



Network Management – Balancing demand and capacity of Australia's aviation network

Airservices is a government-owned organisation which provides safe, secure, efficient and environmentally responsible services to the aviation industry. In addition to its air traffic management services and Aviation Rescue Fire Fighting Service, Airservices helps balance air traffic flows across Australia's aviation network.

Airspace and airports have a limited capacity, like highways and city roads. Just like road traffic, air traffic can become congested. Air traffic congestion is much more complex to coordinate, as we cannot simply stop aircraft.

The Airservices Network Coordination Centre (NCC) in Canberra is tasked with managing the day-to-day demand for Australia's airspace and airports in close collaboration with all relevant stakeholders.

What is the process?

Step 1: Airlines send their flight schedules to the NCC the day prior to operations. These flight schedules are coordinated by an external body, Airports Coordination Australia (ACA), to ensure they meet applicable regulations like the Sydney Airport Demand Management Act. The flight schedules inform the NCC of the demand for Australia's aviation network for the following day.

Step 2: The NCC establishes the available capacity through a collaborative process with the airlines and the Bureau of Meteorology. In cases of adverse weather, the number of flights that can safely fly in and out of an airport can be significantly affected. Examples of adverse weather include: fog, thunderstorms, strong rainfall and gusty winds.

Step 3: The NCC publishes a Ground Delay Program (GDP) to balance the demand with the available capacity, as established in the first two steps. The GDP instructs aircraft to wait on the ground for their turn to depart, aiming to reduce excessive airborne holding at the destination. This is a bit like traffic lights on a highway ramp restricting the flow of cars onto a busy road.

Sometimes the available capacity can be reduced to such an extent, that airlines make the decision to cancel some of their flights. Flight cancellations are careful commercial and logistic considerations by airlines, outside of the control and influence of Airservices. Often airlines will try to combine flights on busy city pairs to get passengers to their destination with as little impact as possible.

Throughout the day of operations, the NCC closely monitors the aviation network and collaboratively works with airlines to update the GDP when required. While operators in the NCC do not directly control flights like an air traffic controller, they perform an important role to ensure the smooth operation of Australia's aviation network, helping our airline customers to efficiently and safely get their passengers from A to B.