AIRPORT CAPACITY ENHANCEMENT (ACE) PROGRAM

Airservices, major airports and airline operators are working collaboratively to increase airside capacity, particularly during peak traffic periods.

Background

The projected strong growth in aviation traffic, including passenger numbers and aircraft movements, presents challenges for airlines, airports, and air navigation service providers.

As indicated in the 2009 National Aviation Policy White Paper, Flight Path to the Future, Australian aviation is a major economic driver. It supports more than half a million jobs and injects nearly $6.3 billion into the economy.

Constraints at a number of airports, particularly during peak traffic periods, have the potential to adversely affect this community benefit and limit industry growth.

Improving runway efficiency and the use of existing infrastructure, particularly during peak periods, is critical to the efficient operation of the national airspace system and managing the impact of aviation on the environment.

Airservices has introduced the Airport Capacity Enhancement (ACE) program to help meet these challenges.

Following industry consultation, ACE was launched in Melbourne and Perth in 2011 and has since expanded to include Brisbane in 2012. Whilst activity is centred at these airports, ACE maintains a national focus on enhancing airport capacity.

Overview

Airport efficiency can be constrained by runways, taxiways and aprons. However, these three constraints do not operate in isolation. While the initial focus of the program will be runway usage, other constraints will also be considered.

Our planned program of work falls into two general categories:

- **Short term** – related to improvement in pilot and controller performance, operational analysis and subsequent procedures development.
- **Medium term** – new infrastructure, operating modes, traffic mix and airspace management.

Any identified significant infrastructure improvements will be considered through normal planning processes.

Objectives

The ACE program aims to make the best use of existing infrastructure to maximise efficiency. This will involve improving the processes and practices of air traffic controllers (ATC), airport operators and airlines.

There are common themes to the program:

- **Harmonisation**: The steps taken to increase efficiency must be in harmony with current Australian standards and practices, while providing sufficient room for the development of local procedures.
- **Collaboration**: Every movement matters and every second counts. Over many movements, the seconds add up to create additional capacity that in turn can reduce delays. The benefits are shared by all and can be achieved collaboratively.
- **Performance management**: Performance must be monitored and measured in order to tactically manage improvement in ATC and pilot performance. By measuring performance, new methods can be assessed and refined.
Program initiation
Airservices has established ACE to provide support, coordination and standardisation in delivering the benefits to participating airports.

Each participating airport will have an executive steering group which will in turn guide the development and implementation of the program and appoint an ACE Management Team.

ACE Management Teams should ideally include ATC supervisors and experienced operational controllers, senior pilots, flight operations staff and representatives from airport operations. Each also has a role in delivering improvement activities within their specialist operational area.

In this we expect to be guided by the experiences of European airports which are already well advanced with similar programs.

Communication and consultation
The objectives of the ACE program must be communicated to pilots, air traffic controllers and airport staff, and their engagement actively sought, for the program to succeed.

Joint forums will allow identification of ideas, initiatives and plans which may deliver operational improvements.

The early involvement of airport partners on all levels is the key to improving airspace and airspace efficiency.

Where necessary, consultation with the broader community will also occur via airports’ Community Aviation Consultation Groups.

Measuring performance
The national program team and each airport ACE Management team will determine the measurements necessary to assist capacity improvement.

Tactically the measures will assess pilot reaction times, runway occupancy times (ROT) and the ATC applied arrival and departure separation standards. The European program has developed a list of intervals that can be used as the basis for common performance measurement at Australian airports.

These measurements will support the identification of areas where ATC, airlines & airports can deliver efficiency gains within current safety standards.

Performance monitoring will form an essential element of the program.

Participation by key industry partners in the iterative process of delivering the optimum capacity at participating airports will provide a sound platform for the development of strategic measurement and planning to address longer term airport capacity and efficiency matters.

Safety
Safety remains the aviation industry’s over-riding priority.

ACE will introduce measures that improve overall safety by ensuring smooth, planned operations with enhanced situational awareness.

This will provide opportunities to safely anticipate events and better manage ATC and pilot workload during busy periods.

Each initiative will involve comprehensive local safety assessments. Operational changes will be implemented with the development of required procedures and the delivery of appropriate ATC and pilot training.

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