Problem

Major airports throughout the world are becoming increasingly constrained by airside capacity. Providing an additional runway movement per hour at an airport is of enormous benefit to airlines, the airport operator and the local economy. To ensure that the greatest output is obtained from existing facilities, it is imperative that high performance be realised from all the resources that can affect airside capacity. However, many factors influence the resources and there are complex interactions between them. The performance of the entire airside system can only be optimised if these interactions are well understood.

Approach

Icon has developed a three-stage approach to helping airports improve airside performance.

Stage 1 is to set up a comprehensive set of performance indicators to cover all aspects of airside operations. This includes the performance of ATC in sequencing and separating flights, the performance of airlines in complying with airport procedures and requests, the performance of airport management in the allocation of airport facilities to aircraft, and the output of this performance in terms of throughput and delay.

Stage 2 is to identify all the factors that influence airside performance and the interactions between them.

Stage 3 is to quantify the impact that the controllable factors have on the performance indicators that they affect.

The three stages have been captured in an analytical tool that can be tailored to individual airports. The tool permits:

- identification of the factors and interactions that drive each performance indicator;

- quantification of the impact on performance of variability in the system, and hence the improvement possible from reducing variability;

- quantification of the impact on the output measures of improving the performance of the actors involved in airport airside operations;

- sensitivity analysis on the influencing factors to identify where improvement will have the greatest impact;

- goal-seeking to determine the extent to which performance in a particular area must be improved to achieve a desired output.

Application

Icon is offering airports a consultancy service in airside performance improvement, which will be tailored to the requirements of a particular airport. The scope of the service provided will depend on how advanced an airport is in the development of a comprehensive airside performance measurement system. Options include:

- assistance in setting up a complete measurement system;

- extension of an existing system into areas where performance is not currently being measured;

- creation of a diagnostic tool to identify the factors that affect performance and the actions that might be taken when a specific performance problem is experienced;

- identification of the data that is required to populate a performance measurement system and a methodology for analysing it;

- analysis of performance data to provide new insights into how performance might be improved;

- identification of challenging but realistic performance targets for particular groups of actors.

Clients

Icon has developed performance measurement systems in a number of complete industries including European Air Traffic Management, process industries and the public sector. Consequently, Icon's consultants have an excellent understanding of the processes that can be used to set industry-wide performance measures.

Recent work for an international client has led Icon to focus on airport airside performance.

Next steps

If you would like to discuss how Icon Consulting might help you improve airport airside performance, please telephone Mike Rose or Bernard Kinchin on the number below, or send an e-mail to Mike Rose at the address below.