

AIR CARGO SECURITY: An Overview of Several Regulatory Initiatives around the World

A presentation by
Maria Buzdugan
(McGill Institute of Air and Space Law,
Montreal, Canada)

Questions Raised

- Why is air cargo security becoming an increasingly important item on the aviation security agendas around the world?
- What approaches and specific measures have been adopted by various fora and countries?
- What appear to be the best practices in ensuring air cargo security?
- What are the perceived challenges in implementing air cargo security measures: costs, impact on the flow of trade, appropriate party responsible for implementation

TABLE OF CONTENTS

- 1. Why is Air Cargo Security Important?
- 2. Air Cargo Industry Characteristics
- 3. Perceived Security Risks and Vulnerabilities of Air Cargo Transportation
- 4. Potential Measures to Mitigate the Risks and Address the Vulnerabilities
- 5. Review of Selected Air Cargo Security Measures Adopted at the International, Regional and National Level
- 6. Best Air Cargo Security Practices and Implementation Challenges

Definition of Terms

- “Air Cargo” = any property carried or to be carried on an aircraft except mail or other property carried under terms of an international postal convention, or baggage carried under a passenger ticket and baggage check (def. adopted by IATA)
- “Transportation Security” = Ensuring the delivery of cargo in good condition to its planned destination as well as the prevention of any unauthorized use of the cargo or the transport means. (Make distinction between transportation safety and security: while both have as common goal the protection of passengers, crew, cargo and aircraft from harm, safety focuses on protection from unintentional harm, while security focuses on intentional harm)

Why is Air Cargo Security Important?

- Transportation of goods by air has become an essential component of today's world economy, especially in the high-value, "just-in-time" supply chain that serves many other industries (e.g., in the year 2000, air cargo accounted for 29.7% of international trade in terms of value, surpassed only by maritime shipping – with 37%)
- Airlines are financially dependent on cargo transportation, which carries, on average, higher profit margins than passenger traffic, accounting approximately for 15% of total traffic revenue.
- Air carriers transport billions of tons of cargo each year and the volume of air cargo is expected to steadily increase, at a faster pace than the number of passengers, thus adding to the growing importance of cargo

Air Cargo Security: Why Care?

- In this context, vulnerabilities in air cargo security place at risk the entire air transportation system and could have devastating consequences for the international economy (loss of life and property, interruption of trade, costs of diverting traffic)
- In the wake of September 11, 2001, the fact that enhanced security measures have focused almost exclusively on passenger air travel has left the air cargo system more vulnerable and a likely target for terrorists (while 100% of baggage is required to be screened, only a relatively small amount of cargo transported by air is currently subject to screening and inspection)

Air Cargo Industry Characteristics

- The air cargo industry differs considerably from passenger carriers as well as from carriers using other modes of transportation
- In most cases, it has an intermodal nature (including land transport segments)
- Air cargo system is a complex distribution network that handles a vast amount of freight and involves many participants, including manufacturers and shippers (some of whom are routinely engaged in international trade, others only occasionally), freight forwarders who consolidate shipments and deliver them to the air carriers, and providers of storage facilities that accommodate cargo until it is placed aboard an aircraft.

Perceived Security Risks and Vulnerabilities of Air Cargo Transportation

- Critics argue that recent security measures adopted by several States focus too heavily on protecting aircraft from past terrorist attack scenarios – such as suicide hijacking and bombs placed in passengers' luggage – while neglecting other potential security risks. In particular, vulnerabilities of all cargo aircraft must not be underestimated.
- Numerous industry and government studies have identified threats to and vulnerabilities in the air cargo system: potential hijacking and/or sabotage of the aircraft, criminal activities such as placing explosives aboard aircraft, smuggling, theft, illegal shipments of hazardous materials, and tampering with cargo during land transport from the point when freight leaves the shipper to the airport or at the cargo-handling facilities of air carriers and freight forwarders.

Potential Measures to Mitigate the Risks and Address the Vulnerabilities

- Currently, there are two main positions regarding air cargo security
 - One holds that full screening of air cargo would be too costly and too disruptive to allow for successful implementation
 - The other claims that full screening and enhanced security measures are needed to minimize as much as possible the risks associated with air cargo
- At the present time, it is generally accepted that any type of physical inspection or electronic screening of all cargo would not be technically and logistically feasible without adversely impacting air cargo operations (TSA computer models estimated that if full physical cargo screening is implemented, only 4% of the daily volume of freight at airports could be processed).
- Thus, most experts agree that a practical approach would involve the use of risk-managed cargo profiling procedures to identify shipments that may be considered of elevated risk and the application of physical inspection on so selected shipments.

Technology and Operational Initiatives to Enhance Air Cargo Security

- Technology proposed for improving air cargo security includes: explosive detection systems and other cargo-screening devices and technology; tamper-resistant and tamper-evident packaging and containers; blast-resistant cargo containers and biometric systems for worker identification and access control to air cargo facilities
- Operational initiatives include proposals to impose mandatory advance cargo information, expand the use of “authorized economic operator” and “secure supply chain”, improve physical security of air cargo facilities, increase oversight of air cargo operations, provide training for cargo workers, and tighten controls over access to aircraft during cargo operations.

Review of Selected Air Cargo Security Measures Adopted at the International, Regional and National Level

■ **International Regulatory Framework for Air Cargo Security**

- The International Civil Aviation Organization (ICAO) has the responsibility for regulating the many technical aspects of international civil aviation, with the main purpose of promoting aviation safety and security
- Some of the most important multilateral instruments addressing aviation security, hijacking and terrorism were adopted under the ICAO's auspices
- In addition, ICAO adopts "Standards and Recommended Practices" (SARPs): Annex 17 to the Chicago Convention contains several SARPs with the aim of preventing explosives and incendiary devices from being placed onboard aircraft, either through concealment in otherwise legitimate shipments or through gaining access to aircraft via cargo handling areas; States are required to subject to appropriate security control cargo intended for carriage on passenger flights and to ensure that operators do not accept consignments of cargo on passenger flights unless security has been accounted for by a "regulated agent" (defined as an agent, freight forwarder or any other entity who conducts business with an operator and provides security controls that are accepted or required by the appropriate authority in respect of cargo) or that they are subjected to other security controls.

Review of Selected Air Cargo Security Measures Adopted at the International, Regional and National Level

- **Regional Regulatory Initiatives in Air Cargo Security**
 - *European Union*
- **Regulation No 2320/2002 of the European Parliament establishing common rules in the field of civil aviation security** and setting up appropriate compliance monitoring mechanisms: applicable to any airport located in the territories of the Member States of the EU; it includes detailed rules addressing airport security, including access control and 100% staff screening, and cargo handling, screening and protection (including the obligation to maintain the “sterility of the shipments”); it introduces the terms “regulated agent” (an agent, freight forwarder or other entity that conducts business with an operator and provides security controls that are accepted or required by the appropriate authority in respect of cargo”) and “known consignor” (“the originator of property for transportation by air for his own account and who has established business with a regulated agent or air carrier”).

Review of Selected Air Cargo Security Measures Adopted at the International, Regional and National Level

■ **Regional Initiatives in Air Cargo Security**

- **Security and Prosperity Partnership of North America:** established in 2005 between the United States, Canada and Mexico with the purpose of securing the shared borders of the partner-States, while facilitating the traffic of legitimate passengers and cargo; the three countries propose to define a cargo security strategy to ensure compatible screening methods for cargo prior to departure from a foreign port and at the first point of entry to North America; although in an incipient phase, such a regional approach might prove to be a useful testing ground for the feasibility of specific multinational strategies
- **Free and Secure Trade (FAST) Program between the US and Canada:** with the objective of enhancing the security and safety of both countries, while facilitating the legitimate, low-risk cross-border trade: adopts a common approach to risk management and establishes partnerships between customs authorities and those in the trade community who have a history of compliance with all relevant legislation and regulations as well as customs requirements and are committed to the integrity of their supply chain management process.

Review of Selected Air Cargo Security Measures Adopted at the International, Regional and National Level

- Selected Examples of National Regulatory Initiatives Pertaining to Air Cargo Security
 - The United States
 - Canada
 - The United Kingdom
 - Sweden
 - Australia
 - New Zealand

National Regulatory Initiatives in Air Cargo Security

■ The United States

- after September 11, 2001, the US became the leading promoter of strict aviation security measures
- The Aviation and Transportation Security Act (ATSA) adopted in November 2001, created the Transportation Security Administration (TSA)
- TSA is required to provide for the screening of all cargo that will be carried aboard commercial passenger aircraft and to develop a strategic security plan for screening and inspections to ensure the security of cargo that is to be transported in all-cargo aircraft
- In November 2003, the TSA commenced the implementation of its Air Cargo Strategic Plan, a multi-phased, risk-managed approach to strengthening the air cargo security throughout the entire supply chain
- The Air Cargo Security Improvement Act still has not passed both houses of US Congress.

National Regulatory Initiatives in Air Cargo Security

■ Examples of United States Initiatives

- **Advance Cargo Information requirement:** collection of cargo information by the Bureau of Customs and Border Protection (CBP) prior to the cargo's arrival in or departure from the territory of the United States by any commercial mode of transportation: such information is designed to allow identification of high-risk shipments.
- **The "Known Shipper" Program:** sets up procedures for air carriers and freight forwarders to review the security practices of known frequent customers and develop a cargo security plan for handling cargo from known and unknown shippers; a consignment from a known shipper will be transported with no extra screening, while shipments from unknown shippers would be screened by X-ray or physically inspected before being placed aboard a passenger aircraft.
- **The Customs-Trade Partnership Against Terrorism (C-TPAT):** a public/private partnership aimed at improving security along the entire supply chain; the main purpose is to enlist voluntary participation of common commercial air carriers and certain foreign manufacturers, in the partnership and enhance the security "best practices" employed by participants in the international trade chain. A validation process of the participants based on risk management principles is conducted by the US Customs and a representative of the industry. Benefits of participation in the C-TPAT: reduced inspections of partners' consignments and expedited processing of partners' shipments.

National Regulatory Initiatives in Air Cargo Security

■ Canada

- Screening of cargo is currently the responsibility of air carriers; The Canadian Air Transport Security Authority (CATSA) is in charge only with passenger and baggage screening. Discussion of revising CATSA's mandate under airlines' pressure.
- Examples of Regulatory Initiatives in Canada
 - **Advanced Commercial Information Initiative:** a program aimed at increasing the effectiveness of risk management processes by better identifying threats to public health, safety and security prior to arrival of shipments in Canada; importers are required to electronically submit to the Canada Border Services Agency (CBSA) key data regarding their cargo before the goods arrive in Canada
 - **Partners in Protection (PIP) Program:** similar to C-TPAT program; it is available to the entire trade community and involves signing a partnership agreement with CBSA; companies are requested to provide the CBSA with a self-assessment of their security systems; benefits of participation: a quicker movement of low-risk goods through customs.

National Regulatory Initiatives in Air Cargo Security

- The United Kingdom

- **“Known Consignor” Customs-Business Partnership:** cargo from “known consignors” (customers of airlines that pass a validation process conducted by independent validators appointed by the Department of Transport and selected on the basis of their cargo security experience) is to be considered as secure and allowed to be loaded on an aircraft without further checks. Criteria for validation process: the physical security measures in place, the staff recruitment procedures, staff security training procedures, access control to the premises, air cargo preparation procedures, air cargo packing procedures, storage of secure cargo, transport of secure cargo to security approved airline. The validated consignors would maintain their “known” status for 12 months, after which a re-assessment would be required.

National Regulatory Initiatives in Air Cargo Security

- Sweden

- **StairSec Programme:** a global supply chain security system which involves an accreditation process of the operators involved in the global supply chain and is aimed at facilitating legitimate trade while allocating more efficiently resources to high risk areas. Compliant operators receive a Customs- accreditation which provides them with increased efficiency and facilitation in customs processes.

National Regulatory Initiatives in Air Cargo Security

- Australia

- **Accredited Client Programme:** designed for low-risk importers and exporters with the aim of streamlining their reporting requirements/ in order to become an accredited client, traders need to assure customs authorities of their ongoing compliance with business and security rules and a history of providing accurate and timely information; the parties sign a legally binding contract under which the accredited clients need to comply with the obligation to provide customs with accurate and timely information regarding changes to company personnel, security procedures or systems.

National Regulatory Initiatives in Air Cargo Security

- New Zealand

- **FrontLine Programme:** a partnership between customs administrations and industry with the aim to facilitate the movement of legitimate goods; a partnership agreement is signed by the parties on a voluntary basis (it does not have legally binding effects): trade partner undertakes to help Customs identify unusual or suspicious activities and maintain adequate security measures.
- **Secure Exports Partnership (SEP):** a voluntary agreement aimed at ensuring that goods exported under the scheme are packed securely and shipped in such condition that tampering with or smuggling contraband into the shipment is not possible. The business willing to participate in this scheme need to show that they have adequate measures in place to ensure the security of the supply chain.

General Comments regarding Air Cargo Security Initiative Above

- Some governments have taken steps to enhance aviation security through, among others, requirements for advance cargo information and providing for government-business partnerships in various forms.
- It appears though that these initiatives are not pursued with equal determination by all States and, in some cases, do not follow sufficiently similar approaches allowing for an easy harmonization of air cargo security measures in the near future. Sometimes the government-business partnerships entail different approaches to risk assessment of traders and shipments, making the prospect of mutual recognition of status of authorized trader less likely at the moment.

Best Air Cargo Security Practices

- Since inspecting 100% of air cargo is currently impossible due to limited technology and infrastructure, “flow of commerce” and finite resources, many experts agree that the most practical approach is based on a risk-management technique which enables the authorities to identify high-security risk shipments on which to concentrate control.
- Selected best practices to enhance cargo security:
 - Procedures to ensure physical security of air cargo facilities and operations (e.g., periodic inspections and oversight of air cargo facilities, providing training for air cargo personnel, and increasing control over access to aircraft and cargo facilities)
 - Advance electronic information requirement: information that allows identification of high-risk consignments as early as possible in the supply chain
 - Government-Business Partnerships, the “Authorized Economic Operator” and “Secure Supply Chain” Concepts: Based on the assumption that accredited service providers present a lower risk, they would benefit from less controls and fewer delays. The issue of adequacy of procedures for auditing and monitoring “known shippers” and the lack of a basis for mutual recognition of authorized status. The “secure supply chain” means that the cargo is properly protected from interference at every stage of its transportation. The underlying idea is that the supply chain is as secure as its weakest link and a desired degree of security in transport can be achieved only by targeting the entire supply chain.

Implementation Challenges

- Most security regulations can result in a significant adverse impact upon the air cargo industry, especially given their debilitating effect on shipment transit time in an industry characterized by time-sensitive realities: The main challenge is how to achieve a secure air cargo transportation system without unduly burdening the flow of cargo itself.
- Also, the issue of costs of implementing such security measures needs to be taken into account.

Long Term Solution: A Comprehensive Risk-Management Approach

- A comprehensive security plan must manage various security risks in a cost effective manner and must adopt a multimodal vision that provides an efficient security framework that is risk-managed, adequately addresses vulnerabilities in the system, is fiscally responsible and does not unduly impede the flow of commerce
- Suggested risk management includes:
 - An assessment of threats to air cargo security in a particular region, based on such factors as capabilities, intentions and past activities;
 - An assessment of vulnerabilities to those threats, which implies identifying particular weaknesses that may be exploited and proposing measures to address these vulnerabilities; and
 - An assessment of relative importance of addressing the identified vulnerabilities, given their effect on public safety and the economy.

Funding the Implementation of Air Cargo Security Measures

- The implementation of air cargo security must be based on a partnership where each participant must bear its fair share of costs. Yet, such costs can be quite onerous to both governments and the air cargo industry.
- Some have suggested that a fee schedule be established to be charged to all shippers to cover costs associated with screening cargo, fee that would be similar to the security service fee imposed on airline passengers in the US.

Concluding Remarks

- Air cargo security has become one of the major global security concerns given its recognized vulnerabilities which make air cargo possibly the easiest target for terrorists. In recent years, several states have adopted measures aimed at enhancing air cargo security and such requirements are imposed on inbound carriers from other countries. Thus, the need the security of air cargo transport becomes a reality for all countries involved in international commercial aviation.