

What we supply

- Report on cost difference between crew base scenarios

How fast?

- Normally within 1 month from receipt of data

Extended scope

- An extended scope may affect the delivery schedule

What we need to know

- Timetables (one or two) and required time periods ¹
- Today's crew data (required distribution of crew per duty base, in duty days or block hours)
- Aircraft rotations for each timetable ²
- Industrial regulations
- Crew agreements
- Cost structure (major cost drivers such as daily crew costs, credit time, etc) ²
- Major stability criteria (minimum crew connection times, standard delay buffers, etc) ²

¹ Can also be extracted from standard OAG.

² Can be simulated, if information is unavailable.

Questions & Answers

Are we obliged to use Carmen optimization software in order to benefit from the analysis?

No. The study will relate all costs to what the original schedule would have allowed. This means that even if your current planning processes do not use Carmen planning optimization software, the estimated cost impact of changing the base structure will still be valid.

A new fleet structure may affect crew distribution. Can you advise us here as well?

Yes. It is possible to let the planning software suggest the optimal crew distribution between bases. Further, it is possible to investigate specific changes in crew base structure, such as opening or closing crew bases.

What is the required level of involvement from our organization?

This depends very much on your needs. Most of the information required for this study can be extracted from public sources or approximated by us, based on our experience from working with similar studies. However the level of detail and the quality of the advice we can give you is of course to some extent dependent on your ability to devote some time to this project. Of course, the less exact the information put into the analysis, the less exact the results will be.

If you have any questions about Fleet and Schedule Analysis, please contact your Carmen account executive or consulting @carmenconsulting.com



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Fleet and Schedule Analysis

- How will a new schedule, or a new fleet structure, influence my crew costs?
- Will a new fleet influence the preferred crew base structure?
- Will minor agreement changes be sufficient to improve the utilization of the new fleet?

A change of just one per cent in crew productivity represents seven figure savings or costs for a mid-sized airline's operations. With extensive experience and unique tools Carmen can advise on how to change rules and how to rapidly make expert evaluations and simulate operational modifications. This enables you to make decisions based on facts.

Benefits

To give you an idea of how a new schedule or fleet structure will influence the crew operation, Carmen can perform a comparative study between the existing schedule and the new schedule.

The most important result is the relative difference between today's crew cost and the crew cost with the new schedule.

Scenarios

In the study, we plan anonymous crew using various scenarios and in different time periods. All change scenarios are compared to a base line using your existing regulations only. This ensures that the final comparisons will be independent of the planning tools used today.

We use Carmen Crew Pairing, the same tool used by many of the world's leading transportation companies for the technical aspect of the study.

Method and Scope

We start the project with agreeing on the scope and the goals. You explain your questions and we bring up potential problems based on our experiences from the airline industry. Following this we set up the system and maintain close contact with your staff to

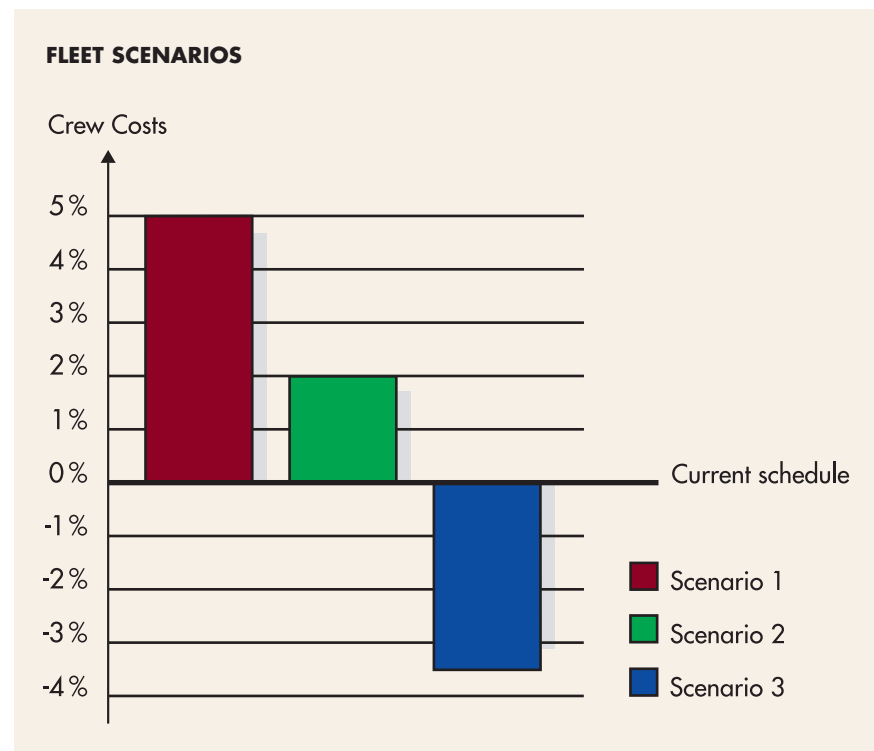


Diagram showing the difference between today's crew cost and three new fleet scenarios.

perform the analysis. We plan for cockpit and/or cabin crew, using weekly schedules over three time periods for up to four different timetables. If more appropriate, daily or monthly planning can also be carried out.

The basic analysis can be expanded to cover even more. It is possible to investigate any number of regulation changes or even entirely different agreement structures, alternative quality criteria and cost structures, timetable revisions, etc. It is also possible to focus on capital expenditure, new fleet transition costs, revenue fluctuations due to new fleet or network structures, maintenance related costs, etc.

Results from a study

- Advice on potential improvements
- Cost comparisons for all scenarios
- Detailed planning scenarios
- Analysis of each scenario