Presentation 26 - Model solution

Note: there are multiple answers that would comply with the assignment, and only few possibilities are shown here.

1. Besides ambulance dispatching & relocating, what other applications could the model (or slightly altered version of it) be used for?
Food delivery

Companies such as Wolt need to somehow optimize their courier relocation and dispatching problem as well, since it's in the interest of the company to provide a) as many deliveries b) as fast as possible.

The problem could be considered to be pretty similar to the ambulance relocation and dispatching problem, even though the response times do not need to be *as* fast but still under the set time limit promised to the customer (e.g. under an hour). Adding the acceptable time window instead of finding the global average minimum could, in fact, be a decent extension to the ambulance problem as well, though in that case we should use a time window much smaller than one hour.

Some other alternative answers include:
- Taxi cab companies
- Other emergency vehicles
- Security/guarding services etc.

2. How could the model be extended, for example, so that it better models real-world ambulance dispatching & relocating (or any alternative application of your choosing)?

Even the article suggests few extensions, such as adding call priority to the ambulance model. This would make sense, since not all ambulance requiring missions are instantly life threatening. However, this would mean that we should re-evaluate our objective since it should now also take into account the priority alongside with the response time for each priority.

There are many other alternatives as well, such as
- Taking into account the different vehicle types (that could be used for different type/priority of missions as well) (came up in class)
- Optimizing with regard to passing some minimum level of accepted response time instead of minimizing the average (came up in class)