

## **SPEECH POINTERS FOR CANSO ASIA PACIFIC CONFERENCE 2017, HA NOI (4 MAY 2017)**

- I am excited to be in Ha Noi, the capital of Viet Nam once again. In my last visit to Ha Noi a year ago, I had the opportunity to visit VATM's Ha Noi Air Traffic Control Centre. It was an inspiring and impressive installation and I would highly recommend that you visit it if you have the opportunity to do so.
- In today's globalized economy, connectivity is critical to each country and region's economic growth. The Vietnamese government has therefore designated aviation as one of the top priority sectors for development in Viet Nam. It is encouraging to see that Viet Nam is succeeding in this priority. Viet Nam is one of the fastest growing aviation markets in the world, with air travel growing 29% last year to 52 million passengers. Air connectivity for Viet Nam is growing rapidly.
- Viet Nam's experience is not unique. Across the whole Asia-Pacific, air travel is expanding rapidly. Counted by Revenue Passenger Kilometers (RPKs), the region recorded growth of 8% last year.
- Asia Pacific will continue to be a fast growing region for air travel for at least the next 20 years. IATA expects that there will be more than a billion new Asian passengers a year by 2035. This growth is fueled by several factors:
  - Rise in GDP and the middle class.
  - Continued growth of Low Cost Carriers and similar business models.
  - More open aviation markets, for example the ASEAN Open Skies.
  - Improved aviation infrastructure.
- We in the ANSP community will be called upon to support this growth in air travel. More aerodromes will open, and airways will become more crowded. We will need to increase our capacity to manage the growth. We need to ensure that passengers are able to travel safely. We also have a role to ensure that passengers get to their destinations as quickly as possible. At the same time, airlines will expect that we deliver all of this cost-effectively.

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- To manage all of this, we cannot carry on a business-as-usual basis. Increasing traffic will impose more strains on our ATM systems. Meanwhile we will also face manpower shortages, as experienced controllers take a long time to train. At the same time, we also need to be more cognizant of the risks that fatigue poses to controllers and manage such risks more effectively.
- I believe that the answer lies very much in technology and greater cooperation between ANSPs. Both are inter-connected.
- Let me touch first on technology. Many of us were present at the WATMC in Madrid earlier this year, and had the opportunity to see first-hand some of the exciting new ATM technologies which are being developed.
- These technologies will lead to greater automation. Automation has the potential to make ATM safer and increase capacity. Through automation, we can reduce the workload for controllers. AI and machine learning can make ATM safer, as systems can identify potential conflicts and surface them to controllers for immediate attention. Predictive analytics can help us to identify potential hot spots and safety risks; we can then design new procedures to avert such risks.
- For us to reap the benefits, we need to fully digitize the ATM environment. We need to collect data, harmonise the data and agree on a common format to analyse them.
- We will also need to develop new skills. Skills like data analytics and operational analyses are important to convert data into meaningful outputs, for instance in preventing incidents or accidents, determining the optimum use of airspace, predicting maximum capacity levels, and developing performance benchmarking metrics.
- We are only in the early days of automation. In particular, I believe that there will be a quantum leap in ATM automation when UAS traffic management

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(UTM) solutions are fully developed. By its nature, UTM will have to be highly automated, as it would not be practical for human controllers to manage UASes the same way we manage manned aircraft today. Separation distances and reaction times will have to be much shorter.

- It will be only a small leap for such technologies to be translated for use in mainstream ATM systems. ANSPs, our technology partners and regulators ought to pay careful attention to this space!
- Finally, technology also offers the opportunity for our systems to become more resilient. One example of this is remote or smart tower technologies.
  - Globally, many ANSPs are actively exploring remote ATC tower operations. The key motivation is to reduce operational costs by remotely providing ATC service, particularly at airports with low air traffic volume.
  - The remote ATC tower capability also enables ANSPs to avoid any interruption of ATC service during contingencies, such as fires or earthquakes, which may affect the availability of the actual control tower.
- Let me now move on to increasing collaboration.
- Connectivity and interconnectivity drive our industry. In the same way that aircraft must cross FIRs, our community too depends on each other. The success of one ANSP can only be achieved through the support of other ANSPs. We need to share information, to develop new processes and products together to bring our industry to the next level.
- I am heartened to see collaboration between many ANSPs. In particular, ATFM is one bright spot. ATFM has the potential to regulate high density traffic flow with the optimum use of available resources. This results in better predictability for all the stakeholders – airlines, airports, ANSPs and passengers. This will enhance ATM safety, efficiency and effectiveness.

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- In the Asia Pacific, the challenge is to implement ATFM across different countries and administrations without a single network manager which other regions use.
- The multi-nodal regional ATFM initiative was started to tackle that challenge directly. This initiative has united the ANSPs of Thailand, Indonesia, Malaysia, Hong Kong, Cambodia, Laos, Philippines, Viet Nam, Japan, New Zealand, Australia and Singapore who have participated in the meetings and operational trials (which commenced in June 2015) to validate the prototype.
- The next phase would be to formalize some of the operational concepts and procedures with the participants and to expand the number of participants.
- Once we are able to cross the hurdle of having the multi-nodal regional ATFM to work successfully, the next step I hope to see is inter-regional ATFM.
- There is scope to do more in other areas. Our APAC Safety Workgroup is working on a common risk management framework and sharing their recent safety efforts within their own organisations. Our APAC Ops Workgroup is working on ADS-B Collaboration, En-route PBN Harmonisation in addition to ATFM. It is my hope that such initiatives can also mature and develop into success stories.
- We need to keep up the momentum to participate in the Workgroup activities as these help keep members engaged in their work and are effective in translating the CANSO vision into strategy and action.
- I wish you all a fruitful Conference.