

## Call center staffing

### Changes to the setup introduced by the simulation project:

None.

### Tasks:

1. The objective is to determine the required number of personnel for each day and the start times of the shifts. The shift duration stays unchanged. The time discretization for the start times of the shifts is the hour.
2. Identify the decision variables.
3. Design an optimization algorithm and apply it to solve the problem. The value of the objective function is evaluated through a discrete event simulation.
4. Like in the simulation project, the objective function can reflect various policies of the decision maker: whether they want to optimize over the average, best, worst, or certain percentile of the objective function distribution. Decide what your position is and justify it, or present results for several alternatives.
5. Use your creativity and design a new call dispatching strategy that leads to a lower cost solution.

**Bonus question:** Design a series of what-if scenarios of the impact of the demand parameters given in your problem on the value and structure of the best solution. Interpret the results.