**Description of the call centre data**

You are commissioned to analyse the performance of the company’s in‐house call centre, derive recommendations for actions based on your analysis and provide a performance dashboard calibrated on the historical data.

The dashboard should provide information for the company‐level and the individual‐level performance.  You got a 20% random sample of the call centre activities over the past 3 months. In addition, HR provided you with additional information about the employees working at the beginning of the sample period in the call centre. Both data can be merged using a unique person identifier.

**Variable definition in the call centre data**

1. Time - time of the day when the call has been recorded (in hours)
2. length - duration of the call with the call centre agent (in seconds)
3. waiting - time duration, the costumer spent waiting to be connected to an agent (in seconds)
4. customer satisfaction - each customer has been asked to rate their satisfaction with the service after the call via a 10‐point Likert scale on the app, between 1 very unsatisfied and 10 is very satisfied
5. problem description - each caller chooses one of four options before being connected to an agent, the options are technical support, delivery problem, return problem and complaint
6. forwarded - if the call centre agent could not resolve the problem, the agent could forward the call to an expert (for technical problems only)
7. agent - anonymous number for the call centre agent

**Variables in the HRM data**

1. gender - indicating if male or female employee
2. age - of the respondent at the reference day (in years)
3. tenure - number of months working in the call centre at the reference day
4. qualification - three broad categories of education degree including apprenticeship, some college and university
5. ethnicity - four categories describing the employee’s ethnic origin including White, Black, Asian, and other
6. agent - anonymous number for the call centre agent