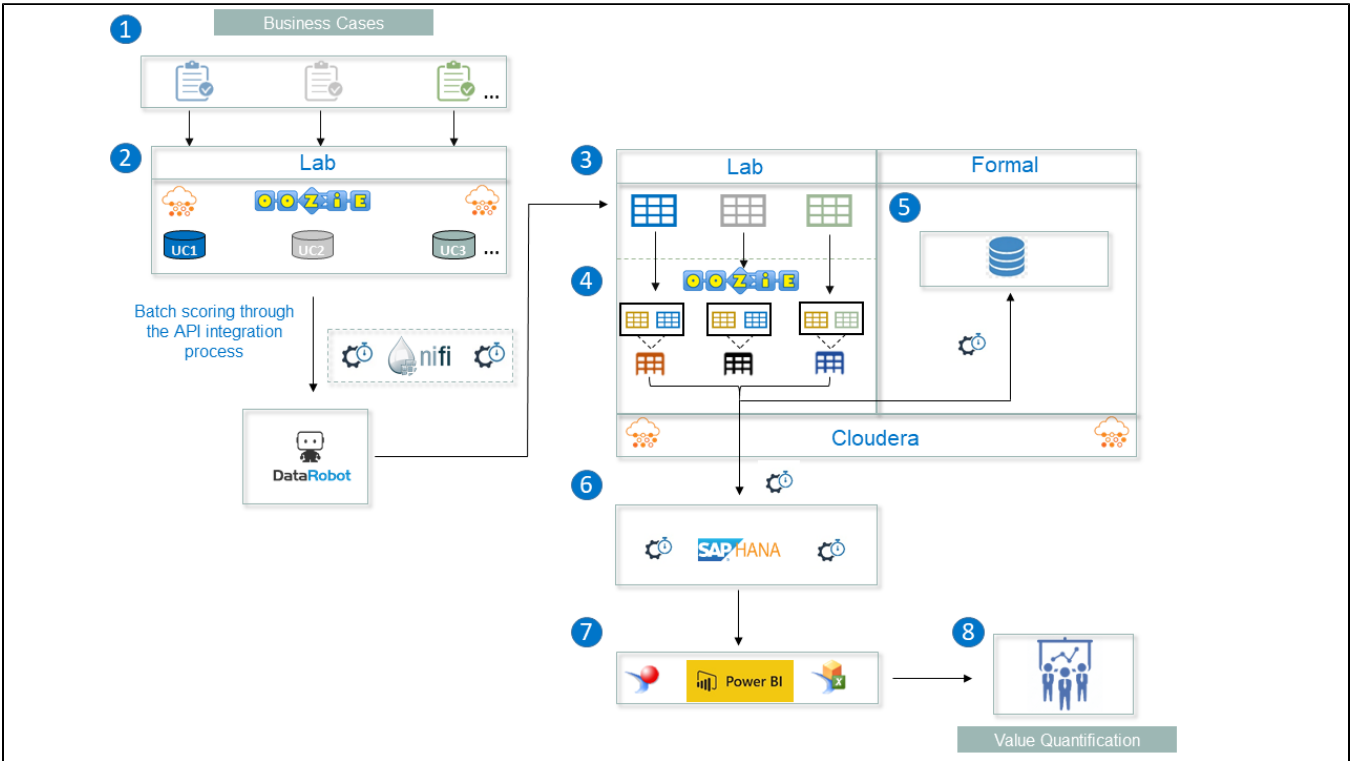


AA - Business Value Integration

This page serves as platform for the design and proposal of the AA business value integration process. This process will enable seamless performance model tracking from both a technical and business perspective. Furthermore this solution will further aid in the value quantification to business stakeholders so as to promote data driven strategies within the organization.

High-level Solution Design

The figure below provides a diagrammatic illustration of the process required for an end to end business value integration process of the predictive modelling solutions created by the Advanced Analytics team.



Component	Component Name	Description
1	Business Case Generation	This component relates to the creation of business use cases tailored to the needs of various business stakeholders in which a predictive solution is befitting.
2	Data Model Creation	This refers to the creation and automation of the data models that will serve as input to the training and scoring process of the various predictive models. Each use case will have a desired data model for scoring which will be scheduled via Oozie.
3	Prediction Scoring Automation	<p>This step just touches on the API predictive scoring process which leverages of the Nifi Orchestration. The input data is taken from the related data models for each use case and scored within DataRobot and the result returned back into the corresponding output tables within the Cloudera Lab environment.</p> <p>These output tables will be the main inputs into the various business processes that it will impact.</p>
4	Amalgamation of Predictive Output	<p>This step caters for instances in which some normalization of the predictive output or alternatively an amalgamation with other data sources within the Cloudera Lab environment is required.</p> <p>The normalization and enrichment will need to be orchestrated via an Oozie job which will be maintained by the Advanced Analytics team. In addition to this, this job will need to be scheduled accordingly so that the final output table is refreshed.</p>

5	Formal Lake Persistence	This refers to the persistence of the amalgamated predictive output to be shared with users outside of BI. This will follow the standard Inbound and outbound data sharing architecture.
6	Cube Creation	This component relates to the creation of cubes relating to each predictive use case. This creation will occur within the SAP HANA SPFLAB environment to ensure ease of accessibility to the business users.
7	Visualization	This is representative of the creation of the various dashboards relating to each use case. The aim of each dashboard is to better monitor the performance of the various predictive models both from a technical and business perspective. Furthermore, these dashboards aim to better position the value proposition of a data driven strategy to the organization.
8	Value Quantification	This refers to articulation of the value of the predictive models for each business case so as to showcase that the model is working in practice and does satisfy the current and future business requirements.

Required Components

Based on the solution design, the following requirements will be essential in meeting the mandated goals of this proposal and are described in the table below.

Requirement	Description	Responsibility
Data Model Creation	Every predictive model that is said to be productionized needs to have a data model required for the training and scoring of the related predictive model.	AA
Scheduling of the Data Model	The data model for the scoring component will need to be embedded within an Oozie job, so as to ensure that the predictive output is readily available for the business required schedule. Each use case will vary based on the relevant requirements.	AA
Predictive Scoring Pattern	The existing pattern leverages off the ML Ops functionality within DataRobot. However, the licensing restriction prevents this pattern from being used for more than 5 deployments. A work in progress is a potential python API integration that utilizes the DataRobot development environment. – This will require some performance guidance from the DataRobot team.	AA
Result amalgamation	This relates to the amalgamation of the predictive output to other assets of data to be able to better position the results from a demographic perspective. This needs to be split into two use case groupings: <ul style="list-style-type: none"> Persistency Analytics – These predictive models focus on the exits of a particular customer. As such, these predictive results need to be blended with a movements data asset from the Experience Investigation workload/ alternatively the PAR data asset which encompasses all of the desired off movements of a policy. Sales Campaign Analytics – The predictive scoring results will be required to be blended to the CAR data asset as part of the sales campaign monitoring process on a scheduled basis. This can leverage off the current existing data sharing pattern between AA and CDH. 	AA
Cube generation	In order for a dashboard to be created, a consumable cube is required for each predictive model's amalgamated output so as to assess the performance of the model at a wider glance. – This could potentially be facilitated by the CDH team.	CDH – Descriptive Analytics
Dashboard creation.	A dashboard is required for each predictive use-case. This will require support from the Descriptive Analytics team to create and maintain the related dashboards.	CDH – Descriptive Analytics

Proof Of Concept Enablement

In order to demonstrate a working solution of the above proposal, a proof of concept will need to be conducted. As such, the S14 Transfer and SIL Early Lapse use-cases serve as good candidates to ensure the success of the wider implementation of the solution.