Asia Pacific Safety Information Sharing Demonstration Project

In the Asia Pacific, four nations and 12 aviation industry partners have launched a collaborative project that uses shared aviation data to identify potential safety issues and address them before serious incidents can occur.

Building on Success

In 2013, the Civil Aviation Authority of Singapore (CAAS) commissioned MITRE to evaluate the feasibility of implementing an aviation information sharing program in the Asia Pacific region. That study examined a variety of factors, such as the availability of safety information and the unique regulatory, cultural, budgetary, and technological environments of the different nations in the region. The study's findings were in favor of a data sharing initiative.

The project's inspiration is a United States data sharing initiative—the Aviation Safety Information Analysis and Sharing (ASIAS) program—credited with dramatically improving the safety of commercial aviation in the United States over the last decade. As the operator of the Federal Aviation Administration's federally funded research and development center, MITRE oversees the program's data collection, protection, and analysis.

Formulating a Demonstration Project

In 2014, MITRE began developing a plan to conduct a regional safety information sharing demonstration project. To do so, we later joined forces with the Flight Safety Foundation (FSF), a world-recognized aviation safety advocacy organization with expertise in intergovernmental governance. Over a three-year period, MITRE and FSF worked with Asia Pacific government and industry representatives to outline the program's foundation and principles, set clear participant roles and responsibilities, and address issues such as how members' information would be protected, how it would be shared, and how program decisions would be made.

Because of MITRE's technical capabilities, previous experience with data sharing initiatives, and not-for-profit objectivity, we were selected to serve as the trusted third party that would collect and analyze the regional information, disseminate findings, and facilitate discussions about potential mitigations.

Governments and Industry Join the Effort

In 2017, four nations—Singapore, the Philippines, Indonesia, and Japan—committed to participating in and financing the project. (Figure 1 shows the airspace corresponding to the four participating nations.) At least six other nations have expressed interest in participating as well. Airlines, aircraft manufacturers, and regional trade organizations have also agreed to supply information and subject matter expertise to the program.
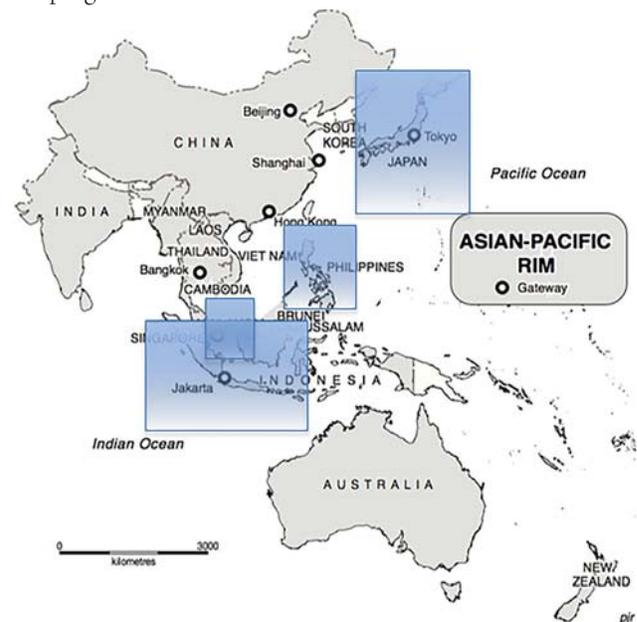

Figure 1. Airspace of the Demonstration Project's Four Participating Nations

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Created as a demonstration project, the initiative will last three years. During that time, the project will pool results and information from participants and analyze safety issues of concern across the region. It will also provide participants an opportunity to assess and refine the program's structure and benefits.

Initial Focus is on Mid-Air Collision Risk

The demonstration project's initial focus is on mid-air collision risk. Although mid-air collisions are rare, near-misses sometimes occur. By tracking those incidents and analyzing the data associated with them, MITRE researchers can better understand why they are occurring and recommend mitigations.

Already, MITRE researchers have identified several mid-air collision risk hot spots that warrant additional study, many of which occur at the borders between countries. As the analysis continues, researchers expect to have a more complete understanding of the situation and to be able to recommend potential fixes for the data sharing program participants' consideration.

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