CASE STUDY HOSPITAL TRANSPORTS

THE CUSTOMER

The client is a mobile app and web application development company responsible for managing an optimization system for the transportation of people and goods within a large hospital in Northern Italy.

NEEDS

The need that arose, given a certain number of hospital transports to be carried out, consisted in optimizing the assignment of the latter to the available operators.

THE PROJECT

The system developed by eLabor is based on OptaPlanner and is presented as a service accessible via HTTP protocol. The project's goal is to assign available operators to transport patients or supplies from one department to another, as requested daily within the hospital. This ensures the greatest possible punctuality in carrying out transports, minimizing operator travel, and ensuring a fair distribution of the workload.

To do this, the system initially allows you to create a daily work plan. If work conditions deviate from those expected, you can revise the plan very quickly, within minutes. This allows you to have a real-time, constantly updated work plan optimized for the resources involved.
The project was developed over three phases (sprints): the first aimed to implement the exchange of both incoming and outgoing data.
The second phase was dedicated to achieving a realistic schedule, with most of the expected constraints for the day's optimization. The third phase consisted of completing the constraints still to be implemented and calculating the extemporaneous optimization.

IMPROVED PROGRAMMING

Thanks to this project, it was possible to optimize daily work scheduling, improving the organization of operator movements and allowing for a more balanced distribution of the overall workload.

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