in multinational cross-border operations. I also underline the EATC Commander's ambition and vision to look ahead and beyond the horizon which we see now. Not only by using EATC capabilities more effectively by our partner nations in time of crisis but also by attributing in any way possible to overcome the shortfalls identified by NATO and EU and shaping the future of the AT domain in Europe. Together we go beyond!

(Photo: Royal Netherlands Air Force)

# Air General Javier Salto Martínez-Avial



(Photo: Ejército del Aire)

**Air General Javier Salto Martínez-Avial**, MATraC chair, has been the Chief of Staff of the Spanish Air Force since 1 April 2017. In 2003, he became a Colonel and received command of Wing 11, a unit under the operational command of Combat Air Command (MACOM). Between 2006 and 2008, General Salto was Director of Operations of the NATO Combined Air Operations Centre No. 8 (CAOC 8) at Torrejón de Ardoz Air Base. In 2008, he was appointed Brigadier General and took over the Material Management Sub-Directorate Logistics Support Command (MALOG). In 2012, he was in charge of the Canary Islands Air Command Headquarters and three years later, as Lieutenant General, he was appointed Director of the Technical Cabinet of the Minister of Defence.

to national caveats and guidelines. Additionally, he is responsible for the approval of air operations implying the exchange of services within the ATARES agreement, keeping track of its national balance. From a common EATC perspective, SNRs are essential since they foster cooperation by seeking opportunities that help us utilize our air assets efficiently.

**MT:** Every member nation contributes to EATC's diverse multinational fleet of aircraft. How do you pool and share air transport capabilities both in peacetime and in times of crisis?

**Air General Javier Salto Martínez-Avial:** During peacetime, Spain has permanently transferred the authority over the whole air transport fleet [A400M and C-295]. Additionally, our VIP Fleet [A-310 and Falcon 900] can be temporarily transferred on a case-by-case basis. Nevertheless, it is in times of crisis when we believe the EATC can provide a greater added value. At this point, a series of potential contributions to different crisis scenarios [non-combatant evacuation, humanitarian relief and the like] is under development at the EATC, and we are actively involved in the definition of these scenarios.

**MT:** What does the future hold for your organisation's participation in EATC?

**Air General Javier Salto Martínez-Avial:** Our strong support to the EATC will remain unchanged in the future. Hence, we support EATC development as well as an expansion of its missions to crisis scenarios.

We also believe there is plenty of room for development in the fields of standardisation and harmonization. For that purpose, the use of common European aircraft [A400M, MRTT] can facilitate the establishment of a general framework for the harmonisation of flying and maintenance licenses – as well as “tactical currencies” – that could be very beneficial in the future. Being one of the main A400M users, we are eager to play a relevant role in this context.

Overall, the Ejército del Aire is fully engaged in this venture. We have a lot to offer to our partner nations and we are very satisfied with the return we receive. EATC has a bright future and we are very proud to be a part of it.

**MT:** The European Air Transport Command presently consists of seven member countries. What was the reason to become a member of this unique organisation?

**Air General Javier Salto Martínez-Avial:** From the early days of this initiative, Spain has been fully convinced that the “pooling and sharing” model the EATC represents an optimal solution to make an efficient use of the assets European air forces operate. It has provided substantial benefits for our Ejército del Aire, not only with regard to operations, but also in the fields of standardisation, harmonisation and training.

**MT:** Your organisation is represented within the EATC headquarters by an SNR. What does this entail?

**Air General Javier Salto Martínez-Avial:** The SNR acts as the main link between EATC and our national headquarters, ensuring adherence



# COVID-19: From Challenges to Opportunities



*German medical personnel prepare for relocation of COVID-19 infected patients. (Photo: German Air Force)*

**When COVID-19 broke out, armed forces have provided fast and crucial support from the provision of field hospitals or medical expertise to the transport of patients, logistics and more. As such, EATC was engaged from the very first moment, facing the unpredictability and urgency of the situation that is characteristic to many crisis conflicts. Responding to a crisis situation is the essence of a military command. It also leads to a dynamic opening to find solutions and to unexpected opportunities to generate innovative ideas.**

## From Unpredictability...

EATC's operational team was the first to be confronted with unforeseen problems. Worldwide, the countries ordered national restrictions. Borders, airports and airspace were closed, opened and closed again from one day to another. Restrictions for landing, overflying, remaining overnight or movement of personnel were implemented without previous warning.

This entailed that EATC planning experts continuously had to revise routes, and destinations. They also faced increasing differing national directives to adapt requirements for crews and passengers. When social distancing and face masks started ruling our daily lives, it was no different in the restricted space of an aircraft. Nations imposed customised use of

the cabin with buffer zones between crews and passengers or individual protection equipment for the crews. Once they decided on mandatory disinfection procedures of the aircraft after each mission, the aircraft availability dropped dramatically and EATC had to adapt to this shortage, while the priority of the missions remained high.

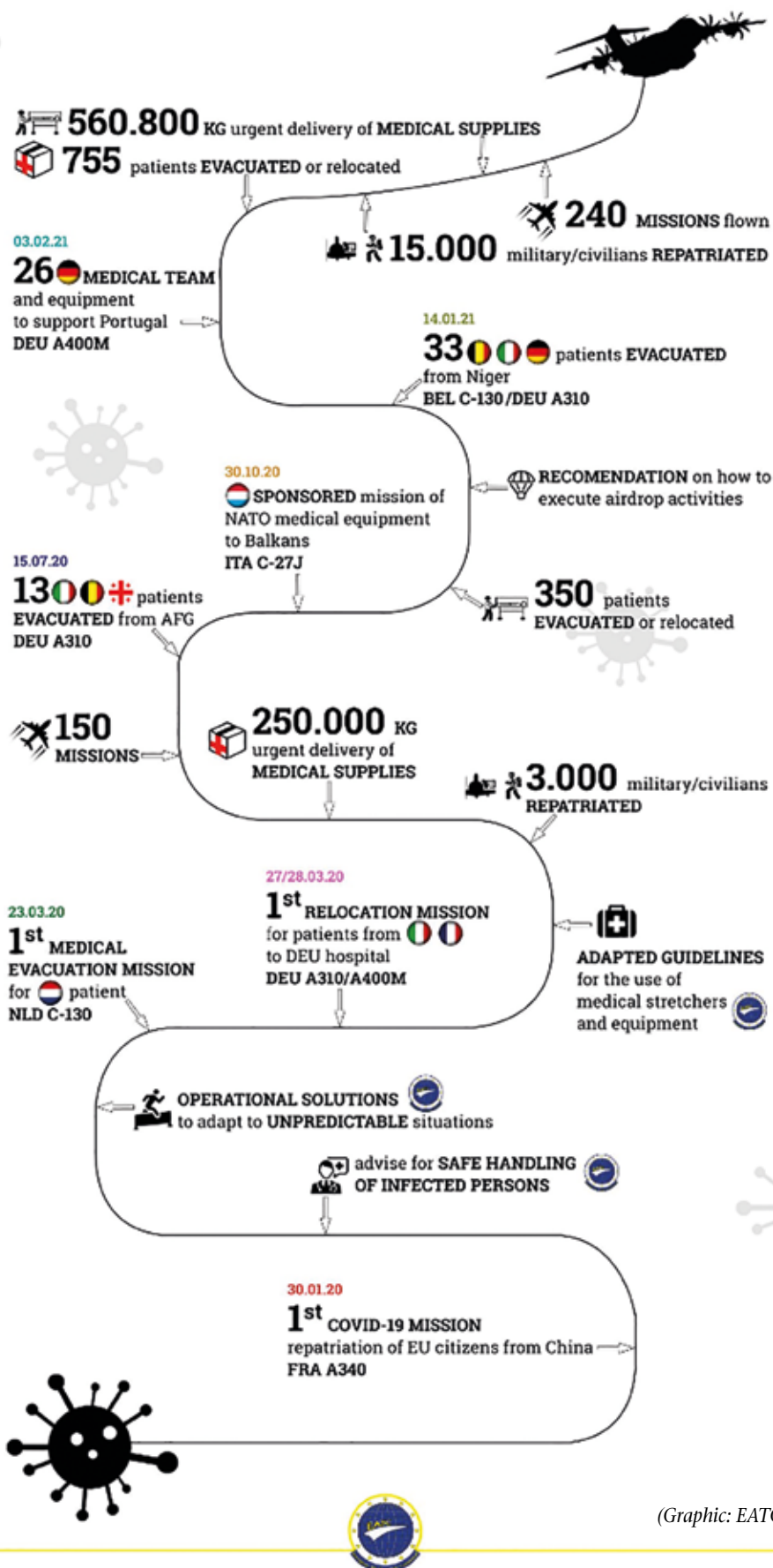
On top of these challenges, the Aeromedical Evacuation Control Centre (AECC) experts faced an unprecedented situation with a need to transport infectious patients on any type of aircraft and national bans on stopovers when infected patients were on board. Of course, the pandemic hit EATC as a whole. Most of the 2020 training and exercise programme had to be cancelled, which imposed a delay on the set training objectives. Then the headquarters was confronted with a situation that is, in principle, not in the DNA of a defence entity, and for certain not of operational business: the sudden upsurge in remote work.

## ... to Windows of Opportunities

EATC faced a situation where the missions could no longer be planned and executed according to standardised procedures and long-lasting experience. They entered uncharted waters, while, on the other hand, the urgency of the missions required prompt, but viable solutions. So, the operational experts started looking for information wherever available in order to create "a picture of the situation". They were permanently in



## EATC, 1+ year in the fight against Covid-19



(Graphic: EATC)

contact with the national crews to hear about recent experiences. Or they just consulted news programmes or internet. This might look daring for a professional command, but the pandemic requested extraordinary solutions.

Communication played a central role during this crisis. Means of communication had to be adjusted while delays to execute missions became shorter, the reduced staff presence and social distancing putting pressure on established coordination principles. A quick exchange of information among all internal and external actors became unprecedented vital. Step-by-step, EATC established recommendations to advise the nations on specific problems and to harmonise the procedures for multinational missions, including how to organise airdrop activities.

EATC's medical experts played a pivotal role and were heavily engaged to find common solutions. Aeromedical evacuation and the consequent medical treatment are highly sensitive national issues and need particular attention. The team finessed operational guidelines for management of air passengers and air/cabin crews. Moreover, they issued advice on how to evacuate patients with a suspected infection, on intra-theatre evacuation missions and on the use of medical equipment during the pandemic. Besides this functional support, they managed 1,500 aeromedical evacuations of infected and non-infected patients during the year 2020. This is an increase of about 50% in comparison to the previous years.

### Looking Into the Future

COVID-19 offered unexpected opportunities to EATC. Some were implemented at the drop of a hat, while others will offer innovative undertakings for the future.

As such, the EATC Commander prioritised the further standardisation of medical processes and regulations and the development of a lessons learned catalogue. Amongst others, recommendations include to permanently warehouse a strategic stock of Personal Protective Equipment kits for flight wings and to train them in using these kits, as well as standard procedures for infectious passengers. EATC will also put care into its exercise programme in general to catch up on training objectives and to seize opportunities to reinforce the e-learning environment. This goes hand in hand with the set-up for home office capabilities to face any future crisis.

In past year of the pandemic, EATC has proven that only acting in concert leads to success. On the one hand, through sharing aircraft and having privileged access to the whole diverse EATC fleet of 170 assets. On the other hand, through pooling experts into one single command. The EATC staff was able to face this unpredictable pandemic through varied professional and cultural backgrounds, and made sure to overcome any problem with innovation and expertise.







# EATC – The Heart and Soul of Air Mobility

In 2020, EATC has celebrated its 10th anniversary and is now preparing for the next decade. EATC is still a young organisation but it is the unique operational reality for effective pooling and sharing of air mobility assets.



**Air Mobility**  
Together we go beyond

## Who Are We ...

... in a few words: EATC is a single multinational command of seven member nations, 200+ experts, 20 types of aircraft and more than 170 aircraft located on 15 national airbases. We plan, task, command and control on a 24/7/365 basis worldwide missions from our headquarters hosted at Eindhoven air base in the Netherlands.

EATC's overall mission is to enhance the combined operational capabilities of the member nations, through effectiveness, efficiency and an increased level of interoperability. EATC is the centrepiece for Belgium, France, Germany, Italy, Luxembourg, The Netherlands and Spain, to operate their military air mobility assets under one single command with one common set of rules and regulations. In this framework, the nations can pool and share air mobility capabilities, exchange experiences and train together in multinational environments.

The key to EATC's success is the trust and confidence gained from the member nations. The relationship between the partners is founded on an innovative business model where nations transfer authority to EATC over designated assets (Transfer of Authority; TOA). On the other hand, they can revoke this transfer of authority at any moment and safeguard national caveats via the "red card holders" (being the Senior National Representatives at EATC). Services between nations are exchanged via the ATARES system, involving no money exchange.

EATC is not an independent body governing the assigned assets, but is integrated in the national command structures. Consequently, the people working at EATC in fact operate for the nations. They are the link between the national air force/joint operational commands and the executing level.

## A Look at the Organisational Structure

EATC's organisational structure includes the command group and three divisions: the operational division; the functional division; and the policy and support division. All entities are closely interacting and working hand in hand to increase effectiveness and efficiency, and to foster interoperability.

The Commander and the Chief of Staff rotate on a three-year basis between France and Germany. As of 24 September 2020, the Commander is **German Major General (OF-7) Andreas Schick**. The Chief of Staff

### Governance: the MATraC

The Multinational Air Transport Committee or MATraC is the highest decision level and composed of the air chiefs of the member nations. The chairperson is chosen among the air chiefs for a two years term. MATraC issues directives to the EATC Commander, takes common decisions on policy issues and approves the budget as well as the peace time establishment.

*EATC Headquarters located at Eindhoven Air Base.  
(Photo: EATC)*





## History

- EATC's origins retrace to decisive statements from 1999. The NATO Summit in Washington D.C. identified shortfalls regarding strategic means of transportation. The EU Helsinki Summit declared strategic transport a priority capability gap to be included into the "European Capability Action Plan" and welcomed the decisions announced by some nations to establish a European Air Transport Command. France and Germany launched the initiative to "start preparing the establishment of a European Air Transport Command."
- They mandated the European Air Group (EAG) to study the European cooperation in the military air transport domain and only one year later, in June 2001, the "European Airlift Coordination Cell" was established. This cell was exclusively in charge of coordinating airlift missions for the seven EAG member nations. In 2004, the nations decided to go a step further and created the European Airlift Centre (EAC) with a broader planning authority and capability. The EAC was also mandated to harmonise procedures and regulations. However, the EAC and the still existing national structures were competing and the results did not tally with the expectations.
- In 2006, the nations decided to take another step forward. On the one hand they merged the EAC with the "Sealift Coordination Centre" to launch the "Movement Coordination Centre Europe". On the other hand, France and Germany decided to replace national structures and create a multinational air transport command. Belgium and The Netherlands joined the initiative within months.
- The four nations laid out their ideas in a common concept and tasked an implementation team based at Beauvechain Air Base in Belgium, to translate the concept into reality. They also decided to establish the future EATC on the military airbase in Eindhoven, the Netherlands.
- The efforts of the implementation team drew to a close on 30 June 2010, when the four Ministers of Defence signed the "Technical Arrangement" officially establishing EATC. Two months later, on 1 September 2010, EATC was formally inaugurated. In only one month, it ramped up to the full strength of 155 personnel under the command of the German Commander, Major General Both. Luxembourg and Spain were granted observer status during the whole process and they formalised their accession respectively in 2012 and 2014, respectively. Italy joined EATC at the end of 2014.

is French **Brigadier General (OF-6) Stéphane Gourg**. The Deputy Commander rotates on a three-year basis between Italy, Belgium, Spain and The Netherlands. On 28 September 2020, Belgian **Brigadier General (OF-6) Paul Desair** took over the position as Deputy Commander.

The member nations are represented within the headquarters by SNRs. These positions are double-hatted: on the one hand SNRs act as national superior for their personnel assigned to EATC and interface between EATC and their respective nation. On the other hand, they hold the rotational positions of the division heads and the deputy division heads, as well as head Public Affairs Office.

The **Operational Division** manages all processes related to the execution of EATC air mobility missions. The division runs a daily average of 60 missions throughout the world thanks to its five integrated branches. The tasking branch plans and prepares the air transport and AAR missions, whereas the aeromedical evacuation branch manages the strategic medical missions. All choose the asset which fits the requirements of the mission at hand best, thus striving to fulfil the national request as efficiently as possible. In parallel, the intelligence branch monitors, analyses and disseminates information with regard to areas of interest or strategic relevant domains. The branch also delivers threat assessment to the mission control, thus playing a crucial role in a successful mission execution.

At the end of the process, they hand over the approved mission to the mission control branch. This centre works on 24/7 duty. It monitors all flight activities under the responsibility of EATC, pro-actively manages unplanned circumstances impacting the schedule, as well as provides quality service and cost-effective plans in the interest of the member nations' requirements.

The division is also supported by the MEAT branch. MEAT is a unique C2 software at the heart of the EATC's air mobility process. It is regularly re-tailored to the national needs. An evolutionary step will be introduced with "MEAT New Generation" leading EATC into the future.

The **Functional Division** acts as the key enabler to promote harmonisation, standardisation and interoperability. The division fosters interoperability through harmonisation of procedures and joint multinational training. It is divided into three branches: employment, technical & logistics and training & exercises. The branches are strongly interrelated and work in close interdependent coordination, with in particular the operational division, as well as national partners.

The Employment and Technical & Logistics branch translates the operational results into concepts, procedures, common standards and



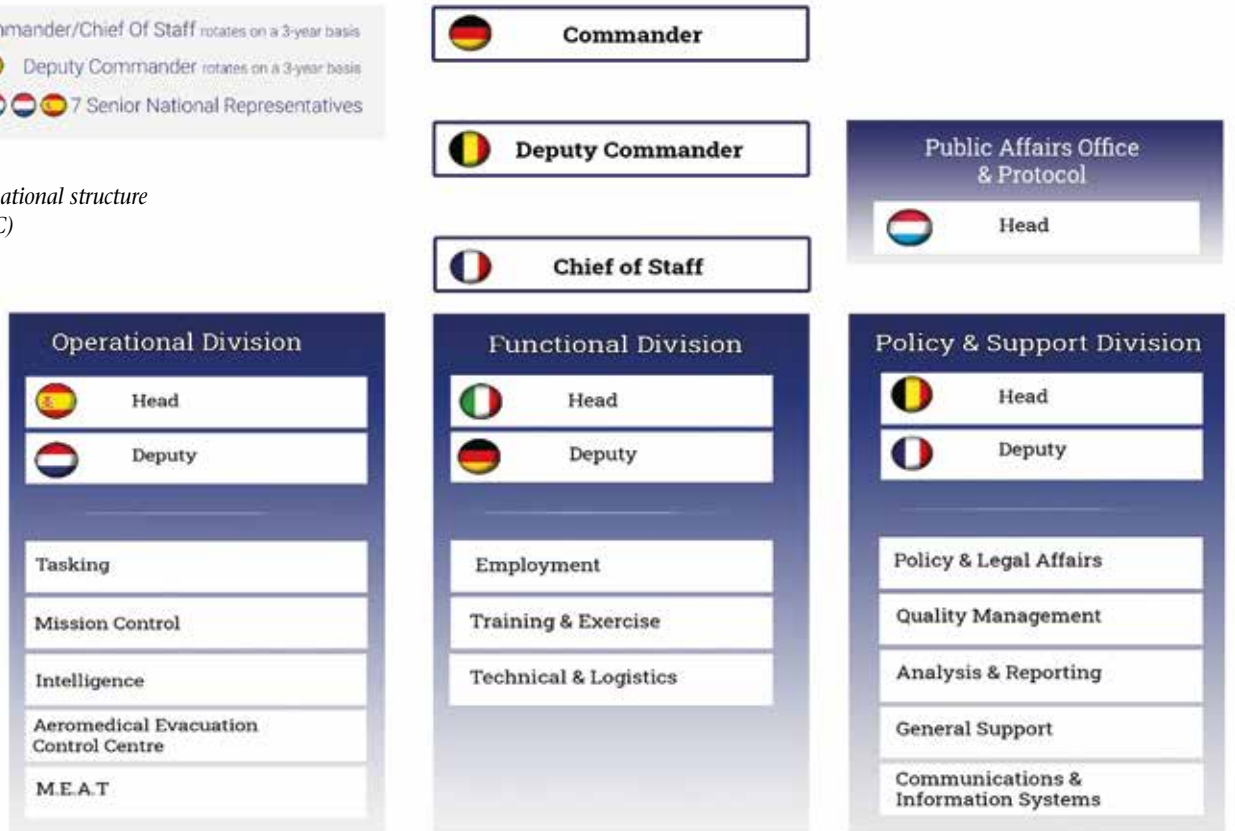
EATC's state-of-the-art assets. (Graphic: EATC/MMU/respective air forces)





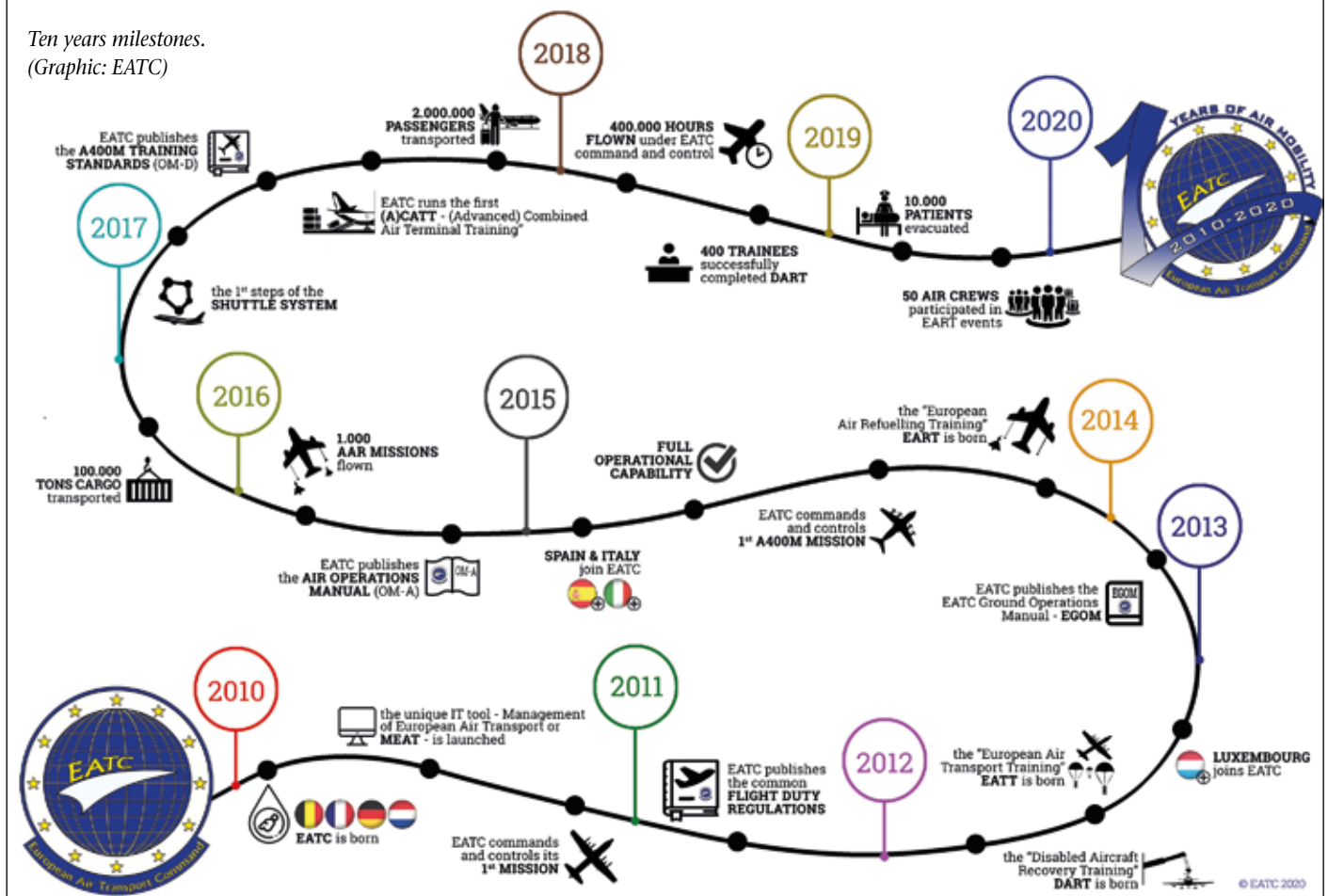
Commander/Chief Of Staff rotates on a 3-year basis  
 Deputy Commander rotates on a 3-year basis  
 7 Senior National Representatives

EATC's organisational structure  
(Graphic: EATC)



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Ten years milestones.  
(Graphic: EATC)



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**Statistics**

	<b>2019</b>	<b>2020</b>
• Total flying hours:	47,166	47,203
• Flying hours per domain:	45,041 (air transport)	45,247
	2,125 (AAR)	1,956
• Missions* flown:	7,434	7,633
• Passengers transported:	188,085	154,900
• Paratroopers dropped:	93,873	78,691
• AAR missions:	469	516
• Tonnes of cargo transported:	19,942	22,215

\* consist of single flights and may last several days.

innovative opportunities regarding the utilisation of assets, logistics, air-lift, airdrops, AAR, ground maintenance and much more. The output is laid down in documents such as the EATC Operations Manual, the EATC Ground Operations Manual (EGOM), the cross-para booklet, the yearly fleet review or concepts for A400M cross-exchange of technicians.

The Training & Exercises branch translates these achievements into multinational training events, such as EART, DART or CATO courses, CATT and ACATT. The branch also supports ETAP.

The **Policy and Support Division** liaises with external actors and supports the activities of the headquarters. The division is structured in five branches: Policy & Legal, Communication and Information Systems (CIS), Analysis & Reporting, Quality Management and General Support. The Policy and Legal affairs branch plays a leading role coordinating with the member nations and third parties. This is of utmost importance, as EATC draws on strong cooperation with other European stakeholders in the air mobility domain. The branch also develops long and medium-term strategies, common policy and legal frameworks. EATC CIS experts support the set-up the EATC IT and prepare it to the requirements of this new decade.

The Analysis and Reporting branch offers mission analysis and statistics to the member nations to facilitate the identification and monitoring of

critical indicators. It is also responsible for the ATARES accountancy of exchanged flying hours and services between the EATC member nations.

The Quality Management branch oversees and coordinates all activities and processes in EATC, whereas the administrative and financial support is managed through the General Support branch. The latter is also the liaison to the host nation and Eindhoven airbase.

**What Do We Do? AIR MOBILITY!**

EATC delivers air transport solutions in the domain of air mobility: air transport, AAR and aeromedical evacuation. Moreover, EATC looks beyond the daily business and works on smarter solutions to pool and share, harmonises processes, standardises procedures and facilitates interoperability.

**Air transport** includes cargo and passenger transportation among others supporting troops in operations and trainings all over the globe, VIP flights, paratroopers or cargo drops and much more. EATC also aims to increase the performance level of the nation's air transport capabilities and provides concepts on how to proceed in the future. One example is the introduction of a shared inter-theatre shuttle system combined in the long term with a so-called hub-and-spoke system.

**AAR** is a major air power force multiplier: it enables the ability to extend the range, endurance, payload and flexibility of a receiver aircraft. Today, all EATC member nations own AAR assets, either on a national basis or through multinational units. During operations, AAR tankers are often a pooled asset: a tanker from one nation may be required to refuel an aircraft from another nation. Interoperability is, therefore, essential for success.

**Aeromedical evacuation** is a tremendous morale booster for deployed troops. EATC plans strategic aeromedical evacuations of injured or sick persons by air assets from anywhere in the world to the patient's home country, or to a safe place where appropriate medical care is available. Cross-national missions – where a patient is transported by another nation's asset – have proven to be an effective tool to cope with the current pandemic challenges.



*EATC's mission control experts on their 24/7 duty.  
(Photo: EATC)*



# “Train As You Fight, Together!”



*French, German, Italian and Dutch tankers during EART.  
(Photos: G.J.A. van Boven/EATC)*

Precisely when shortages are visible, some imaginative ideas spring up, to preserve a certain culture and maintain what has been achieved. As far as EATC is concerned, lack of assets to fulfil all important air mobility tasks often causes a decrease in training, which can lead to loss of proficiency. However, it has been proven throughout history that a shortfall, if well-managed, can become an opportunity for improvement.

EATC's Training and Exercises Branch (known as TREX) promotes multinational training events and courses to achieve harmonisation and standardisation in the whole air mobility arena, always bearing in mind a cost-effective approach. Different domains are handled by experts, who think up, plan and run projects not only for the benefit of the seven EATC member nations, but also for non-EATC partners. AAR, ground handling, maintenance or tactical airlift are key capabilities that nations are willing to improve by developing common tactics, techniques and procedures. Common documentation, shared experiences and strong networking are of utmost importance to achieve the desired end state of being able to fight together in operations.

“Train as you fight, fight as you train” is a very well-known motto in European air forces, which should be followed by the phrase “and always in a harmonised and standardised way with your partners and allies”.

## “The Line Between Disorder and Order Lies in Logistics”

Usually in our air forces, the ‘iron’ – or today carbon fibre – birds and their flight crews are the visible spearhead of air power. However, EATC is fully aware that supporting functions are indisputably required to achieve

successful air mobility operations. Furthermore, harmonising supporting functions unquestionably benefit several domains.

Therefore, ground handling operations are a key domain for enhanced interoperability in air mobility. TREX developed two exclusive events fully dedicated to the personnel of the ground handling units when it took over from the EAG in 2016: the CATT and the ACATT.

Both trainings aim at training handlers and processing passengers, luggage and cargo in a multinational environment. Strengthening existing skills and improving interoperability among the participants are objectives of both events. These objectives are met through familiarisation with multinational processes, specified in EATC documents. Thanks to both academics and “on the job training” covering the whole scale of handling operations, trainees enhance their knowledge of airlift related logistic operations, material and handling

equipment used by EATC and EAG nations. Since 2017, CATT is held at the home of Italian 3rd Wing in Villafranca di Verona, and since 2019, ACATT is hosted by the German Airborne and Airmobile Training School in Altenstadt.

TREX always strives for improvements of trainings, taking into account the needs and requirements of the member nations and the experts. To support EATC's endeavours, an impressive virtual reality training system with the use of an A400M mock-up was developed by Germany. This system offers a 360-degree virtual environment for training and will hopefully enrich the entire EATC community of ground handlers in the future.

Another support function where EATC plays an important role is maintenance. This is a vast area encompassing several sub-domains like cross servicing, repairs, spare parts management or recovery. In the near future, TREX will develop cross-maintenance training events in close coordination with other EATC branches. The output will support the overarching EATC project to enable nations to create multinational maintenance teams for combined deployments.

EATC also concentrates on rare capacities. The EATC fleet is so heterogeneous that removal/recovery of disabled aircraft becomes more and more complex. For most forces, it is neither economically lucrative to procure and to store all the necessary equipment for each aircraft, nor to provide manpower with required qualifications. Consequently, multinational cooperation has been established in the scope of removing immobilised or disabled military aircraft. The main goal of this cooperation is to ultimately reduce the logistical footprint by pooling and sharing required equipment.

Part of this initiative is a multinational DART, which is organised by EATC. It offers the perfect environment to achieve a certain level of interoperability in aircraft recovery and to proof and train on new means. Since 2012, about 400 trainees from EATC countries and partner nations



have been successfully trained. DART originally started as a training for team members. Since 2019, a Disabled Aircraft Recovery Officer (DARO) training for team leaders has been added. This event combines theoretical preparation with a live DART.

## Fuelling Fixed Wings' Interoperability

Already in 2012, AAR was identified as a capability shortfall in Europe and a plan to further develop this capability was set up by the EDA. Lessons learnt from operations led to an assessment, that more training dedicated to tanker crews was needed. Therefore, EATC, supported by EDA, developed the sole European training event for tanker aircraft, the EART. EART is organised yearly in conjunction with a large fighter exercise like the Dutch FRISIAN FLAG or the Spanish OCEAN SKY, and aims at training tanker air and ground crews and increasing their know-how in complex multinational scenarios. The event is also a unique opportunity for exchanging information and procedures and building interoperability within the European AAR community. EART is also used as a test-bed by EATC experts to develop and refine common procedures and receive immediate feedback from all actors.

EART was initially designed for strategic tankers, like A330 MRTT or KC767. Today, we also focus on more tactical assets like the A400M or the KC130J to perform AAR missions in support of fixed or rotary wings. In order to foster interoperability in this area, EATC just recently started to investigate new training opportunities.

In the early 2000s, the situation of the tactical airlift domain had similarities with that of AAR. Under the umbrella of European Air Transport Fleet (EATF) programme (led by EDA), European partners identified the lack of multinational air transport training events as a major shortfall in Europe. Therefore, they committed to deliver a series of exercises or trainings. EATC was asked to support the initial implementation of this project and developed – together with EATF nations – a training and a course both dedicated to tactical airlift. After several iterations, those events were merged into a single programme known as ETAP. To facilitate the execution of

single training events, a standing organisation, the ETAC was founded in Zaragoza (Spain) in 2017.

The ETAP objective, shared by EATC, is the enhancement of the European tactical airlift operational capability, through pooling and sharing of experience, best practice, training opportunities and organisational costs.

Although aircrews are the primary training audience of ETAP, the programme has been evolving, providing participants with the opportunity to receive flexible training in the aforementioned fields of supporting functions. EATC is leading the development and the execution of these additional training modules dedicated, for instance, to maintenance teams, CATO crews or paratroopers.

In addition to ETAP and other multinational exercises, TREX also fosters cross-participation. It is defined as the notion of inviting partner countries to participate in national trainings or exercises. Exchange of know-how and culture undoubtedly strengthens interoperability. Through yearly conferences and continuous exchange of information, TREX encourages nations to share their training opportunities. The long-lasting shortfall of assets in the last decades prevented this idea from reaching full cruise speed, though the current increase of airlifters should entail more cooperation.

## Side Aspect: Benefiting From Distance Learning

Like any organisation, EATC improves and refines its own processes and products for the benefit of its seven air forces. Improving the training events means enhancing outputs and optimising resources. TREX identified that some time will be saved for more flying sorties or practice time by excluding academics from the real events, and choosing distance learning to prepare every participant beforehand.

TREX developed several online courses in coordination with other EATC branches and national experts. These modules are used by the ETAC to run ETAP projects. In addition, other EATC-led training events are already supported by distance learning.

During the last five years, this state-of-the-art teaching method has been developed and advanced by TREX staff







◁ French C160 paratrooper and cargo drop training.  
(Photos: French Air Force/Julien Fechter)

members, investing a lot of time with often self-taught skills. It is now time for EATC to move on and professionalise this activity, also reinforced by the COVID-19 crisis. Thanks to the setup of a section dedicated to training aids within the TREX branch, EATC's ambition is to provide highly interactive, modern products and to take a new step in supporting force generation and interoperability building.

## Conclusion

Flavius Josephus wrote, *"Their exercises are unbloody battles, and their battles bloody exercises."* No activity better prepares for combat than combat itself. Therefore, military training should be realistic, as close as possible to actual operations. Most recent operations, conducted by European nations, were handled in coalition, together with allies and partners.

The functional mission of EATC is to enhance interoperability in the air mobility area, in order to enable a more efficient and effective use of assets in combined operations. Multinational training is evidently required to achieve this task.

Hence, EATC's TREX branch is fully engaged in the development and support of multinational training events and exercises. Training together in nearly every air mobility field is a key to success for all existent and future operations.

**EATC TREX Branch**



Multinational disabled air recovery training.  
(Photo: EATC)



## Documents, Concepts, Interoperability Shaping the Future!

Since it was established in 2010, EATC has raised the level of interoperability in the air mobility domain. This is done through harmonisation of procedures and creation of common doctrines, as well as through joint multinational training. The overall aim is to enable the air forces of the member nations to better conduct joint and combined operations.

### Interoperability is Key

Interoperability also is a key element for EATC to coordinate the smooth transition towards successful entry-into-service of the new common fleets like the A400M, C-130J and A330 MRTT. Procuring the same air-frame does not necessarily mean that one can effortlessly exchange air/ground-crews or equipment nor spare parts. Or that one can operate under the same regulations and procedures. On the other hand, operating multinationally and being efficient in joint and combined operations is the ultimate benchmark today. However, speaking the same military language among partners remains a challenge and this is why EATC attaches a high priority in fostering interoperability, thus enhancing the ability to operate together and achieving the best utilisation of air mobility assets.

### How to Pool and Share Personnel and Material in an Efficient Manner?

If someone asks EATC's Functional Division, there is one prevailing answer: more harmonisation leads to a higher level of interoperability. The Functional Division stands up for exactly this and is responsible to develop EATC's common doctrines and concepts, procedures and standards for all areas of air mobility. We work in the following three domains: the Employment Branch focuses on aeronautical operational aspects; the Technical and Logistics Branch concentrates on ground support aspects of air mobility operations; and the Training and Exercises Branch uses their results to develop training scenarios and prepare trainings and exercises.

Several studies and reports on 'lessons learned' show the importance of involving stakeholders during the whole product development to avoid complex and unsatisfying results. This is one of the reasons why EATC interlinked the functional and operational domains into its structure. The Operational Division commands and controls the member nations' transferred aircraft. The Functional Division translates the operational results into harmonisation of planning and usage of airlift capabilities, providing solution-oriented doctrines, leading multinational training events and ultimately offering imperatives for real-life operations.



*A330 MMU air-to-air refuels German fighters.  
(Photo: MMU)*



To understand the importance of harmonisation, a quick look into the composition of the EATC fleet will help. Each aircraft transferred to the EATC is legally still bonded to its national regulations. This regards crew rest, loading capability of an aircraft, night flying regulations and much more. Differing procedures could hamper the preparation and conduct of

operations, and possibly result in inaccuracies during a flight operation, even jeopardising the flight safety. Common procedures should prevent this and are the prerequisite for applying the Pooling & Sharing principle and simplifying the tasking, planning and mission control of air transport operations.



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*French and German crews working together.  
(Photo: EATC)*

To achieve 100% of harmonisation still seems out of reach at the moment. However, focusing on reducing national regulations by transferring them into common manuals, paves the way for this development. One significant objective of the Functional Division, therefore, is to provide an EATC Operations Manual to the operators. The document is updated continuously in order, among others, to optimise standardisation and harmonisation among the member nations. This manual comprises several subparts, covering all the different aspects required for the safe, effective and efficient conduct of air transport operations. This includes, but is not limited to, regulations, training, qualifications, ground handling, risk management and tactical employment. Thus, the EATC Operations Manual forms the basis for day-to-day operations and deployments.

## How to Develop and Improve Doctrines and Concepts?

This is done via a straightforward process flow in coordination with the member nations. The basis of any common output is a study under EATC lead. The steps to request, initiate, conduct and implement the results of a study are pre-set in a dynamic process. For example, a study can be initiated by one of our member nations or by EATC. The reasons can be manifold, such as national requirements or operational/functional needs. In any case, all our studies benefit our member nations. Once the study is initiated, EATC thoroughly investigates the outline and goals, as well as possible opportunities and risks. Eventually, after this assessment, the study is launched.

Let us have a look at the development of concepts where the cross-certification of A400M aircraft maintenance is a perfect example. This overall A400M project is a milestone in interoperability in the history of EATC and from the earliest stage of the development of the programme, a distinguished example of European cooperation. The study on cross-certification was initiated by EATC in cooperation with all A400M EATC

user nations. In 2019, EATC launched the “EATC A400M Cross-Exchange of Technicians Manual”. It enables nations to integrate technicians from foreign military Approved Maintenance Organisation to perform together maintenance on the same type of aircraft.<sup>[1]</sup>

The next step was made in 2020 when EATC established the EATC Cross-Maintenance Working Group. The objective is to develop a common concept to enable member nations to perform cross-maintenance on a standardised basis. In an initial phase the group focuses on the A400M, but will extend in the future its efforts to other aircraft types like C-130J and A330 MRTT. Cross-maintenance is a priority of the EATC Commander for the upcoming years. To Major-General Schick, it is essential to intensify the mutual acceptance between the nations on the maintenance and the aircrew side as cross-certification of national authority has the potential to be a significant force multiplier for air power.

## Why is the EGOM a Significant Step to Foster EATC's Interoperability Efforts?

Because ground handling is an important part of an effective and efficient military air mobility. The EATC Ground Operations Manual (EGOM) was introduced in 2016 with the ultimate goal to ensure safe, efficient and consistent ground operations activities. The overall objective is that all users (executing agencies, load preparation units, handling personnel, crewmembers, passengers) work according the same rules with the same documents. This is why the EGOM offers common standards on passengers, baggage and cargo handling, but also on aircraft handling, airside security and load control. By applying the EGOM, a designated operating base of one nation can receive cargo or passengers from another nation, inspect and prepare these for air transport and subsequently load them onto any aircraft.

Since it was released five years ago, the EGOM proved successful far beyond EATC nations' borders, fostering a high level of interoperability





in Europe. Several non-EATC nations and multinational entities are using these common procedures on a daily basis.

But EATC will now tackle the next challenge: to have a unique standard Cargo Load Clearance procedure, i.e. using the same schemes and principles to tie-down cargo load. This will give EATC and the member nations the highest interoperability level in air cargo transportation.

(see EATC's webpage <https://eatc-mil.com/en/info-hub/eatc-documentation>)

## What Happens After a Concept, Procedure or Doctrine is Finalised?

As mentioned earlier, it is important to involve all stakeholders during the product development. But this is also true once the product is developed, or in our case, once a documentation is released. This is why EATC experts are continuously staying in close contact with all involved national actors. For instance, they provide assistance and expertise on the implementation and application of the EATC doctrines and concepts in the member nations. They also organise and lead multinational trainings and courses based on the common documentation. This "full service" can also be requested by non-EATC nations.

This is the foundation of EATC's cooperative effort: only through gained interoperability and common procedures will Europe be more efficient in operations. The training environment will change in the future as digitisation is gaining in importance. The relevance was reinforced by the consequences of the worldwide COVID-19 pandemic.

The development of a fully functional distance learning environment currently is one of the biggest challenges within EATC. Today, the concept is in its early stages. Some initial ideas are to include distance learning via

virtual classrooms with online whiteboards and screen sharing capabilities, allowing the highest level of interaction between the student and the supervisor. Crews and other personnel attending multinational trainings and courses will be able to prepare in advance via study academics. This provides a tremendous advantage and offers more time for live training.

## Conclusion

The Functional Division is a crucial element within EATC to achieve effective and efficient pooling and sharing. The key to success is listening to the needs of the member nations, recognising future challenges, identifying problems, understanding them, providing feasible solutions and offering opportunities for testing and implementing those solutions. This is only possible through the professional and committed experts who have characterised the Functional Division in the past ten years. The personnel offers a remarkable and wide-ranged expertise in all sophisticated fields of air mobility.

EATC will continue its cooperative effort to develop and improve aeronautical operational and ground support related air transport documents, concepts and doctrines, and to prove them through multinational trainings and exercises. These achievements will guarantee that through the highest level of interoperability and increased common procedures, EATC's nations will be even more effective and efficient in joint and combined operations.



<sup>[1]</sup> An Approved Maintenance Organisation in the context of aviation is similar to a certified garage where you bring in a car for inspection while retaining all warranties and liabilities.

## COMMITMENT IN ACTION

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# A Glimpse at the EATC Fleet

The so-called “EATC fleet” comprises more than 170 assets that the seven member nations transferred under EATC’s authority. These assets are stationed on national bases in the member nations. They represent approximately 20 different types of aircraft and are divided into a tactical, wide body and narrow body fleet. Moreover, some are also AAR-capable.

## The Tactical Fleet...

...comprises the Airbus A400M Atlas, Lockheed C160 Transall, Lockheed C130 Hercules, Lockheed C130J Super Hercules, Casa CN235, Casa C295 and C27J Spartan assets. In 2020, the fleet performed nearly 6,500 missions. The pandemic influenced, of course, the activity of the fleet. As such missions were shortened in time or directed to single destinations. This was necessary to avoid for example double crews on board and limit the risk of infections. Moreover, many training and exercises were cancelled in the first year of the pandemic.

While Germany and France are decommissioning their legacy transport aircraft (C160), Belgium and Spain are replacing the C130H. On the other hand, five EATC nations ramp up the A400M fleet: Belgium, France, Germany, Luxembourg and Spain. In 2021, ten additional A400M will be integrated into the fleet and in the coming years, the tactical operational burden will rely mainly on the 102 A400M foreseen to be operational as of 2025.

## The Wide Body Fleet...

...refers for example to the Airbus A310, Boeing KC767A, McDonnell Douglas KDC10, Airbus A330-200 and Airbus A330 MRTT (Multi Role Tanker Transport Aircraft). In 2020, the fleet executed more than 1,200 missions, including missions by assets not permanently under EATC’s authority. Assets such as the German A340 and A350, Spanish A310 or French A330 MRTT may be under EATC’s authority for a limited period of time or reduced number of missions. They are then fully integrated into EATC’s processes. This offers EATC the possibility to fall back on a larger number of aircraft. The nations are given the opportunity to pool and share more extensively.

COVID-19 also influenced the activity of the wide body fleet. Many exercises were cancelled in the first year of the pandemic, whereas social distancing and imposed buffer zones between the passengers and the crews increased the number of missions, for instance, in the framework of the troop rotation from theatres of operations.

Two French A340 were decommissioned in 2020 and have been replaced at the end of 2020 by A330-200 assets. Moreover, the German

A310 fleet and the KDC10 will be replaced in the second semester of 2021. On the other hand, the Multinational MRTT Unit (MMU) in Eindhoven will ramp up its fleet. The MMU comprises six nations: four EATC members (Belgium, Germany, Luxembourg and The Netherlands) plus Norway and the Czech Republic. In 2025, the MMU will operate nine aircraft, whereas in the long term, France will operate 15 A330 MRTT.

## The Narrow Body Fleet...

...is the smallest of EATC’s fleets performing nearly 550 missions in 2020. It includes the Dutch Gulfstream, as well as the Belgian Airbus A321 and Dassault Falcon 7x, replacing the decommissioned Embraer ERJ135/145 assets. Moreover, the German (Bombardier BD700) and Spanish (Dassault Falcon 900) corporate assets are temporarily under EATC’s authority.

The narrow body fleet remains a rare resource for the transportation of VIPs and small groups of passengers. The pandemic reduced the demand to transport VIPs or passengers as meetings, trainings or conferences were cancelled. This left more possibilities to deploy the assets for logistical missions.

## Civilian Contracted Assets...

...enrich EATC’s fleet for aeromedical evacuation and cargo transportation. These assets are not under EATC’s authority as such. However, the planning and tasking is done according to EATC’s processes and the missions are executed under EATC’s authority.

## The AAR Focus...

...in 2020 was on the strategic tanker including the German A310 MRTT, Italian KC767A, the Dutch KDC10 or A330MRTT, or tactical tankers such as the German A400M, French and Italian KC130J, or French C160NG. Spanish and French A400M are also AAR-capable. In 2020, EATC commanded 27 AAR assets. This number will increase further in the coming years when for instance the A400M and A330 reach full AAR operability.

## The Figures of the Past...

...from the day EATC was established in 2010 until the end 2020:

- nearly 500,000 flying hours achieved;
- over 80,000 missions flown;
- more than 11,000 patients managed;







*A glimpse of EATC's diversity.  
(Photos: EATC/Respective Air Forces)*

- over 2 million passengers transported;
- nearly 950,000 paratroopers dropped;
- almost 3,500 AAR missions flown;
- nearly 200,000 tonnes of cargo transported

## The Future...

...looks ahead at a new generation fleet centred on the A400M or the C130J, together with a solid pillar on the B767 and the A330 MRTT. These four air assets will constitute a robust backbone of the fleet for military air transport, air-to-air refuelling and aeromedical evacuation.



*Luxembourg and Belgian A400M  
at their binational unit in Melsbroek (Belgium).  
(Photo: Belgian Air Component/Kristof Moens)*



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These state-of-the-art aircraft will enhance the capabilities of EATC both from a quantitative and a qualitative point of view. New-generation assets will be operated under the framework of the European Military Airworthiness Requirements (EMAR), meaning that EATC member nations are to implement the EMAR into a national regulatory framework. As a consequence, it facilitates airworthiness recognition amongst member nations and paves the way for more interoperability.

The capacity of transport will rise considerably in terms of passengers, payload and volume. The A400M significantly improves the capability to deliver, faster and further, medium-weight forces, larger equipment and robust cargo. This is because of its strategic skills and tactical ability to operate from virtually any unpaved landing zone. Cargo or forces are delivered closer to the location of employment or need. At the same time, there will be a significant increase in the AAR capacity and the current capacity will be tripled with the ramp up of the A330 MRTT, as well as the use of central units or wing kits on both the A400M and the KC130J.

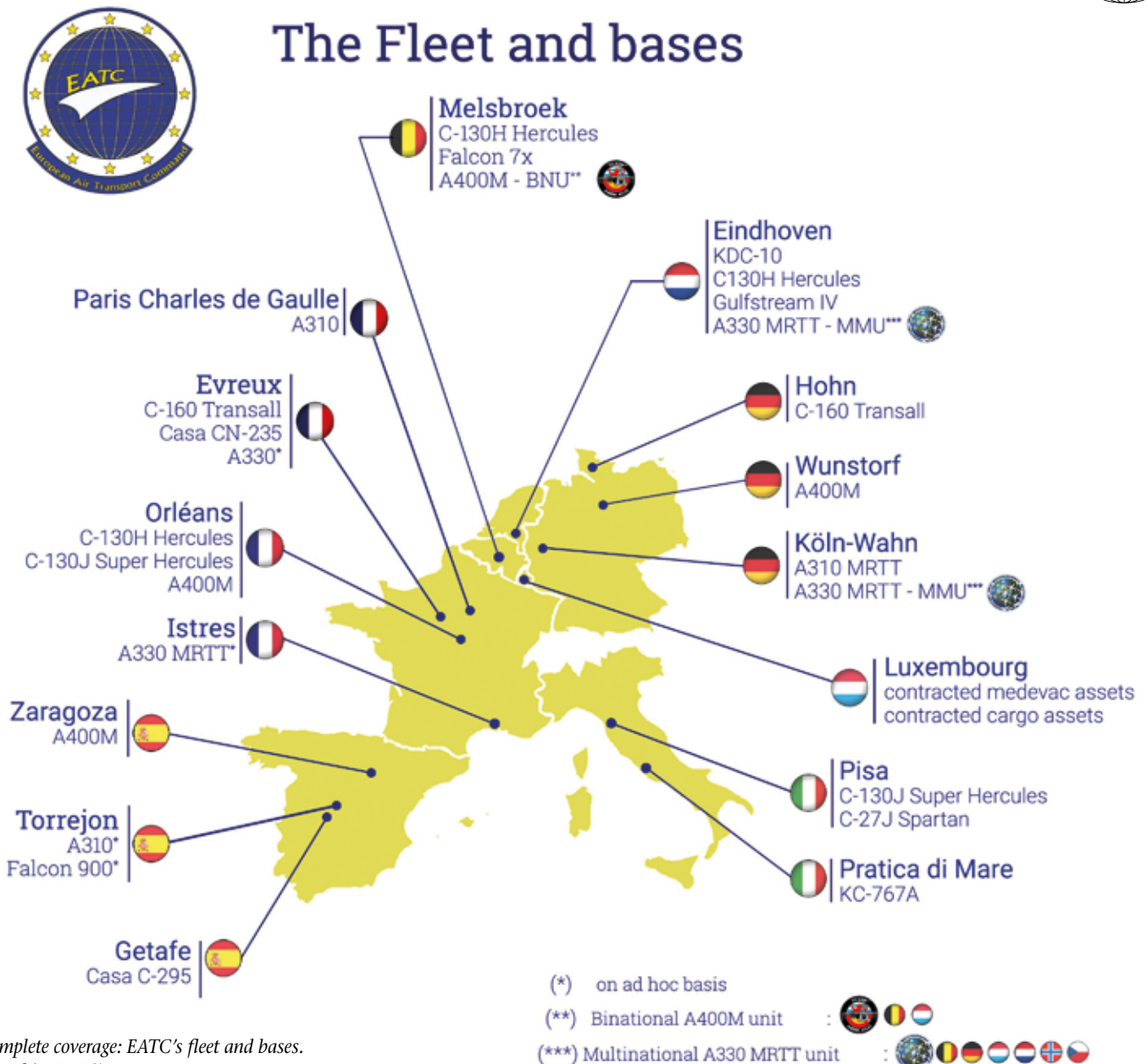
The A330 MRTT also provides a new real multi-mission capability. Whereas multi-role aircraft can be quickly configured to perform a specific role, a multi-mission asset can carry out more than one role in a single

mission. For instance, a A330 MRTT transports German passengers and Dutch cargo from Cologne to Mali. Over the Mediterranean Sea, the aircraft air-to-air refuels French fighters and on the way back, the A330 MRTT boards two Italian heavy injured patients and transports them to Rome.

## Conclusion

At the end of the day, the nations decide on how "EATC's air mobility fleet" looks like, which assets they commit to the fleet and what the future will offer. The nations host the aircraft, maintain them and fly the missions. They also decide on the planning and designing of their national fleets, thus EATC's multinational fleet, according to their individual national requirements and priorities.

EATC connects the seven custom-made national fleets into one single pooled fleet to be shared among seven nations. This is the basis for EATC's planning and controlling air mobility missions. Connecting seven fleets into one multinational is for sure a challenge, but also an opportunity for common regulatory frameworks, shared lessons learned, exchange of views and, as a bottom line, joint operations.



Complete coverage: EATC's fleet and bases.  
(Graphic: EATC)



*A French helicopter is loaded onto a Spanish A400M.  
(Photo: Spanish Air Force)*



## Reaching Out Through Pooling and Sharing!

April 2021. A French request flashes up in MEAT. A helicopter is to be transported to the United States in order to participate in the aerial combat training exercise called RED FLAG. EATC's planners spring to action. First, they look for a suitable type of aircraft to fit the helicopter. Their decision is swift and precise: an A400M. Then they check which A400M is available to fly the mission on the indicated date. French A400M assets are already engaged elsewhere. But they spot a German A400M that is still available for a mission. The planners coordinate with the German and French national point of contacts. Upon the latter's approval, the mission planning process is launched. But then, the planners and taskers run out of luck! They are only a couple of days before the scheduled departure and everything seems to run at best. Unforeseen circumstances occur: the German A400M is urgently required to support the catastrophic effects of the COVID-19 pandemic in India. Humanitarian aid missions have one of EATC's highest operational criteria prioritisation and precede any logistical missions. A new option needs to be found. The helicopter has to be transported to the United States on time. No delay acceptable! The RED FLAG exercise is going to take off. EATC's experts need to reassess the options and availabilities. They have to find an alternative solution. Without delay as time runs out. Within only a few hours, they manage to earmark a Spanish A400M for the mission. A quick and pragmatic coordination process starts with the Spanish and French representatives.

EATC's experts plan the mission according to the new modalities. From that moment on, no more surprises! EATC's mission control centre commands and controls the mission successfully and the French helicopter participates as planned in the RED FLAG exercise.

This is a perfect example to show what EATC stands for: pooling and sharing air mobility aircraft assets and guaranteeing support to partners when needed. EATC's Pooling & Sharing mechanism is the best and fastest way to find a solution when no national aircraft is available. This is, of course, only possible because EATC member nations are willing to join efforts and to pool their aircraft under one single command. The example also reveals how vital it is to offer streamlined standard procedures. These are necessary to execute successfully air mobility missions, and especially cross-national missions, involving multiple partners. EATC's operational procedures are well defined and revised on a yearly basis between the internal and external actors.

### Who Pays Who?

Our example brings up the question of who pays Spain for providing a service to France. Basically, the two nations may decide bilaterally on any way of settling the bill. However, the principle between the EATC nations is the ATARES agreement.

ATARES does not involve cash exchange. It is based on an Equivalent Flying Hour (EFH) reference, defined as the cost of "one C130/C160



flying hour". All other aircraft types are calculated against this one EFH. To come back to our example, Spain was credited its ATARES balance according to the pre-fixed A400M rate, and France was debited the same amount of EFH. This system is, however, not based on purely bilateral reciprocity. In other words, France and Spain do not have to settle their balance bilaterally, but they operate in a global multinational framework between all ATARES members. All EATC member nations have signed the ATARES agreement and exchange services through this framework.<sup>[1]</sup>

The ATARES agreement offers optimisation of the aircraft available space and exchange of services among our nations. Although ATARES missions, compared to all missions, are outnumbered, these cross-national missions are the essence of the pooling and sharing system and of the continuous search for the maximum effectiveness and efficiency in the use of the available assets.

## In Times of Crisis

This is even more important in times, such as the current COVID-19 pandemic, when the demand exceeds the national capabilities. Having privileged access to the EATC partners' capabilities offers the possibilities to fulfil national needs when own means are not available or already engaged. The beginning of the pandemic resulted in a reduction of the total number of standard missions, caused by a rapidly changing environment and associated restrictive national regulations and procedures. At the same time, however, the needs for aeromedical evacuation and humanitarian aid missions increased significantly. EATC adapted swiftly to the new circumstances, among others thanks to the standing operational procedures. These turned out to be fully adapted to this crisis situation.

To fulfil these increased requirements, EATC experts took advantage of the great variety of available assets capable of supporting the pandemic requirements – from pure logistics up to intensive care missions. In the end, this led to continuous mutual support transporting urgent medical material, repatriating citizens or evacuating patients, thus saving lives and satisfying national demands.

## A Reliable and Efficient Air Network

One of the EATC Commander's priorities for his tenure is to offer as soon as possible a reliable air network. This network of predefined and regular scheduled routes is to serve common destinations with the objective of maximising the use of aircraft's available space. This is a step further in the optimisation of the use of national assets. The concept emerged from the constant strive for better efficiency as well as to respond to the nations' requests to compensate for potential air mobility shortfalls in a transition phase when nations are building up new generation fleets.







In 2018, EATC decided to take a proactive stance. The first step was the introduction of a shared inter-theatre shuttle system: to set up pre-scheduled regular cargo and personnel flights to the most common destinations and to resupplying ongoing operations. The final and more strategic goal will be to set up a flexible and integrated worldwide air mobility network. Main operating bases in the member nations will be connected to each other as well as to land and sea transport solutions (hub-and-spoke system). The aim is to further increase the effectiveness and especially the efficiency of EATC's mission conduct, thus freeing assets to conduct other mission tasks.

Unfortunately, COVID-19 restrictions had an impact on the timelines of this concept. Therefore, a testing phase for the first step at a reduced scale was initiated belated in 2021. Based on known data and a theoretical approach, broad margins for cost-efficiency were identified and three initial "primary routes" were defined. They go to West and Central Africa, as well as the Middle East. These initial bi- or trilateral shuttles are the basis to prove the feasibility

of the concept, to learn initial lessons and to make the necessary adjustments. Initial results are expected this year.

There is still a way to go. We take up the challenge to provide a well-defined multinational air network that will boost the exchange of services among EATC's members and emphasise the value of EATC's pooling and sharing concept.

## Conclusion

EATC's success comes through a comprehensive multinational approach. We are continuously looking for effectiveness and efficiency through our pooling and sharing concept or through innovative solutions.

The cooperative efforts go far beyond commanding missions for the seven member nations. The so-called "Sponsor Nation Concept" is the basic principle support to non-EATC nations or multinational organisations. It is based on the ATARES agreement.<sup>[2]</sup>

EATC's member nations are more than ever committed to the pooling and sharing principle. EATC experiences this engagement on a daily basis. A recent example is the redeployment from Afghanistan where the nations rely on each other to share assets and tasks, and allow a smooth and timely re-deployment of everyone's personnel.



*Dutch C130 and  
German A400M.  
(Photo: Royal Netherlands  
Air Force)*

<sup>[1]</sup> The Movement Coordination Centre Europe (MCCE) hosts the ATARES secretariat that generates and validates the EFH balances of the 28 ATARES member nations. Moreover, the Director MCCE has been elected on a yearly basis to chair the ATARES Coordinating Board.

<sup>[2]</sup> A separate article in this Special Issue provides detailed information on this very interesting policy.



# Aeromedical Evacuation *par excellence!*

*The German A400M can be operated as a flying intensive care unit.  
(Photos: Volker Schubert)*



**A broken leg, a life-threatening injury, malaria or COVID-19 infected – EATC manages timely strategic aeromedical evacuation missions of casualties or sick persons from anywhere in the world to the home country, or to a safe place where the necessary care facilities are available.**

The Aeromedical Evacuation (AE) of patients requests in-depth expertise of medical personnel combined with the know-how in aeromedical transportation. This is why EATC drew on a professional team of flight surgeons and flight nurses, integrated in the operational division: the Aeromedical Evacuation Control Centre (AECC). The team evaluates the AE requests from member nations, chooses the best suited transportation asset for the patient, plans the evacuation mission and supervises each step until the successful completion. This is done in close cooperation with the national authorities.

The overall aim is to offer efficient and effective AE missions to the nations. The patients are often deployed or posted in operations, humanitarian missions, training and exercises, overseas territories, or any

## Aeromedical Evacuation Control Centre (AECC)

The AECC manages the AE of patients on a 24/7/365 basis from all over the world. The multinational team is composed of flight surgeons and flight nurses who have long-lasting experience and know-how in aeromedical transports.

The team:

- plans, coordinates and controls the execution of reliable, cost-effective strategic aeromedical evacuations of injured or sick persons by air assets from anywhere in the world to the patients' home country, or to a safe place where appropriate medical care is available;
- assesses the national requests for AE of patients and provides medical expertise to the nations;
- chooses the best transportation assets with regard to the medical requirement of the patient;
- supervises the evacuation mission;
- develops standardised procedures and cross-national certifications in the AE domain to enhance interoperability.





other temporary duty abroad. Depending on the AECC's assessment, they are evacuated with a dedicated AE asset or on existing routine missions. Any decision by the AECC is coordinated closely with the requesting nation's National Patient Evacuation Coordination Centre. These centres are EATC's single national points of contact, responsible for the medical evacuation of the personnel within the national military system.

The AECC manages approximately 1,000 patients per year. In addition, the COVID-19 pandemic put a strain on AECC and EATC. AECC managed 50% more patients in 2020 and since March 2020 (until end June 2021), the team coordinated the medical evacuation and relocation of nearly 950 infected patients.

### **The National Contribution: Crew, Equipment and Aircraft**

The nations commit their aircraft under EATC's authority for air mobility missions. When it comes to AE missions, they offer also AE crew and the adapted AE equipment, according to the NATO and EU standards.

This entails that AECC has access to a large portfolio of assets to plan and execute AE missions. The diversity of the portfolio offers flexibility, efficiency and effectiveness.

The portfolio includes on the one hand dedicated AE assets ready within hours, such as Luxembourg's contracted civilian assets or the German A310 MRTT. Germany offers one A310 in AE configuration on permanent alert at the Cologne airbase. The aircraft can transport up to 44 patients in a lying mode or six intensive care patients. It will be decommissioned in 2021.

On the other hand, all nations offer air mobility assets that can be used under EATC authority for AE missions. For example, Italy provides assets that may be equipped with special air transport isolators for the safe transport of contagious patients. Others are operated as „flying intensive care units" and offer a maximum of medical treatment for the air transport of injured or sick people in emergency situations, such as A400M and A330 MRTT AE capabilities. The German A400M in AE configuration can be cleared for take-off within twelve hours. The aircraft can host a team of eleven medical specialists who handle six patients simultaneously: two patients for intensive care, two patients for intermediate care and two for low care. The medical crew on board concentrates on the stabilisation



of the patients and on intervening during flight if needed. It goes without saying that the asset offers state-of-the-art medical equipment, a broad range of medicines or bandages.

The multinational A330 MRTT in AE configuration will be located in Germany and operated by a German crew and equipment. It will be operational soon and will then be able to transport up to six intensive care patients over long distances under the most demanding circumstances.

### **Cross-National Missions: the Be All and End All of AE**

AECC is constantly looking for the best solution to evacuate a patient. This means that a patient is not necessarily evacuated by an aircraft provided by his national authorities. AECC always carefully assesses the medical and operational requirements to choose an option that brings back the patient in optimised conditions. So, the patient might be evacuated by another nation's asset.

This so-called "Cross-National Cooperation" offers flexibility for the benefit of the patient. This is only possible thanks to the trust and confidence between the medical personnel, the military command and the political authorities.

Cross National Missions undergo the same process as national missions, though, of course, the coordination is extended to all actors involved: the authorities requesting the AE, as well as those providing the asset. These missions may be executed by a multinational medical team, offering the best possible care to the patient. This presupposes a high standard of interoperability between the nations; thus, it depends on trained personnel for various national AE equipment. During a cross-national flight, all crew members, whatever their nationality, have the same privileges to execute the mission in the best possible way.

Cross-National Missions with mixed medical crew are not as yet carried out routinely. Crises situations such as the COVID-19 pandemic, however, show that the multinational cooperation is the way forward.

### **No Success Without Interoperability, Harmonisation and Cooperation**

Today, EATC and AECC are recognised as a centre of expertise for AE. They are looking back at more than ten years of operational experience, without forgetting that interoperability and harmonisation of concepts are also key for success and safety in the AE domain. This is why the AECC contributes with AE expertise to projects and studies led by EATC's functional division. Moreover, the medical team is carefully paying attention to the nations' needs, optimising the processes accordingly and continuously engineering common approaches to support the member nations in the best possible way. When COVID-19 hit the world, AECC quickly developed procedures for the safe transport of infected patients, responding to the crisis and the nations' new challenges.

The AECC team meets the national counterparts on a yearly basis, discussing subjects, including the standardisation of basic aeromedical evacuation training or how to optimise interaction and ensure quick and reliable reaction to a scenario at hand.

EATC is also offering its expertise to entities such as the European Union Military Staff (EUMS). The first step was done in 2016 with an enhanced cooperation between functional subject matter experts. Since 2020, EATC's medical experts advise the EUMS in the sensitive subject of aeromedical evacuation of patients from EU non-executive missions.

EATC and AECC are striving for more alignment of medical equipment, aircraft configuration or airworthiness certification. This will offer increasing possibilities in a multilateral approach for the transportation of patients, and thereby the best use of EATC on a daily basis.

It is of utmost importance to offer a high standard of medical care in operation and the assurance to bring a patient swiftly home when needed.







◁ A Luxembourg aeromedical evacuation mission under EATC C2.  
(Photo: Luxembourg Air Ambulance)

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*The first European AAR training – EART14 – was conducted alongside the Dutch fighter exercise FRISIAN FLAG 2014 to provide crews with the opportunity to take part in dedicated AAR scenarios embedded in realistic combat situations.*

*(Photo: German Air Force)*







## EATC, the Air-to-Air Refuelling Trademark

**AAR is pooling and sharing *par excellence*. Nowadays, during operations, AAR tankers are often a pooled asset: a tanker from one nation may be required to refuel an aircraft from another nation. Interoperability is therefore key.**

All EATC nations own national or multinational AAR capabilities. This has not always been the case. Since years, AAR was identified as a capability shortfall within EU and NATO. While initially AAR was meant to exclusively refuel strategic bombers, its range widened in our days. Today, most air mobility assets deployed on a theatre of operations can be air-to-air refuelled and the demand has increased correspondingly. Nevertheless, the demand for AAR was not matched with an equivalent increase of AAR capability and Europe suffered a lack of equipment and a lack of interoperability. This situation has changed to some extent with the ramp up of AAR capable state-of-the-art aircraft.

The essence of EATC is to pool and share assets, and to consolidate the operational needs from the seven member nations with the functional requirements to guarantee successful joint military air operations.

### EATC, a Major Player in AAR

AAR has always been one of the main pillars of air mobility for EATC. EATC has developed over the past years a large AAR expertise in the functional and operational domain.

Today, EATC handles more than 500 AAR missions per year. As of 1 July 2021, the fleet includes the KDC10, A310 MRTT, KC767A, KC130J, C160NG, A330 MRTT and several AAR-capable A400M assets. This portfolio gives EATC access to various AAR systems probe-equipped receivers for any kind of AAR asset, helicopters for the tactical EATC fleet, receptacle-equipped receivers for KDC10, A330 MRTT and KC767. The A400M can be used as a tanker when equipped with wing pods.

Although assets such as the Dutch KDC10, German A310 MRTT or French 160NG will soon be decommissioned, the number of tankers under EATC's authority will increase in the coming years when for instance the A400M, KC130J and A330 MRTT reach full AAR operational capability. Thus, as of 2025, the number of AAR missions will increase dramatically and EATC will be confirmed as a major force provider in Europe, with large operational options and reinforced operational effectiveness.



### Force Multiplier

AAR aircraft, usually called tankers, are a force multiplier and critical enabler for the projection of air power. AAR provides an essential capability that increases the range, endurance and flexibility of all capable receivers. Tankers participate in air operations to support a wide range of assets from combat aircraft to Airborne Early Warning (AEW) but also helicopters and transport aircraft. AAR is multidimensional: fuelling in-the-air allows fighters to stay airborne for several hours, offering air support to troops. AAR also maximises the use of AEW aircraft and offers transport aircraft the possibility to execute long range missions without technical stops.

### EATC, a Centre of Expertise for AAR

In 2014, EATC created a dedicated AAR cell in order to optimise the coordination with the national authorities and to build up an in-depth know-how in the AAR domain. This AAR cell is not vested in one single division but draws on the expertise from experts throughout EATC's structure. The cell will ramp up with the completion of the A330 MRTT fleet in 2024 and its full AAR operability.

The AAR cell is a permanent nodal hub delivering a coordinated, efficient and responsive service and ensuring coherence between the member nations. It is in close contact with the National AAR Coordination Centres or NAARCC. The NAARCC are single national point of contacts, gathering the AAR expertise both from a tanker and receiver point of view.

Thanks to a continuous flow of information, the nations and EATC plan AAR missions from an early stage complying with EATC's operational process. This is all the more important that the number of missions will rise once the AAR fleet are fully operational. EATC's AAR cell is also engaged in enhancing interoperability within the AAR community and in standardising AAR related tactics, techniques and procedures in cooperation with the NAARCCs. The last-in-date project is the operations manual "Trail Missions" handbook, which aims to harmonise the planning, tasking and execution of trail missions.

In order to enhance interoperability and in consequence facilitate common operations, EATC offers a unique multinational AAR training, called the European Air Refuelling Training (EART). EATC's Training and Exercises branch leads this event in close interaction with the AAR cell. The aim is to offer realistic scenarios to train tanker crews, planners, taskers and engineers in planning and executing missions in a multinational framework. This is why EATC runs EART in cooperation with major European fighters' exercises.

### Conclusion

EATC proves that it is up to lead the build-up of a European AAR capability. Our processes are well in place. We harmonise documentation, test common standards and evaluate through multinational trainings. The headquarters in Eindhoven gathers highly experienced experts coordinating daily with the national counterparts and taking into account their requirements and needs. EATC, a trademark for AAR!







*A French C135FR  
air-to-air refuelling  
a Rafale fighter jet.  
(Photo: French Air Force)*



*EART 2017:  
view from the "boom" operator screen  
showing the AAR of a NATO Airborne  
Early Warning (AWACS) aircraft. (Photo: EATC)*

*An Italian KC130J during  
an AAR operation with an  
Italian HH-101A helicopter.  
(Photo: Italian Air Force)*





## The Backbone of EATC's Missions!

EATC uses a large variety of software applications and tools to support its daily operations. Some of these tools are off-shelf. But to optimise air mobility on behalf of seven member nations, EATC draws on a unique, tailor-made, in-house solution, called Management of European Air Transport or just MEAT.

### What Makes MEAT Out?

MEAT is EATC's C2 tool *par excellence*. It is an innovative and one-of-a-kind application. It is working in the background, but all the more, it is the backbone of scheduling, planning and conducting of EATC's air mobility missions.

Firstly, MEAT is a made-to-measure sophisticated high-end product. It is developed within EATC for EATC. To this end a group of highly professional experts are integrated into a dedicated branch within EATC's Operational Division. This multinational team is composed of up to 14 military and civilian business analysts, web application developers and test engineers. They are responsible to develop the MEAT software, to

ensure a continuous maintenance of the tool, as well as to re-tailor new functionalities and increase the performance of the application.

Secondly, operational planning for seven nations demands a holistic approach and this is why MEAT connects all actors with one common software system. The stakeholders include the requestors, as well as the executing agencies responsible to fly the missions and of course EATC who plans and executes the missions. This trilateral bond is one of the keys to effective and efficient mission planning. Currently, MEAT registers more than 3,400 authorised users. At peak times more than 900 users connect simultaneously.

Thirdly, MEAT offers – to each and every user – access to a fine degree of detailed up-to-date restricted-classified information. The data includes information on air mobility missions in all different stages of planning or execution, from the initial air transport request up to the final mission report.

Finally, MEAT is revisited continuously to offer at all moments an enhanced tool. To do so, the MEAT team takes into account the needs and requirements of in-house and external users. They organise yearly boards coordinating the various requests for development or improvement. The



◁ Working with MEAT.  
(Photo: EATC)

EATC team also analyse ad-hoc change requests and incident reports adapting the software in consequence.

## From a Classical Software Package to MEAT New Generation

The first MEAT version was launched in 2011 as a classical software package installed on a user's workstation. As of September 2014, MEAT changed into a web-client based network service, hosted by the Dutch Joint Informatie Voorziening Commando.

Now, it is time to look into the new decade and take an evolutionary step with MEAT New Generation (MEAT NG). MEAT NG will be based on evolving legal frameworks and adapted to modern software development tools and designs. It will give the EATC in-house experts the possibility to take into account requests that were not to be implemented by the current setup. Moreover, it will offer new opportunities to approach functional requirements from the users.

EATC plans to release MEAT NG into production in late 2024 or early 2025 with a "minimum viable product". This will include the set of functional features of the last MEAT version, plus several improvements

outlined in an issue-related project initiation document. The transition phase will offer full functionalities to the users and the current MEAT will continue to be developed and maintained until MEAT NG is successfully launched.

## Digitised Operational Air Mobility Management

MEAT is the backbone of EATC's military air mobility efforts. To offer high performance, EATC needs to draw also on complementary applications. This includes, for example, specific software for military flight planning. The output of such a tool is used through data import to support the MEAT application. The military flight planning tool analyses, improves and streamlines redundant tasks through automated workflows. It also maximises payloads with precise, reliable performance calculations and enhances the operational flight plans or optimise route calculation. MEAT and the additional software applications provide fully digitised operational air mobility management. Together, they enhance operations, ensure effectiveness, improve safety and efficiency and ultimately lead to overall readiness.

MEAT NG will lead EATC into the future. As its predecessor, it will be innovative and unique. It will be tailored in-house and meet the needs of the users. It will be the backbone interconnecting all partners via one common, efficient tool for reliable air mobility missions.

**MEAT Branch**



*Italian flight crew inserting the flight plan, with MEAT data, into the aircraft system. (Photo: Italian Air Force)*







NATO cargo being loaded onto a Luxembourg-sponsored flight by an Italian Air Force C27J.  
(Photo: Italian Air Force)



## EATC Sponsor Nation Concept

### How to Sponsor a Mission Within EATC?

EATC's cooperative and coordinated efforts go far beyond planning and commanding missions for its seven member nations: EATC can also support non-EATC nations and multinational entities such as NATO or the EU. This support is based on a dedicated and well-thought-out strand, called EATC's "Sponsor Nation Concept". The concept aims at creating avenues to work closely together and to meet the defence challenges beyond a seven-nation pooling and sharing concept.

### How Does This Sponsorship Work?

If third parties – be it a non-EATC nation or a multinational entity – are in need of AT, AAR or AE, they contact one of the EATC member nations to stage as a sponsor. They may also contact the MCCE to coordinate a sponsorship with an EATC nation. This is a prerequisite, as only EATC member nations can directly request air transport within EATC. First of all, the third party and the EATC sponsor establish a bi-lateral agreement.





Then, the operational process starts: the EATC sponsor introduces the request into EATC's dedicated IT tool called MEAT. This tool lies at the heart of EATC's operational process, connecting EATC's experts and national actors. Subsequently, EATC's tasking branch plans and prepares the required mission on behalf of the EATC requestor and for the benefit of the non-EATC nation or multinational entity. At the end of the operational process, the tasking branch hands over the approved mission to the mission control centre, that monitors the flight activity in the interest of

#### Germany's Sponsorship for Tunisia During the COVID-19 Pandemic

When Tunisia expressed an urgent need for the transportation of medical diagnostic equipment to a military hospital in Tunis, Germany volunteered without hesitation to sponsor the mission within EATC. The Sponsor Nation Concept took its course and the German National Movement Transport Coordination Centre (NMTCC) requested EATC to plan and conduct the mission on its behalf. EATC established the urgency and sensitivity of the mission, among others, as some cargo needed continuous cooling. The experts rapidly identified an already existing mission to Djibouti and decided to reroute this mission via Tunisia. On 17 June 2020, at 08.30 local time, a German A400M aircraft left Wunstorf with the requested cargo on board and landed a few hours later on Cathage Airport near Tunis. On the ground, the German Military Attaché in Tunisia closely coordinated the handling and management of the cargo with the local authorities and the military hospital.

A full success thanks to close cooperation between all actors!

the parties involved. This is a smooth process, where actors are working hand in hand, striving to fulfil national requests as efficiently as possible.

#### Different Levels of Sponsorship

One single EATC member nation can stage as a sponsor, but EATC also foresees the possibilities that more than one or even all EATC member nations co-sponsor missions. The level of sponsorship depends on different factors, such as the scope and extent of the request or national political decisions.

#### What About Refunding for the Services?

The "refunding" for the service is negotiated exclusively between the sponsor nation(s) and the third party, not involving EATC. The options include *pro bono* flights ("free of charge"), payment via the ATARES arrangement, "cash flow" refunding or any other bilateral agreement. The ATARES arrangement offers its members a cash-free invoicing system where the members invoice each other with a virtual currency (01 Equivalent Flying Hour C130). The accounts are managed by MCCE on behalf of the 28 ATARES members.

#### EATC Sponsor Nation Concept and the COVID-19 Pandemic

The Sponsor Nation Concept highly demonstrates how invaluable global cooperative effort is in times of an unpredictable crisis. As of the beginning of the COVID-19 outbreak, EATC stepped up its efforts to comprehensive support. The first missions were requested with urgency to evacuate EU citizens from Wuhan in the People's Republic of China back to their home countries in Europe. But EATC was not to rest on

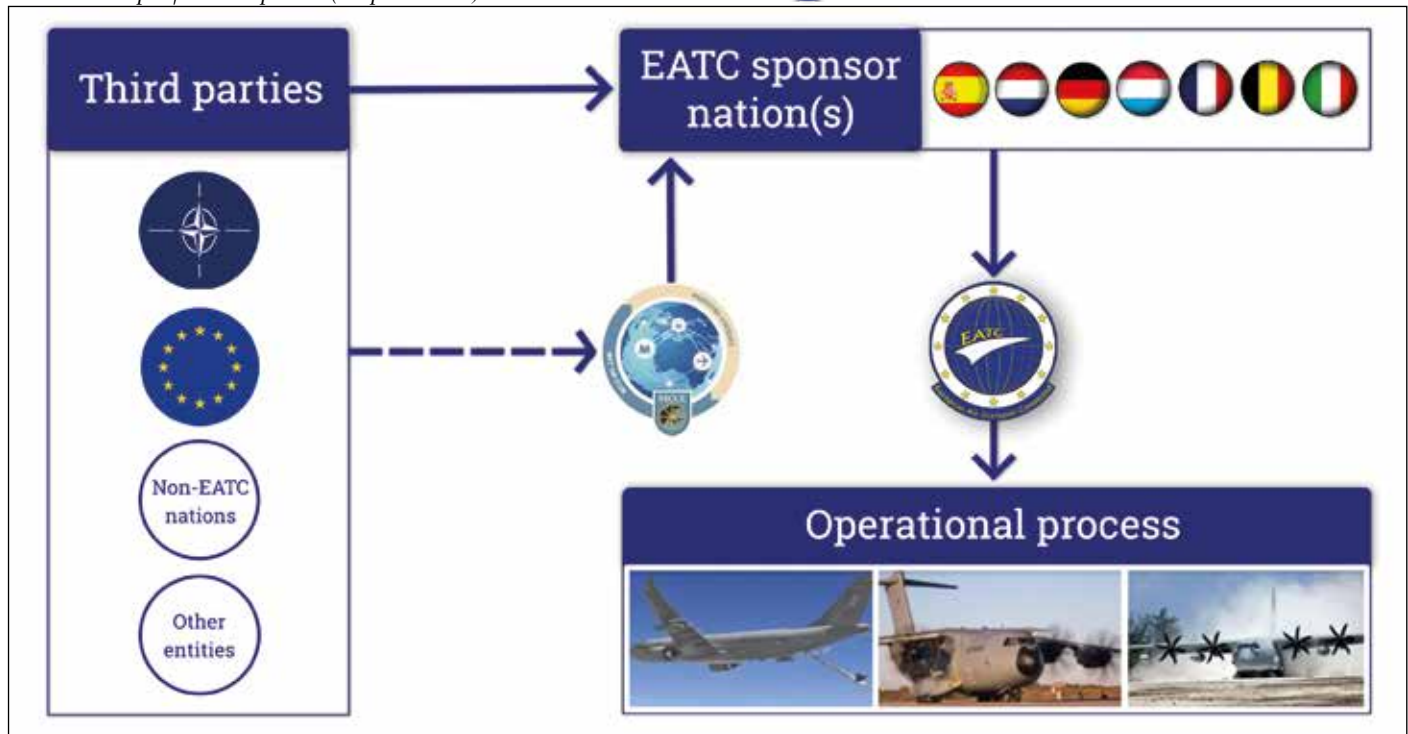
#### Luxembourg Sponsors a Mission for NSPA/NATO

In October 2020, when the pandemic took another upturn, NSPA was looking for a sponsor to transport U.S.-sponsored medical equipment to the Balkan region. Luxembourg agreed to sponsor the mission and addressed an air transport request to EATC. EATC looked for the best solution to swiftly transport the urgently needed equipment to its destination. They decided on an Italian C27J and Italy agreed to fly the mission. The service provided by Italy was refunded by Luxembourg via the ATARES arrangement.

Another example of cooperation success through a comprehensive multinational approach.



Illustration steps of how to sponsor. (Graphic: EATC)



its laurels. Immediate missions to transport medical supplies, to evacuate and relocate patients or bring back personnel from theatre of operations followed. In this respect, EATC member nations took up the role of sponsor-nation for other EU nations, or for partners such as NSPA (NATO Support and Procurement Agency)/NATO, Tunisia, South Korea and

Balkan states. To the Commander EATC, Major-General Andreas Schick, *"the pandemic outbreak emphasizes the value of the sponsor nation concept. EATC's concept is an important step to strengthen, in real terms, defence cooperation and to create effective, cooperative opportunities in air transport."*



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