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Author's Details

Mr. Ander Oquillas joined ICAO as a Technical Officer, Aviation Security Policy section, in November 2019. He is involved in work related to air cargo security and the assessment of threats and risks to aviation security. He has also contributed to ICAO's work in response to the COVID-19 pandemic from an aviation security perspective.

Prior to joining ICAO, Mr. Oquillas worked for the Spanish Civil Aviation Authority, as Head of the Air Cargo Security and Risks Service and as a National Aviation Security Inspector. He represented the Spanish CAA in several national and international forums, including the Aviation Security Regulatory Committee of the European Union and the ICAO Working Group on Threat and Risk. Some relevant national projects under his lead are the Spanish ACC3 program and the National Aviation Security Risk Management Framework. He was also a European Commission Aviation Security Inspector for 4 years before joining ICAO.

Introduction:

Throughout history, humans have always wanted things that are not naturally available in their living environment. To satisfy that demand, people have always found ways to import exotic goods, even at the risk of crossing entire continents, navigating vast oceans, or, more recently, flying throughout the skies.

Beginning from ancient times, merchants used land and sea transport modes to move silk, spices, precious metals, textiles, and cereals, among other things, between Asia, Africa, and Europe. Later on, from the 15th century, the establishment of maritime routes across the Atlantic Ocean allowed those in Europe to access goods such as tobacco, while domesticated livestock or cereals such as wheat were transported in the opposite direction.

Trading using those modes of transport was slow, hazardous, and involved long distances and physically demanding journeys. As such,

there were no guarantees that shipments would reach their final destination, as merchants were subject to different dangers, such as the risk of being attacked by thieves and pirates, getting lost in the middle of the ocean, or having their ships destroyed by natural phenomena.

Fortunately, we now have air transport.

Air Cargo is a Terrorist Target

Today, we take for granted our ability to acquire anything we want from virtually anywhere in the world within a reasonable timeframe, but the transport of goods by air is relatively recent. Despite its short history, it has established itself as the fastest, safest and most reliable method for the movement of goods, mainly perishables or high-value items. As a matter of example, air cargo represents less than 1% of global trade by volume, but 35% of it by value. That share of value is even predicted to increase as a result of the COVID-19 pandemic.



While it comes as no surprise that transporting cargo by plane is fast, **have you ever wondered why it is also so secure?**

The supply chain that air cargo goes through from its point of origin to its destination is subject to numerous risks. In fact, those risks are the new-world version of the threats that ancient merchants used to face. Threats to air cargo range from land or air accidents, to theft throughout the cargo movement, and even terrorist attacks; the latter risk being especially relevant.

As a symbol of progress and a pinnacle of scientific and technological development, **civil aviation has been a target for terrorist groups for decades.** Among the possible ways of attacking this mode of transport, the introduction of an explosive device in an air cargo shipment is a preferred one. This has been evidenced by past incidents such as the sabotage attempts carried out in October ¹, when improvised explosive devices were found hidden in the ink cartridges carried by a cargo aircraft, or the plot that was foiled in Australia in ². The risk of this type of attack is of great concern to the International Civil Aviation Organization (ICAO) as documented in the ICAO *Aviation Security Global Risk Context Statement* (Doc 10108 - Restricted), and addressed by Annex 17 – *Security* provisions. A successful attack of this nature would not only cause a high number of fatalities (a large percentage of air cargo is transported on passenger aircraft), but

¹ <https://www.reuters.com/article/us-usa-yemen-idUSTRE6A024O20101101>

² <https://www.reuters.com/article/us-australia-security-raids-idUSKBN1AJ367>

would also cause enormous economic as well as reputational damage to the entire air transport sector and air cargo supply chain.

This is especially important in the current context of the COVID-19 pandemic. Air cargo is playing a critical role in transporting medical supplies and vaccines, as global distribution thereof largely depends on it. Additionally, e-commerce has been on the rise over the past twelve months, and made great use of air transport to distribute products and goods all over the world. Who hasn't used an electronic platform to purchase an item during confinement?

Security Culture and Air Cargo Protection

It is essential to protect air cargo from potential attacks, especially given the demonstrated importance of this sector in the context of the current crisis. To this end, civil aviation has developed numerous measures and processes to ensure it is protected; but there is one that stands out and encompasses all the others, and on which I want to focus today: **Security culture**.

Security culture is a set of norms, beliefs, values, attitudes and assumptions that are inherent in



the daily operation of an organization, and are reflected by the actions and behaviours of all entities and personnel within the organization. In a security culture context, security becomes everyone's responsibility – from the ground up and from the top down.

ICAO has designated 2021 as the Year of Security Culture (YOSC), and this couldn't have been more timely when it comes to air cargo. Security measures applied to freight transported by air rely on security culture, where they find solid

foundation. Secure supply chains are based on security controls being applied and maintained from the moment a shipment is identified as air cargo until it is offloaded from the last plane transporting it. The **human element** is crucial across this journey.

Items are often identified as air cargo very early on, sometimes from the time of manufacture. As such, security controls are applied from that moment as part of a secure supply chain. Employees involved in manufacturing, packaging, and handling processes play a key role not only in ensuring that no prohibited articles and substances are concealed inside those items, but also in challenging anyone who may be unauthorized to access them. Subject to strict hiring and vetting processes, strong security culture helps employees understand what is at stake if security procedures are not correctly followed, and compels them to stick to those procedures.

Next, the packaged goods/items must be transported to the airport, usually by land, which frequently involves multiple stops or layovers at intermediate warehouses. Here again, security culture enables staff to remain vigilant and take action should they suspect an unauthorized access to, or interference with, items marked as secure to fly.

When one entity delivers a shipment of secure air cargo to another in the secure supply chain, the receiving staff must verify that the delivering company is actually authorized to handle secure air cargo before accepting it. To do this, appropriate authorities roll out, maintain and make available databases of entities authorized to handle and transport secure cargo in order to facilitate the vetting process. To ensure that all protocols, measures and processes are abided by, appropriate authorities rely on security culture principles so that all actors are appropriately trained, fully prepared and adequately knowledgeable.



Finally, when air cargo arrives to the airport, and although it may appear to be in a secure place, it is important to maintain control of it so that it remains protected and free of unauthorized access, as complacency would offer an opportunity to interfere with the cargo in an attempt to carry out an attack. Simple and effective measures such as making sure secure shipments dropped off at the entrance of cargo terminals are not left unattended are supported by security culture.

Security Culture embraces everything



By now, it is clear that not only security personnel are responsible for ensuring the protection of air cargo. **All employees involved in the transport process also have a crucial role in preventing shipments from being tampered with.**

The importance of security culture is not limited to the time when air cargo is directly subjected to security controls. There are many elements that indirectly protect air shipments, and proper **awareness** helps close the circle: the use of

personal IDs, which help distinguish whether a person is authorized to access certain areas, would be meaningless if employees would not sound the alarm when detecting someone who does not

carry a proper ID; access controls, in the form of, for example, doors that automatically open after electronically checking that the person attempting to access is authorized to do so, would not serve their purpose if staff did not ensure that tailgating or piggybacking does not take place; and a pallet of *secure* cargo in a sterile area of an airport, which will later be loaded onto an aircraft, would be a security risk if the handling company staff did not notify that some of the boxes appear to have been opened.

Conclusions

Without further dwelling into technical elaborations, I will say that security culture is still present as a core element in the protection of other important air cargo related processes, such as its loading and unloading from an aircraft.

To provide an analogy, in the world of transport of air cargo, **security culture is the oxygen** without which the existing security processes, no matter how well designed, would suffocate and would have no real impact on actual security levels.

The most optimistic forecasts indicate that 2021 will be the year of recovery from the pandemic. Having made a commendable contribution to the global effort against this crisis, air cargo should return to business as usual. It will remain the tool that brings us those mobile phones we order online, the exotic fruits that we buy at the supermarket, or that fresh fish we crave for despite being caught on the other side of the world.



2021 is the year during which ICAO will reinforce the importance of embracing security culture in civil aviation. This is just another milestone of the organization's efforts to ensure security culture continues to be the "grease" thanks to which the aviation security machinery keeps on running smoothly, and ensuring that it makes life a little easier and a little better for all of us.

