



INTELLIGENT TRANSPORTATION SYSTEMS

Planning optimization system for Transabus Balear on the island of Mallorca

The project

- Scheduling, timetabling and rostering system for:
 - 63 buses, 121 lines, 161 drivers
 - Drawing up the timetable
 - Generation and optimization of vehicle services and driver service
- Driver task assignment system
 - Rostering optimization
 - Driver workload optimization
 - Management of holidays and absences
- Exporting of driver's work hours to the corporate payroll software

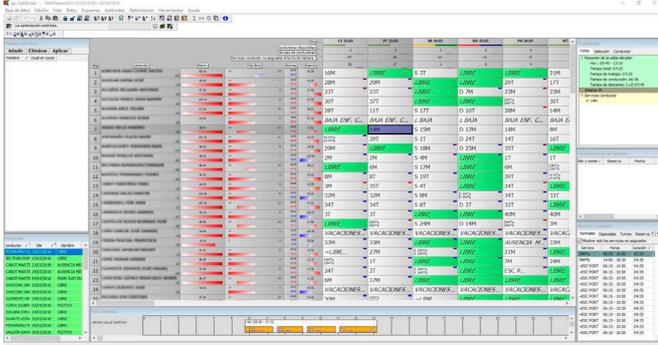
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*«In a relatively short period of time we have managed to reduce the number of vehicles, drivers and the mileage»
Ivan Tizón, Transabús Traffic Manager*

Initial situation and goals

TRANSABUS BALEAR wished to digitize the public-transport planning service, upgrading from traditional manual tools to an all-in, lifecycle-long public-transport management system providing planning information in a user-friendly tool and capable of responsively analyzing new planning scenarios in such a way as to boost the passenger service without having to increase the number of vehicles.



Digitization of Mallorca's passenger transport optimization and planning

TRANSABUS, a private concessionaire running a set of Mallorca's urban and interurban public-transport lines, took the decision to set up a public-transport planning and optimization software system, replacing the traditional methods by a system allowing them to optimize the use of resources (vehicles, drivers, fuel) guaranteeing the passenger service by means of a tool integrated into the corporate lifecycle.

Solution

The implemented solution is an urban and interurban public-transport planning and optimization system that ensures lifecycle-long planning in a single tool.

GMV Planner caters for all the following: scheduling and timetabling; dimensioning the fleet to suit, using the minimum number of vehicles and drivers while duly taking into account the statutory driver rest periods.

GMV Planner will also arrange shifts in a simple but very complete interface; this rostering pays due attention to legal rules, collective bargaining agreements and other group or individual constraints (reductions of the working day, early retirement, etc.)

GMV Planner creates and manages each driver's service-sheet lifecycle: the supervisor is able to draw up and give to each driver his or her daily service sheet as well as verifying and checking each service sheet. The supervisor can also easily monitor the overtime planned and actually worked by each driver, duly allowing for any planned absences or holidays and exporting the record of hours worked to the corporate payroll tool, etc.

In carrying out this project, GMV duly adapted and personalized **GMV Planner** to suit client needs, thereby solving particular constraints and problems of Transabús, such as the tachograph to manage rest periods, sometimes used and sometimes not due to the mixed urban/interurban mode, and rostering tailored to Transabús's weekly rest policy.

Results

Transabus's take-up of **GMV Planner** quickly recouped the initial outlay by optimizing service resources in light of such indicators as the number of vehicles and drivers necessary to cover the schedule, the mileage, etc.

GMV Planner has slashed the planning time, freeing up more time for seeking new optimizations or new passenger services, simulating these new scenarios beforehand.

«The clinching factor in choosing GMV Planner was its rostering and services optimization and planning power»

Ivan Tizón, Transabús Traffic Manager

The system is also phased in with GMV's fleet management system, enabling **GMV Planner** to be imported to deal with the duration of driver shifts or even the time taken for each run in the various daily timebands. This integration of the two GMV systems also means a dispatch tool can display the availability of each driver for stand-in purposes according to their workload on previous and following days.

