# DAT 650 Use Case Descriptions Document

# Customer Churn

‘Churn’ (a derivative of change and turn), also expressed as customer attrition or customer turnover, refers to the loss of customers or clients. Within the GE Healthcare portfolio, a Health IT service is available on a subscription basis. The service is used by smartphones and provides a platform to assist medical professionals in their daily roles. The service includes a required use of a GE provided smartphone and cellular service configuration to ensure the data streaming bandwidth is available and sufficient to support the medical professionals use of the smartphone application. This GE cellular service provides the medical professional with all normal cell phone usage in addition to the application.

GE has partnered with a cellular carrier – SmartAppCellular – that provides dedicated bandwidth and configuration services for cell phone applications. GE is beginning to experience a small amount of attrition and based on customer feedback, it is related to the cellular service and not the application. GE Healthcare recognizes that other vendors are beginning to compete in this space and is attempting to identify ways to retain their customers.

The current data environment is a database that contains subscriber information which is updated at the end of each month and reflects the most current month end cumulative account information. The data is stored in an Oracle database in account level transactional form. The IT department has built a data warehouse that is updated each end of month by appending the most recent end of month data.

The Customer Account Management Team have access to this information through monthly data warehouse reporting and have access to generate adhoc extracts of select data into excel for their unique research needs. The Team extracts are limited in rows as well as fields that have been corporately pre approved for extraction.

GE has compiled a file for the purpose of this pilot project using the extract tool. The dataset provided, telecom\_churn.csv, includes information on GE Healthcare IT Application subscribers applicants which the GE Customer Account Management Team believes to be relevant to analyzing this problem.

The Customer Account Management team would like to determine if this data can be used to identify subscribers that may churn. It is important to be able to understand churn default drivers for meta data like longevity, cell usage and other pertinent groupings which comes from the analysis.

The pilot will need to only show basis for this data to be able to describe and generally identify subscribers that may churn. The management team expects to make a GO or NO GO business decision based on the pilot recommendation. If there is a GO, then GE will allocate new project dollars to arrange for GE resources to develop a full enterprise deployed predictive analytic model. Note that the results of this pilot will be used as a basis for that next project.