



## EUROCONTROL

### OPTIMISATION OF BOTH THE SIZE AND THE SCHEDULES OF AIR TRAFFIC CONTROLLER TEAMS ACCORDING TO TRAFFIC



#### Objectives:

- Obtain a tool to optimise the sizing of air traffic controller teams and their schedules according to changes in air traffic
- Encapsulate it in an easy-to-use Excel programme
- In the long run, combine the tool with a system enabling real-time tracking of traffic in the next hours, so as to better manage schedules and breaks and to modify the workload of each controller during the day



#### Solution:

- Eurodecision's LP-Shift integrated in Excel
- An accurate analysis of air traffic volume both monthly and daily, and according to the season. This allows to determine the number of controllers present for each ten-minute period 365 days per year
- Suggestions for contracts (shift duration, rules concerning breaks, etc.)



#### Results:

For each set of suggestions, the tool determines the number of controllers who must be present for each day of the year and their specific schedules, presented as a Gantt chart

*"We wanted to perform a recurrent, rational optimisation of shifts for air traffic controllers. Based on its experience in several other transportation sectors, Eurodecision provided a tool which perfectly matched our needs: LP-Shift. In just a few days, they were able to fully understand our problem and proved very resourceful. The tool was up and running in a matter of weeks. Since then, we have included LP Shift as a central component for simulating new shifts," said R. Ehrmanntraut (Capacity Management Team, MUAC).*

EUROCONTROL is an intergovernmental organisation made up of 38 Member States and the European Community which co-ordinates safety in the European air space. The primary objective of EUROCONTROL is the development of a seamless, pan-European air traffic

management (ATM) system. The company contributes to making European aviation safer, performance-driven and environmentally sustainable.

EUROCONTROL also provides air traffic control for the upper airspace (above 24500 feet) covering Belgium, Luxembourg, the Netherlands, and western Germany.

Eurodecision's LP-Shift is an optimiser already used by the Aéroports de Paris, one of the leaders in the entertainment sector, and Eurotunnel, Air France, etc. and has proved an ideal solution. It allows to easily define scenarios for organising controller teams using a very large number of parameters.

In just a few days, the Eurodecision team was able to comprehend the project and make a suitable proposal. Based on the LP-Shift numerical model, the goal was to develop an Excel-based tool and then train the EUROCONTROL operator responsible for the project. Eurodecision also helped develop scenarios for team shifts based on analysis of the previous year's data. Work days were divided into ten minute periods between 6 AM and 10 PM with different variables according to the season.

This powerful tool allows to enter a considerable number of parameters and to very accurately define human resource requirements.

Following this work with Eurodecision, EUROCONTROL plan to acquire a "break planning tool" in order to calculate when controllers can take their breaks, or change their schedules, based on such as

- breaks at the last minute (from D to D+1, or even in the morning for the afternoon),
  - factoring in the latest traffic information (changes to flights, delays, etc.)
- so as to optimally cover the related workload.