PROJECT

**ACE**

**Airport Airside Capacity Enhancement**

**Funding:** European

**Duration:** Feb 2002 - Nov 2006

**Status:** Complete with results

Background & policy context:

The need to enhance capacity at an airport is clear at many airports within Europe. Increased demand for airport slots cannot be met, delays are increasing and growth is restricted. In many cases, investment in new infrastructure takes time in order to resolve environmental, political and cost issues and the potential for significant increases in capacity appears limited.

Objectives:

However, existing infrastructure is often under-utilised through the use of inefficient practices and procedures. The Airport airside Capacity Enhancement (ACE) projects the means to release this “latent” capacity through:

- accurate measurement of the performance of the airport operation,
- assessment of the capacity of the airport and,
- enhancement of ATC, pilot and airport operator performance via the implementation of Best Practice techniques.

Methodology:

Capacity at an airport is limited by a variety of constraints with the most restrictive of these governing the overall capacity. In order to sustain growth, the airport must engage in Airside capacity planning to meet future demands. Therefore, the primary objective of this process is to provide a structure for identifying and targeting the constraints that are limiting current or future capacity. It starts by quantifying the capacity requirements for the short and medium term and then determines what constraints will impact on the ability of the airport to achieve those requirements. The prerequisites are to have an in depth knowledge and profile of the current and forecast capacity requirements, understanding of all constraints that can effect the process and accurate and reliable information on all areas associated with the development of the airport.

The Airside Capacity Planning Method Document describes a step by step process leading to the development of a Capacity Plan:

- **STEP 1** - Establish the baseline capacity
- **STEP 2** - Determine future demand
- **STEP 3** - Determine if a shortfall will exist
- **STEP 4** - Identify the constraints
- **STEP 5** - Score the constraint impact
- **STEP 6** - Identify remedial actions
- **STEP 7** - Score the remedial action impact and cost
- **STEP 8** - Establish priorities
- **STEP 9** - Establish Capacity Enhancement Plan

Other programmes: APR - Eurocontrol "Airport Operations Programme"

Partners:

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Key Results:
The ACE project has developed a structured methodology that enables any airport to assess its existing airside capacity and to evaluate the potential for maximising runway throughput. Through working closely with some of Europe’s busiest and fastest growing airports, the ACE project has identified a number of Best Practices that are applicable for all airport stakeholders. These Best Practices have undergone rigorous evaluation at EUROCONTROL and trial airports.

A number of techniques and methods have been developed by the ACE project that can be used by the airport community. These are in three forms:

- Guidelines and manuals
- Analysis and modelling tools
- Courses and workshops

In addition, to maximise the effectiveness of the ACE methodology, it is essential to ensure a high-degree of collaboration between the airport operator, key airlines and ATC.

The ACE team consists of airport ATC, pilots and runway capacity analysis experts with experience in evaluating and enhancing capacity at a significant number of airports.

The ACE methodology enables airport to:

- Use runways to their full potential;
- Improve airport airside efficiency;
- Anticipate, and be prepared for, future airport airside capacity needs,
- Bring together the airport community to work together to enhance the efficiency of operations.

Through these benefits, additional runway slots have been provided during peak demand times, leading to reductions in delays and increased revenue for all airport stakeholders.

STRIA Roadmaps: Infrastructure
Transport mode: Air transport
Transport policies: Societal/Economic issues