



ISSUE 8

A FINE BALANCING ACT

Many have grown accustomed to the Changi experience, characterised by seamless, efficient travel with the added perks of duty-free shopping and attentive service. However, away from the spotlight, key public and private agencies work closely together to continuously review, adapt and deliver a robust and efficient security system. This level of collaboration ensures the highest standards of security, while facilitating the smooth movement of people and cargo across borders. Bridging Skies shares insights on the people, processes and technology behind Singapore's aviation security practices at Changi Airport.

As a world-class airport that facilitates the movement of 27.4 million travellers year-to-date, aviation security is a key consideration in Changi Airport's operations. "Security is an integral component of Singapore's aviation system. As such, it is important that its regulatory framework, measures and processes are relevant, effective and practical," explained Sherman Koh, Head, Aviation Security, Civil Aviation Authority of Singapore (CAAS). To ensure that Changi Airport's security is aligned with international standards, CAAS adapts the International Civil Aviation Organization's (ICAO) global Standards and Recommended Practices (SARPs) on aviation security.

AVIATION SECURITY: A COLLABORATIVE EFFORT

Security at Changi Airport is a symphony of coordinated actions between government and private organisations. It involves the formulation of policies, regulations and emergency preparedness plans, as well as the implementation of security measures and frontline operations. "The relationships are interlinked. Each organisation plays a different role but they work towards a common goal of ensuring a balance between optimum aviation security while maintaining a high level of customer service and passenger facilitation," said Alan Tan, Head of Aviation Security Unit, Changi Airport Group (CAG). Four organisations are key in this collaborative effort:

1. The Airport Police Division (APD), which leads in the efforts as the state authority on aviation security matters;
2. CAAS, the aviation industry authority and regulatory body;
3. CAG, the airport operator licensee responsible for implementing all required security measures at Changi Airport;
4. Certis CISCO (Certis), the auxiliary police responsible for the day-to-day running of airport security operations.

Overseeing the efforts of these four organisations is the National Civil Aviation Security Committee, which formulates national aviation security policies and sets directions for all the entities involved in aviation security to ensure that Singapore maintains a good level of civil aviation security.

This committee facilitates a comprehensive security network that effectively protects air travellers as well as cargo and identifies any potential security threats. “Together, a balance between a robust security system and healthy industry outcome is achieved,” noted Tan.

VIGILANCE IN THE FACE OF CHANGING THREATS

Since the events of 9/11, the nature of threats has changed. “The focus of our efforts, our mindset and our approach has been adjusted to take into consideration current and new threats on the horizon. Implementing measures to counter such threats remain key to our aviation security efforts. It is important to note that what has occurred in the past is not a template for what will happen in the future,” said Koh.

While subsequent responses to events such as 9/11 have branded the aviation community as being reactive, Tan asserted that it is both reactive and proactive. The former because threats are unpredictable and the latter because the global aviation security community does put in place measures that ensure future security breaches are contained. “What is important is to put measures in place to ensure that devastating incidents do not happen again. The aviation community is constantly gathering intelligence and working on possible scenarios and contingency measures.”

Implementing measures to counter such threats remain key to our aviation security efforts. It is important to note that what has occurred in the past is not a template for what will happen in the future.

Douglas Yeo, Deputy Superintendent of Police, Head Security Regulatory Branch Concurrently Head Operations and Training, Checkpoints Task Force, APD, agreed. He noted that Changi Airport and other authorities around the world have learned from 9/11 and other terrorist plots since then. These states have reviewed their airport regulations and check-in procedures as well as tighten their security networks.

In 2006, for instance, perpetrators aboard aircraft travelling from the United Kingdom (UK) to the US and Canada threatened to detonate liquid-based explosives. In a separate case last year, one tried to smuggle an explosive device onto an aircraft by hiding it in his underwear. Yeo added that these attempted terrorist plots have crucial learning points for airport and airline security. They have resulted in the implementation of new security regulations such as the restriction of liquids, aerosols and gels in hand-carry luggage to 100ml, as well as more encompassing physical checks on passengers. “While security implementation generally

impacts passenger facilitation, CAG, in consultation with APD, will always try to keep the process simple and where possible, design the system such that it is transparent to the passengers while keeping it as fuss-free as possible,” said Tan.

While security implementation generally impacts passenger facilitation, CAG, in consultation with APD, will always try to keep the process simple and where possible, design the system such that it is transparent to the passengers while keeping it as fuss-free as possible.

As for terminal operations, the auxiliary police are also doing their part. “All 2,400 personnel from Certis who are deployed to guard access points, conduct pre-board security and hold baggage screenings have to undergo monthly refresher courses to update themselves on the latest security threats and preventive measures,” said Eric Khoo, Group General Manager, Certis.

EVERY DETAIL MATTERS

Even as Changi Airport is ready to manage threats of such magnitude as terrorism, it continues to devote just as much attention to the most basic daily security procedures that control the movement of passengers and cargo. To ensure that no irregularities pass through checkpoints, Changi Airport security depends on four levels of security – the public and transit areas, the air site and its perimeter. Each level of defence has security measures commensurate to the risks likely to be encountered there, with security becoming tighter as the traveller moves closer towards the air site and the aircraft.

Tan and Khoo both agree that the first line of defence begins the moment a person steps into the airport. One of the many initiatives that encourage this is the Threat-Oriented Passenger Screening Integrated System (TOPSIS), a project piloted by MHA that trains non-security communities to identify anyone or anything amiss. “Everyone who works for the airport from the airline check-in counter staff to the cleaners can play this role as they are the ones who interact with the passengers and are thus more able to pick up hints that a person or object may be a potential threat,” said Tan.

Another vital aspect of aviation security is to stop prohibited items or illegal goods such as weapons, explosives, flammable solids and liquids, bleach, corrosives, drugs, toxic or infectious substances and smuggled animals from entering and leaving the state. Therefore, auxiliary police officers and screeners from Certis and the Immigration Checkpoints Authority (ICA) must also look out for and prevent these items from passing through. With all security and non-security units participating to keep a collective eye on everything from suspicious-looking characters to dubious objects, the security network at Changi Airport is not only comprehensive but also significantly reinforced.

LEVERAGING TECHNOLOGY

As security threats evolve, so do counter-measures and the technologies that aid them. For instance, to overcome the limitations of the naked eye, officers now depend on a screening machine much like an X-Ray machine to see what may be hidden underneath the surface of an object. In addition, they use an explosive trace detection device that uncovers even minute trace elements of explosives. Tan said that they are constantly sourcing for the latest equipment to deflect newer threats and noted that CAG and APD are currently conducting a trial on one of the latest body scanners in the market.

As an added layer of security, Certis has an elaborate computer system at its onsite Certis CISCO Aviation Security Integrated Operations Centre (CIOC), which centralises planning, command and control over all of Certis' armed auxiliary police officers and security screening officers. It also keeps track of all flights through the integration of various technologies. This is essential in keeping track of Certis personnel who are responsible for several tasks such as guarding entrances and checkpoints at all terminals and in the cargo complex, as well as screening passengers and cargo before they board the aircraft.

Data from the airport's flight information display system (FLIDS) is also fed into the Certis system to allow CIOC to deploy its resources and disseminate information readily. This tighter network enables airport security to cover more ground and perform more efficiently as it significantly shortens emergency reaction time. Certis officers are also able to constantly monitor the boarding and transit areas through its 2,000 closed-circuit television (CCTV) cameras. As sophisticated as these machines are, the search for newer, better technology never stops, given the prevailing and dynamic nature of security threats.

SAFEGUARDING THE CHANGI EXPERIENCE

Underneath the veneer of a sophisticated terminal lies a comprehensive network of agencies, systems and technology that work together to ensure safe and secure passage of passengers and cargo. Buttressing this framework is a culture of constant vigilance by all involved and a programme of rigorous training. It is the combination of all these factors that cements Singapore's reputation as a safe and reliable global air hub.