

THE IMPORTANCE OF DEFENCE INTELLIGENCE IN ENSURING AVIATION SECURITY WITHIN THE AIR TRANSPORT SYSTEM

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Informational support is a fundamental element in decision-making processes. Although the importance and necessity of intelligence has been demonstrated throughout history in armed conflicts, other events with impact on society, such as the terrorist attacks on 11 September 2001, have imposed a change in perception regarding the intelligence support areas of application within the air transport system. Even though aviation safety is the basis of air operations, civil or military, aviation security has become vital due to rapidly and unpredictably changing global security challenges. Nowadays, in the context of global security challenges, lessons learned have led to the involvement of defence information support (intelligence) in ensuring global aviation security; artificial intelligence and advanced technologies enable a quick response to identified threats and risks, an aspect recently demonstrated in the civil air transport system.

Keywords: informational support; aviation security; intelligence; threats; risk;

CONSIDERATIONS REGARDING AIR FORCE INTELLIGENCE

The unique characteristics that differentiate air power from sea or land power generate unique intelligence requirements for supporting air operations. Air power is thus able to respond quickly over long distances and, in various situations, aircraft are the first to reach crisis areas; intelligence support must come in a short time, coherently, from all possible sources so that decision-makers at operational, tactical or strategic level have the necessary information to make decisions in a timely manner. Moreover, air power limitations also generate own intelligence requirements. Transport aircraft and the airports where they operate must be protected; the intelligence product must include assessments of threats nature and capabilities. The number of aircrafts in a country's fleet or organization and their operational costs make them a valuable resource. This aspect, together with the vulnerability to which they are exposed during flight, means that intelligence product must represent an assurance that threats can be avoided or neutralized, when possible. (Keightley, 1996, xi)

Albert Einstein once said: *"The level of intelligence is given by the ability to change"*. These words perfectly summarize the challenges of the world we live in, a world marked by rapid technological developments and a constantly evolving security environment. In this context, threats are becoming increasingly diverse and complex, requiring continuous adaptation from all actors involved in maintaining safety, security and stability in air operations (Enache, 2022, p. 73). This principle applies particularly to transport aviation, which ensures both rapid mobility of resources and forces, as well as logistical support in operational environment. Given contemporary threats, the ability to adapt and improve intelligence products in support of air transport operations becomes vital to ensure safety, security and success in the dynamic and unpredictable context of global threats.

For decision-makers, the intelligence product is an essential element in planning and execution of both combat and non-combat operations. It provides assessment of adversary capabilities, vulnerabilities, and intentions, thus empowering decision-makers to prepare and act effectively. Through intelligence products, the centre of gravity of adversaries is identified and their vulnerabilities can be exploited.

The intelligence product, by reducing decision-making uncertainty, mitigates the risk to which own forces are exposed and helps the commander to evaluate the effect of operations. The accuracy and relevance of timely information is the basis for effective planning, being thus essential in the conduct of air operations (Keightley, 1996, xii).

INTELLIGENCE SUPPORT FOR PLANNING AIRLIFT OPERATIONS

Security, safety and efficiency of aeronautical operations in air transport missions are crucial elements for ensuring national and regional security, especially in the current context dominated by uncertainties and complex threats. Intelligence support plays a critical role in maintaining security and efficiency by proactively contributing to their improvement. It entails the collection, analysis and dissemination of essential information that contributes to the prevention of security incidents and to the prompt and effective response to any potential threat. Advanced technologies and artificial intelligence enable real-time monitoring and management of situations, reducing risks and increasing operational efficiency (Chiriac, 2018, p. 6).

Air transport ensures the mobility of resources, people and materials, to the right place and time. Organizing, training and equipping air transport units are elements of a constantly evolving science due to operational results and lessons learned. The doctrine of transport aviation, like any other doctrine, is continuously developed so that the air forces of NATO allies, especially of the United States of America, are able to improve their responsiveness, flexibility and effectiveness in operational areas. The biggest challenges remain when airlift is the only available power projection capability in the operational environment, in hostile areas. In these situations, informational support becomes very important in achieving the objectives. Informational capabilities (intelligence support) are not easy to obtain and require rigorous analysis before applying doctrine principles (Donoho, 1997, p. 4).

In a dynamic and complex global security environment characterized by rapid technological developments and diverse threats, intelligence support has become a crucial element for the success of military airlift missions. Through the effective collection, analysis and dissemination of essential data, intelligence structures contribute to the safe planning and execution of air operations, minimizing risks and maximizing efficiency. Airlift missions, especially those carried out in conflict

zones or high risk environments, require a high level of coordination and security. Through intelligence support, proactive measures can be implemented to ensure mission integrity and minimize associated risks. The mentioned support includes, but is not limited to, threat identification and neutralization, risk assessment, air traffic monitoring and coordination between various agencies and entities involved in air operations.

The role of aviation security is to prevent acts of unlawful interference, essentially by preventing the introduction of dangerous objects such as weapons or explosives into aircraft by passengers or other airport personnel with access to or in the vicinity of the aircraft. The field of aviation security has become a major concern following the terrorist attacks of September 2001. Since that critical moment, the normative framework specific to this field has expanded globally, either at national level or through international cooperation/agreements, or through the International Civil Aviation Organization (ICAO) and Annex 17 to the Chicago Convention, or the universal security control program and other related documents (Debyser, Kuzhym, 2024).

Each element has a well-defined role in air transport operations. These elements are often interdependent. If all requirements are managed properly, then the probability of success of the air transport operations carried out is higher; in the same vein, if the requirements stated above are ignored, then chances are high that successful air transport operations will not be possible. From the planning stage, it must be determined which elements are necessary for success, depending on the context, and which are secondary. Lessons learned from Allied operational experience demonstrate that there are four critical elements to successful airlift operations; if one of these elements is not managed properly, then the entire planned air transport operation cannot be successful. The key elements identified are: *command and control, aircraft availability and capability, support and defensive systems, and intelligence activity*. It is not enough to identify these elements, but they must be applied in a logical sequence in the operational phase (Donoho, 1997, p. 60).

The intelligence product is, logically, the first step; understanding the location, the associated risks and threats affecting safety and security in that region are important as they support decision-making process before allocating necessary resources to conduct air transport operations. Whatever the decision, it is much easier when clear and concise information is available.

The intelligence support process in airlift operations (*figure 1*) can be exemplified as a building. The foundation of the building consists of elements specific to the field of intelligence, which essentially represent the principles of the process; they are the most important element of intelligence support in aviation. Obviously, if other elements are omitted from this process, the whole dynamic and structure affect the accomplishment of objectives. Based on these principles, the key attributes and functions required for the information support process are developed to support the four purposes of airlift operations, namely: *decision support, planning and execution support, operational force support and air operations centre of gravity*. All the elements in *figure 1* must be aligned to the doctrine and be flexible enough in order to be adapted to global threats regardless of challenges so that air operations can be conducted safely and in full security (Keightley, 1996, p. 54).

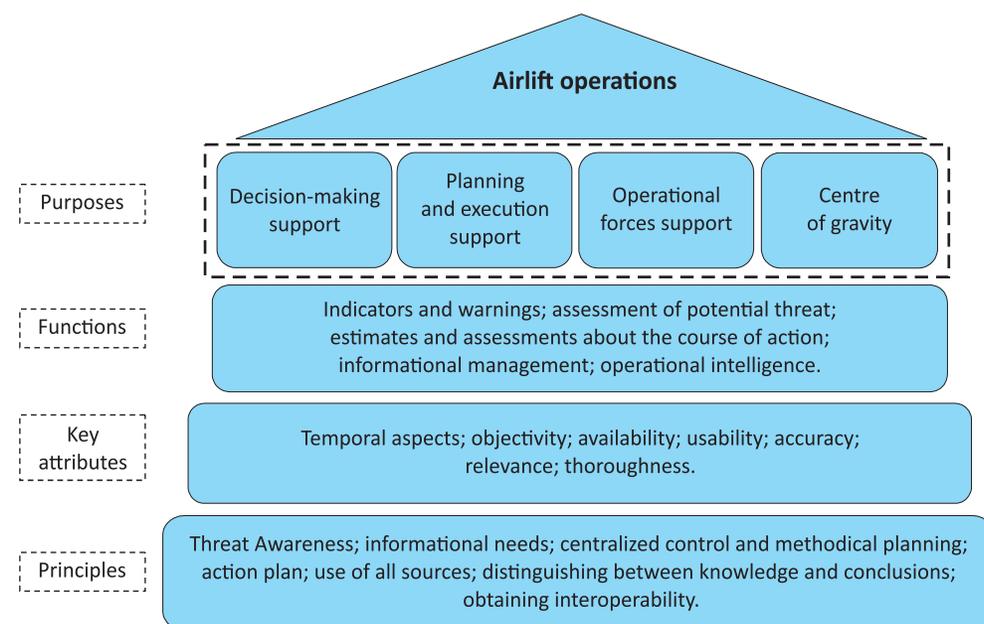


Figure 1: Intelligence support for planning of military or civil air transport operations (adapted after Keightley, 1996, p. 54)

SUPPORT OF INTELLIGENCE STRUCTURES FOR ENSURING CIVIL AIR SECURITY – EASYJET FLIGHT EZY8303, 3 JULY 2022

In air transport system, security culture entails both compliance with international security standards and promotion of a proactive and responsible attitude towards threat and risk management. In aviation, threats represent the intention to attack a specific target and the probability of this intention to become an actual attack within a specified time frame. In the same vein, risk is the probability that such an attack will be successfully carried out against a target, taking into account the existing vulnerabilities of the respective aeronautical system.

The terrorist attacks on 11 September 2001 represented a dramatic moment in aviation history, demonstrating the impact that terrorism can have on civil aviation, which imposed the development of security management in the air transport system. Those events resulted in significant loss of life, causing significant material and economic damage, and aviation organizations were forced to adopt stricter security measures and invest heavily in technologies and procedures to ensure aviation security.

In the face of existing global threats, security management in air transport system requires a multidimensional approach. Reducing vulnerabilities through the development and implementation of clear and rigorous procedures, physical and technological measures, continuous education and training of personnel in the field of crisis management are essential to maintain a safe and secure environment in air transport system.

Developing and promoting a robust security culture is essential for safe and effective air operations to rapidly respond to the dynamic spectrum of global threats. Security culture is not just about complying with regulations, it entails adopting a proactive and responsible mindset among staff and all entities involved to be constantly prepared to manage complex and varied risks.

On 3 July 2022, Aditya Verma, an 18-year-old British man was preparing to board the EasyJet company's Airbus A319 aircraft, flight EZY8303, from Gatwick Airport in England, with five friends, to travel to Menorca, Spain to celebrate the end of school year and the start of holiday. Before boarding the aircraft, Aditya Verma sent a message to his friends on a private group on social networking platform Snapchat in which he wrote: "I'm going to blow this plane up. I'm a Taliban"; Aditya Verma later stated that the message was sent as a joke, following the discussions he had with friends regarding who among them would be stopped for a thorough security

check. The 18-year-old British man sent the message from his mobile phone, using mobile data to connect to the internet, and his friends were connected to internet via the Wi-Fi network provided by Gatwick Airport (Gozzi, 2024).

During the flight EasyJet EZY8303, in the airspace of Spain and shortly before the Airbus A319 aircraft began its descent from the assigned flight level to land at Menorca airport, two F-18 Hornet airplanes from the Spanish Air Force military fleet intercepted the civilian aircraft following an order received from national authorities. The captain of Airbus A319 aircraft informed the passengers that he was trying to find out the reasons why the aircraft was intercepted by fighter aircrafts; because of that event, the aircraft landed with a delay of 30 minutes at Menorca airport (Ib.). After landing, the aircraft was parked in an isolated area and, according to the statements from passengers, they waited for approximately four hours on the airport apron as the aircraft was thoroughly checked for explosives by Spanish national authorities.

The EasyJet Airbus aircraft was declared safe and moved next to other commercial aircraft following investigations by specialized teams with dogs specially trained to find explosives. Spanish authorities arrested 18-year-old British Aditya Verma after the aircraft landed; he spent two nights in Menorca prison while the Spanish authorities investigated the incident; he was released on bail. The British intelligence intercepted the message sent by Aditya Verma and it was considered a direct threat to air security. On his return to UK, the British intelligence services, MI-5 and MI-6, interrogated the young man (Hancock, 2024). During the trial that took place at a court in Madrid, Spain, following the incident, the young man stated that *“the intentions was never to cause public distress or cause public harm”*. If found guilty, the British student had to pay the costs incurred by the Spanish Ministry of Defence for alerting and taking off the two F-18 Hornet aircraft that intercepted the Airbus A319 EasyJet aircraft in the amount of 95,000 euros and a fine of 22,500 euros (Gozzi, ib.).

The police said that in the young man’s phone they discovered that he had searched the Internet for information about the conflict between India and Pakistan and about the possibility of an attack by the Islamic State in the region, but they did not identify any elements of interest from which it could be concluded that Aditya Verma was radicalized and supported jihad. Asked during the trial what he thought when he saw the aircraft being flanked by fighter jets, Aditya Verma stated that: *“The Russia-Ukraine war was happening so I thought it was a military exercise related to that conflict”*. (Hancock, ib.). During the trial not all elements were

clarified; it remained unclear how the message could have been intercepted given that Snapchat app is encrypted, like many other apps available to the general public. One theory, discussed during the trial, was that the message was intercepted via Gatwick Airport’s Wi-Fi network, but an airport spokesman said the Wi-Fi network *“does not have that capability”*. The judge who presided over the case, quoted by the European press, stated that the message *“for unknown reasons was intercepted by the British intelligence”* (Ib.). In January 2024, the Spanish court acquitted Aditya Verma.

The message sent on the private group by Aditya Verma and intercepted by the British authorities was considered a direct threat to aviation security, the context and content of the message generating an emergency response and swift action from the national security structures. At the same time, the incident demonstrates the vulnerabilities associated with the use of social media platforms; Internet access and the use of electronic devices enable passengers to communicate in real time with family and friends, thus sending messages that can be intercepted and misconstrued inadvertently become real threats to flight security or national security.

British and Spanish authorities reacted immediately after intercepting the message. Treating it as a terrorist threat they activated air security and threat response protocols. At the same time, the event demonstrated the effective cooperation and coordination between national authorities at an international level, in the present case the ones from Great Britain and Spain, regarding aviation security. Fast information sharing and coordination across national security structures are crucial for a prompt response, even if the event exemplified above was not critical, in order to ensure and maintain aviation security.

CONCLUSIONS

Today’s aviation security measures, including pre-boarding security screening of passengers, training of airport and aircraft personnel, and advanced technologies used to detect threats, have significantly reduced the chances of a terrorist attack occurring, but have not completely eliminated them. The mentioned incident highlighted the cooperation at the international level between national structures on rapid and effective exchange of information, which demonstrates that there are currently agreements and connections between states to implement common standards and practices and to exchange technologies and information in order to improve global security in commercial aviation field.

However, the incident demonstrates the challenges and vulnerabilities that the technological evolution in aviation security implies. In the future, monitoring systems are likely to become even more sophisticated, integrating emerging technologies such as artificial intelligence to detect unusual behaviour or potential threats. Continuous technological progress and adaptation to global challenges are the basis for effective global aviation security, providing accurate and efficient means to monitor and protect airspace.

Intelligence support is essential to improve air security and efficiency of air transport operations; this support entails collection, analysis and dissemination of relevant information to competent structures and authorities that can prevent aviation security incidents and respond promptly and effectively to any potential threat in the current global context dominated by uncertainties and complex threats.

In conclusion, intelligence support, is an essential pillar in improving aeronautical security in air transport operations. By integrating and implementing advanced technologies, the development of management and information flows, as well as by improving the dissemination process of intelligence products, the effective management of security risks and the safe operation of civil or military transport aircraft are ensured. At the same time, effective informational support contributes decisively to maintaining national and regional security, ensuring that Romania remains a responsible and capable actor in the management of current and future aeronautical and military security crises and challenges.

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