**INFORMS CAP Certified Analytics Professional competencies**

**Business Problem Framing**

**(Ability to understand a business problem and determine whether the problem is suitable for an analytics solution)**

Objective 1: For the open data source selected, define the problem to be addressed

* The problem in this dataset is the voluntary staff turnover levels. The dataset is coming from the IBM website, this is a fictional data set created by IBM data scientists.

(https://community.watsonanalytics.com/wp-content/uploads/2015/03/WA\_Fn-UseC\_-HR-Employee-Attrition.xlsx)

Objective 2: Identify the stakeholders

* Management
* HR Department
* Recruitment
* Finance

Objective 3: Determine whether the problem is suitable for an analytics solution

* This is a typical problem where HR departments deal with either too high or too low turnovers. HR departments have available data at their disposal to build models which can identify patterns and trends in staff attrition

Objective 4: Refine the statement of the problem with any constraints

* With accordance to GDPR and file retention policies, HR departments have only certain data available to them. This particular data set has no data collected from exit interviews, it should be noted that certain reasons given for leaving are external factors meaning outside influences such as emigration, distance, paternal influences

Objective 5: Define an initial set of business benefits

* Reduction in recruitment costs, lower volume of recruitment, increased wisdom and knowledge from current employees staying in the company longer, reducing reliance in hiring of contractors and temps to backfill roles, reduction in time for training and induction, less HR administration, improved employee engagement score and net promoter score

**Analytics Problem Framing**

**(Ability to reformulate a business problem into an analytics problem with a potential analytics solution)**

Objective 1: Reformulate problem statement as an analytics problem

* The company deals with high employee turnover and wishes to improve staff retention levels. Using available HR data we wish to build a model that helps to understand which factors influence staffing attrition. The outcomes will help the company to review the recruitment model and the use of temps and contractors to back fill the vacant roles

Objective 2: Develop ABT attributes and outputs

Objective 3: State the set of assumptions related to the problem

* We are making the assumption that all influences on staff attrition are related to the current data that we have. We are aware that some outside influences may have a factor on staff attrition and understand that not all correlating factors are a cause of employees leaving the company

Objective 4: Define the key metrics of success

* Lower staff turnover
* Increased retention metrics
* Improved staff knowledge metric
* Improved Employee Net Promoter score