

**SPEECH BY SINGAPORE DEPUTY SECRETARY (INTERNATIONAL)
MR KEVIN SHUM TO THE OPENING PLENARY OF THE ICAO
SYMPOSIUM ON INNOVATION IN AVIATION SECURITY, TUESDAY
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Esteemed Dignitaries,

Ladies and Gentlemen,

Good morning,

- 1 I am glad to be with you today at the opening of the International Civil Aviation Organization (ICAO) Symposium on Innovation in Aviation Security.
- 2 I'm pleased to note the attendance of some 300 leaders and professionals, representing the global civil aviation industry. For everyone here today, your presence demonstrates that there is strong and continuing global interest in fostering and developing innovation in aviation security.
- 3 The Opening Plenary theme of driving technology developments and innovation is timely given the challenges we face.

- 4 The nature of aviation security threats to civil aviation has evolved over the years. These threats are increasingly sophisticated, and are no longer limited to aircraft hijacks or conventional threats to airports and civil aviation facilities. The threats today have evolved to include Improvised Explosive Devices (or IEDs) and even the use of civil aircraft as weapons of mass destruction, to name a few. Security measures have to keep up with the broader range of threats.
- 5 At the same time, aviation stakeholders recognise the importance of making civil aviation more cost-effective and convenient for the movement of growing numbers of passengers and cargo shipments.
- 6 How do we balance these two seemingly opposed priorities? Technological innovation in aviation security is one way to bridge the gap. Indeed, the ICAO has embraced the theme of adopting modern technology in aviation security. Singapore, as a strong supporter of ICAO's work, and an active participant in many ICAO expert bodies, such as the ICAO Aviation Security Panel, fully supports this direction taken by the ICAO.

The case for technological innovation in aviation security

- 7 Technological innovation has the potential to offer better and more reliable security outcomes. For example, using technology, such as biometrics, to conduct identity checks instead of having a security officer do the checks, offers greater consistency in identifying persons of concern and sieving out fraudulent impersonators.

- 8 At the same time, technology has much more to offer than just improving security outcomes. For example, technology can offer passengers greater convenience when they go through aviation security checks. Quicker processes, less hassle and anxiety can lead to a better passenger experience and improved facilitation. This is in line with one of the ICAO's strategic objectives of having a healthy balance between security and facilitation.

- 9 Furthermore, the introduction of innovation and technology can lead to significant manpower savings and productivity. This can reduce cost for the entire aviation community.

Looking to the future

- 10 I believe that we are moving towards a new phase in technological innovation that has the potential to substantially improve security measures and outcomes. This new phase is being driven by the convergence and maturing of three technologies.
- 11 Firstly, greater applications of data. Most of us are already familiar with biometrics. The next phase of biometrics applications will improve the consistency of security outcomes, by replacing the human verification of identification documents with technology. Beyond this, we will increasingly gain the ability to mine big data to ensure more targeted and more accurate risk management.
- 12 Secondly, better and more accurate detection technologies are being developed. Today's state-of-the-art, body scanners or Advanced Imaging Technology (AIT) equipment allows us to detect non-metallic IEDs which conventional metal detectors cannot detect. Tomorrow's technologies will be even more capable, helping security officers detect and locate objects of concern more accurately, thus increasing the level of security whilst reducing the processing time at security checkpoints.

13 Finally, increasing automation of human tasks. The maturing of robotics technologies and the automation of aviation security tasks will augment and supplement the human security officer. This in turn will reduce the need for highly trained and scarce security officers, whilst minimising human error in these tasks.

Enabling factors for successful innovation and technology in aviation security

14 Whilst these developments offer significant benefits to the aviation community, we will also need to address the challenges that these technologies bring along.

15 Foremost amongst these will be privacy. To tap on these developments, airports and security agencies will collect, store and analyse growing amounts of personal data. To get acceptance from passengers and air crew, we will need to guarantee them that their privacy will be protected, there will be no privacy breaches, and the data is used only in their best interests.

16 Passengers will also need to adjust to a different experience when they use airports. Today's passengers are used to interacting with

human beings, but as these technologies mature, they will have to adjust to increasingly being screened and served by machines. There will also be higher expectations that passengers will know how to use and interface with new and advanced security screening and other technologies at airports as they navigate their way from check-in to boarding the aircraft.

- 17 Cost will also be a significant consideration. New technology usually requires significant upfront investment. In particular, early adopters of technology typically pay a higher cost for new innovation and technology.

Role of Governments

- 18 States will therefore have an important role to play in shepherding technological innovation. Governments will need to be thought-leaders and engage stakeholders. They will have to put in place regulatory frameworks to ensure privacy and secure user buy-in, whilst helping to mobilise the resources to acquire and implement these technologies. And they will need to be pragmatic, even while they push for new innovation and technology. Properly executed, they will achieve better security outcomes, improving passenger

experience whilst improving the bottom line for the aviation community.

19 Let me cite an example of what Singapore is doing in this regard.

In Singapore, our aviation sector continues to grow, and Singapore Changi Airport now handles more than 50 million passengers per annum, whilst costs and manpower are key constraints. Therefore, Singapore intends to roll out new airport processes as we build our new Terminal 4 in Singapore Changi Airport. These new airport processes, known as the FAST travel process, will involve the integration of biometrics, automated access control checks, baggage security, and departure immigration checks into one seamless process. We will subsequently roll out FAST to all of Changi's terminals.

20 We are already addressing some of the anticipated challenges

with small scale pilots of the FAST travel process at Changi Airport's existing Terminals. We will need to convince passengers that automated processes can deliver a superior passenger experience at the airport. We will also put in place safeguards to ensure that passengers' privacy is protected. We will have to accept a slightly higher cost of implementation, as some of the

products and processes are brand new and would need to be customised for our use. We are excited by the potential the technology offers and we look forward to having you experience FAST for yourselves when the process is fully rolled out in 2017.

Conclusion

21 The future holds many exciting opportunities for innovation and technology in aviation security. Looking ahead, I am optimistic that innovation and technology will deliver enhanced aviation security and facilitation for civil aviation. Indeed, this is crucial as the continued growth of the aviation industry is premised on continued secure civil aviation operations.

22 I would therefore like to commend ICAO for recognising security and facilitation as key pillars of its work, and for organising this Symposium on Innovation in Aviation Security. I am certain that we will all benefit from the views and information that will be shared during the next three days and wish everyone a successful Symposium.

Thank you.