YOUR PLANNINGS – OPTIMIZED BY ALGORITHMS!

Planners, schedulers, dispatchers, and many other occupational groups are confronted with optimization problems which are hardly manageable – for humans. Our software package from adiutaByte provides algorithmic support to facilitate your everyday business.

We have a lot of experience in developing algorithms. Our own algorithm-framework is flexible and adaptable to create a custom-tailored solution meeting exactly your demands. There is not the one-and-only solution method for planning and scheduling problems in general. However, we develop solutions in cooperation with you to provide the best support for your daily routine.

As time is an important and crucial factor, one of our main goals is to create fast and accurate assistance systems to support you in real time in the world we live in.

Different influences like traffic or weather circumstances can be taken into account or be combined in our algorithmic approaches to achieve better and more precise planning results.

Incidents like unforeseen gaps in the staffing or vehicle failures during the day can be integrated and considered automatically to keep the planning up to date and permanently accurate over the day.

You know your use case with all of its challenges and restrictions. So, no one is as qualified as you to help modelling those. With your information and experiences from your former tasks, our algorithms can learn to provide even better support for the future.
Planning – a daily task in different fields

In almost every company, plans are created manually every day and need to be updated all day long which involves much work and effort. This can be the daily schedule in a hospital, the fleet management of a parcel delivery service or the planning of the shelf location in a warehouse. The creation of such a plan as it is forms a very complex task where a large number of factors has to be considered.

Sudden happenings – a stressful situation for planners

In theory, such plans are created once considering different influences and factors and executed afterwards. In practice, unforeseen happenings and new tasks will arise during the execution. They have to be taken into account as fast as possible since they may influence the current situation directly and call for possible actions. Consider for example a fleet of vehicles for which an incoming traffic jam or a road closure may suddenly lead to an unfulfillable plan. This plan then has to be adjusted as fast as possible with minimal changes.

Algorithms – reduction of routine tasks and stressful situations

During the creation of plans, a large number of further influences and factors have to be taken into account, besides the given tasks. In addition to unavoidable factors like vehicle properties or persons and their working times, there are more relaxable factors like the current traffic situation, the weather conditions or desired execution times. Due to human nature, we are not very good in solving those kinds of problems in short time. Computers and the corresponding algorithms instead can evolve their full potential to support people handling the incident management to create an added value.

adiutaByte – one solution for various use cases

Due to the abstract formulation of our created and offered solution, we are able to easily adapt different use cases in various situations, where planning is essential. Depending on the user’s needs, a large number of factors and restrictions can be considered to create a problem-dependent solution and a distinct added value.

1 A lot of different factors influence the planning.
2 The dispatcher has to consider all of these influences.
3 The algorithm can easily be applied to different use cases.