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ENGG4064 McCain Use Case

Revision History

Date	Document Version	Description	Author
24/08/2017	Version 1.0	Initial Document	Accenture
28/08/2017	Version 1.1	Edits to scope of UC1, UC5, added UC3	Max Schultz Nicolas Dai

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Operational Use Cases

UC-1 Long Term Data Forecasting

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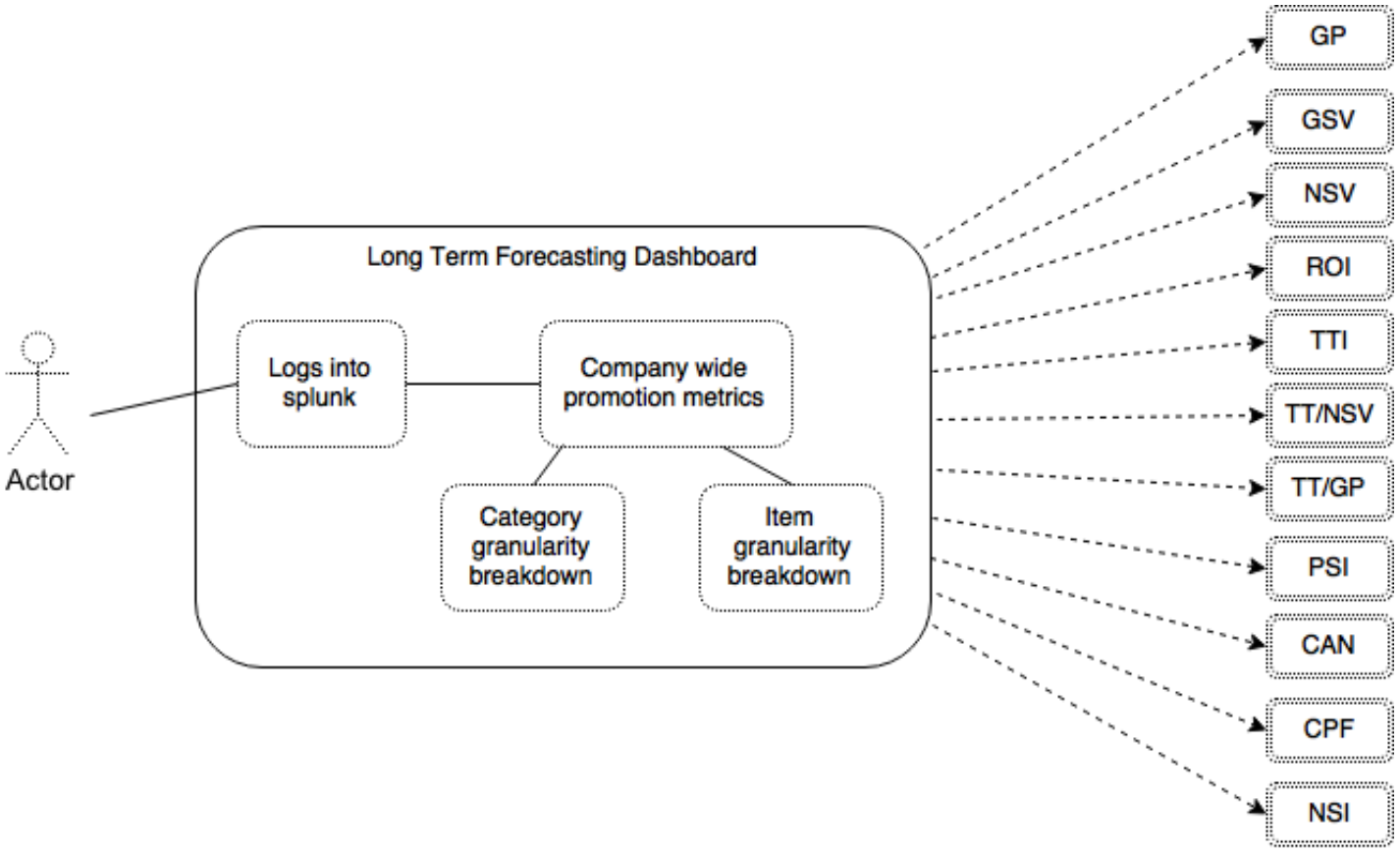
<tr><td>Use Case Diagram</td><td>UC1 Diagram: Long Term Data Forecasting</td></tr>
<tr><td>Use Case Description</td><td>
This use case describes a dashboard that allows users to identify optimal distributions for promotional spending across the entire year. This optimized distribution of promotional spending will address how and why promotional spending occurs, and how this relates to value generated.

Metrics will be presented on promotional spending and will take into account factors such as seasonality of items, customer retention, pull-forward of later date sales due to promotion, and value returned on promotions in terms of gross profit.

Yearly sales data will be leveraged to determine historical promotional weeks for competitors. Using this data, promotional weeks for McCain will be redistributed to disrupt competitor sales. This will have the effect of increasing McCain sales, and decreasing competitor sales meaning that McCain is able to perform better in annual reviews with distributors such as Woolworths.

<table>
<tr><th>Element</th><th>Description</th><th>Equation</th></tr>
<tr><td>GP</td><td>Gross Product</td><td>Vol*[SP/NSV] – Cost</td></tr>
<tr><td>GSV</td><td>Gross Sale Volume</td><td>SP*Vol</td></tr>
<tr><td>NSV</td><td>Net Sales Volume</td><td>GSV – TT</td></tr>
<tr><td>ROI</td><td>Return on Investment</td><td>To be decided on Client Approval</td></tr>
<tr><td>TTI</td><td>Total Trade Invested (Promotional Spend)</td><td>∑Promotions + 14.8%*GSV</td></tr>
<tr><td>TT/NSV</td><td>Ratio of TT to NSV</td><td>N/a</td></tr>
<tr><td>TT/GP</td><td>Ratio of TT to GP</td><td>N/a</td></tr>
<tr><td>PSI</td><td>Promotional Sales Increase – increase in sales of promoted items</td><td>[Actual Sales (promo) – Expected Sales (non-promo)] for Promoted product</td></tr>
<tr><td>CAN</td><td>Cannibalization of sales of other products in the same category due to a promotion</td><td>[Actual Sales (promo) – Expected Sales (non-promo)] for non-Promoted product</td></tr>
<tr><td>CPF</td><td>Customer Pull Forward (likely to be negative due to a reduction in later date sales)</td><td>Actual sales – Expected sales (for later time periods, based off historical data)</td></tr>
<tr><td>NSI</td><td>Net Sales Increase (Value of the Promotion, across product range)</td><td>PSI – CAN – CPF</td></tr>
</table>
Table 1. UC1 Key Metrics

Based upon these above metrics and competitor analysis, factors and results from promotional spending will be ascertained, and suggested optimal promotion weeks will be suggested.
</td></tr>
<tr><td>Dependencies</td><td>+2 years of valid tracker data (14 month period minimum)</td></tr>
</table>



UC1 Diagram: Long Term Data Forecasting

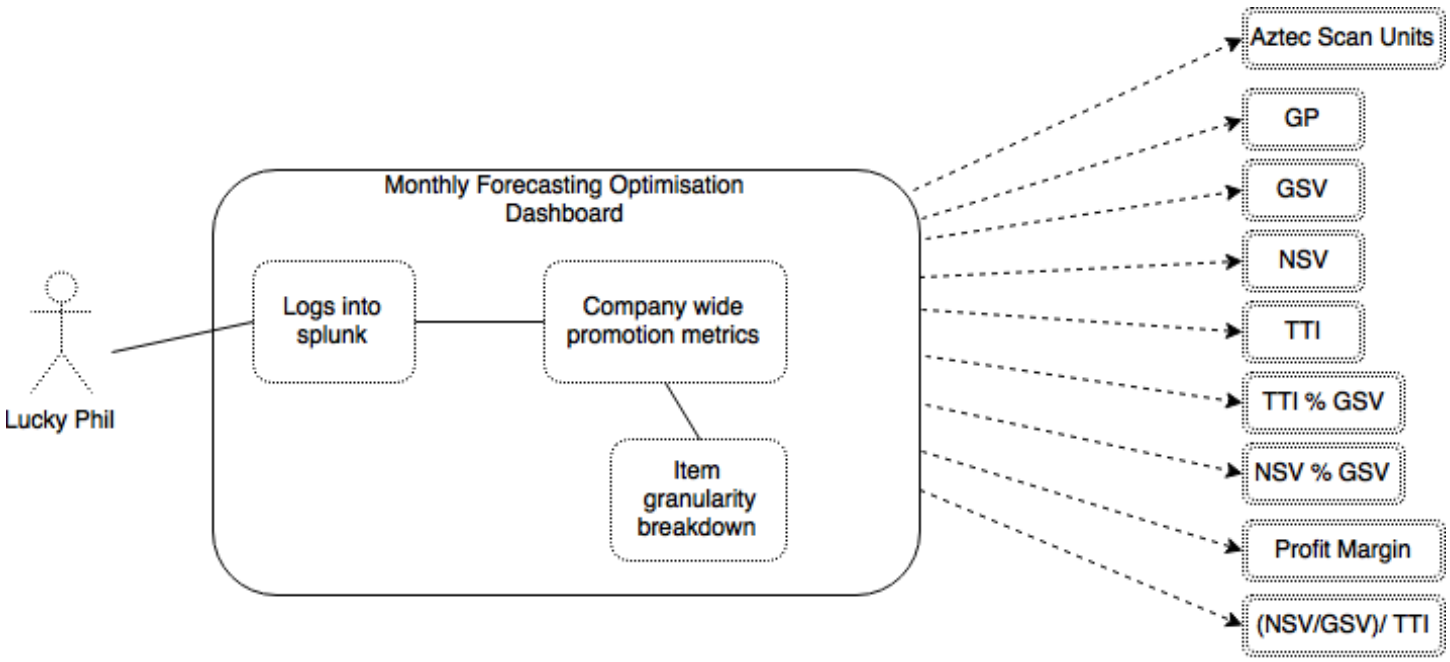
UC-2 Short Term Data Forecasting

<table>
<tr><th>Use Case Element</th><th>Description</th></tr>
<tr><td>Application</td><td>Improved Key Metrics and Optimisation for Month Forecasting</td></tr>
<tr><td>Use Case Diagram</td><td>UC2 Diagram: Optimized Key Metrics</td></tr>
<tr><td>Use Case Description</td><td>
This use case describes a dashboard that allows users to identify short term forecast key metrics for a month period. These metrics will be available at an item specific granularity. The metrics for this use case are presented below (Table 2) and will incorporate information from Woolworths' forecasted distribution.

Woolworths forecasting of sales will be compared to tracker data, and this will be used to forecast key metrics for the month period, starting on the 3rd day of each month. Analysis of historical discrepancies will be performed to reduce variance in forecasting of data, and projected orders from Woolworths will be mapped to manufacturing volumes to decrease variance cost.

This reallocation of trade spend and manufacturing will be displayed in comparison to the original values.

<table>
<tr><th>Element</th><th>Description</th><th>Equation</th></tr>
<tr><td>Aztec Scan Units</td><td>Total number of scanned Aztec Units</td><td>N/A</td></tr>
<tr><td>GP</td><td>Gross Product</td><td>Vol*[SP/NSV] – Cost</td></tr>
<tr><td>GSV</td><td>Gross Sale Volume</td><td>SP*Vol</td></tr>
<tr><td>NSV</td><td>Net Sales Volume</td><td>GSV – TT</td></tr>
<tr><td>TTI</td><td>Total Trade investment</td><td>$Case_{deal}$ + $Margin_{deal}$ + Off Invoice$_{deal}$ + Vistex + Terms</td></tr>
<tr><td>TTI % GSV</td><td>Percentage of TTI wrt GSV</td><td>TTI / GS</td></tr>
<tr><td>TTI % NSV</td><td>Percentage of TTI wrt NSV</td><td>TTI / NS</td></tr>
<tr><td>NSV % GSV</td><td>Percentage of NSV wrt GSV</td><td>NSV / GSV</td></tr>
<tr><td>Profit Margin</td><td>Net income over net sales</td><td>GP/NSV</td></tr>
<tr><td>(NSV/GSV) / TTI</td><td>Ratio of TT to GP</td><td>N/A</td></tr>
</table>
Table 2: UC2 Key Metrics
</td></tr>
<tr><td>Dependencies</td><td>+1 year of valid tracker data, and +1 year of Woolworths PO data. (1-year minimum)</td></tr>
</table>

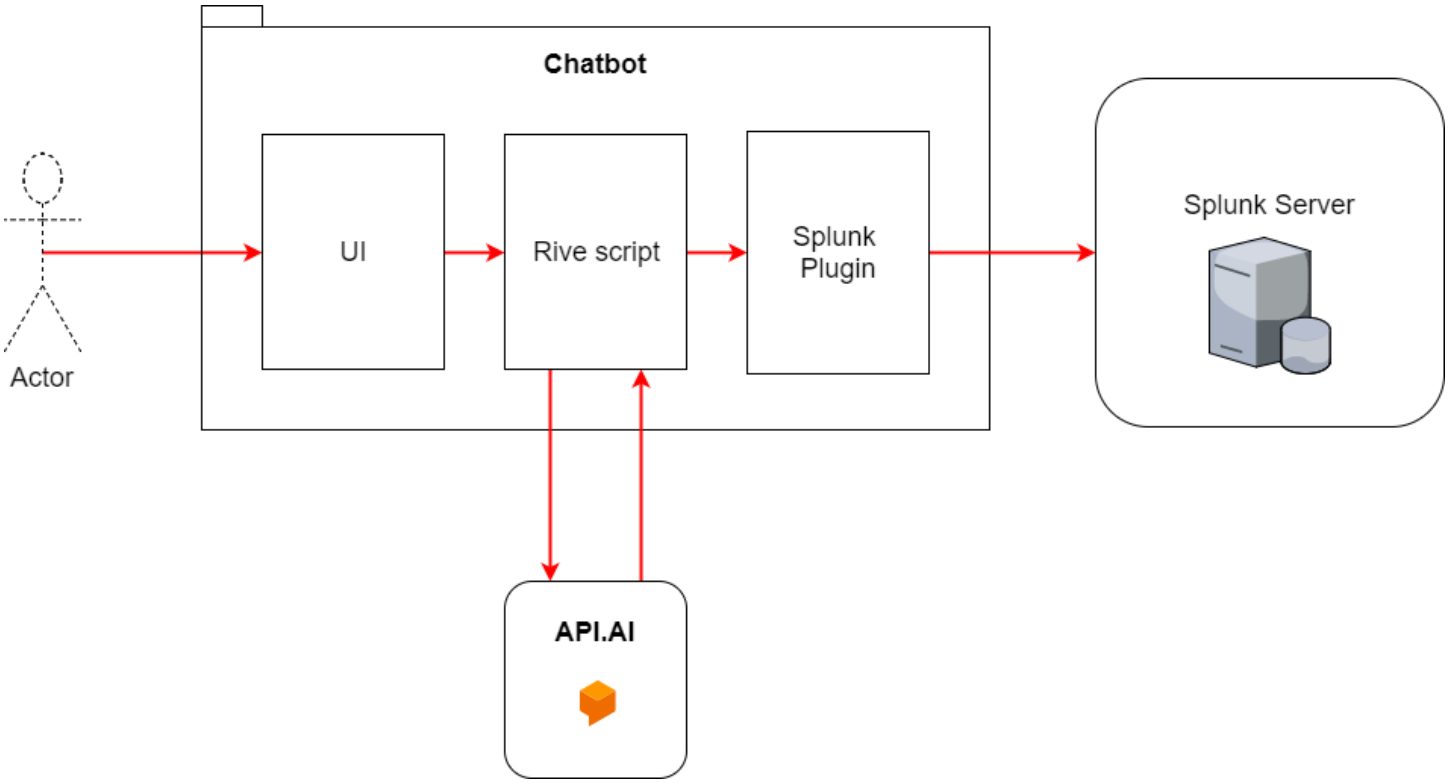


UC2 Diagram: Optimized Key Metrics

Use Case Element	Description
Application	**Reconciliation of SKU Splits and Manufacturing Volumes**
Use Case Description	This use case presents and automated method of adjusting manufacturing volumes based on SKU splits. Manufacturing volumes for SKU splits are currently hard coded manually and are rarely adjusted. This means that unless care is taken, manufacturing volumes for McCain products may be manufactured in incorrect volumes. The required manufacturing volumes will be automatically generated by taking a 2-month average of the sales data from McCain. This method will provide a marked improvement on the current hard coded system, as it will dynamically readjust to the market desire. This dynamic readjustment will be notified to the user on a monthly basis.
Dependencies	A minimum of 3 months of McCain AZTEC sales data.

UC-4 Data Reporting

Use Case Element	Description
Application	**Improved Data Reporting and Interface**
Use Case Description	This use case presents an automated method of providing data reporting, where a set of standard questions are established that will be able to provide answers to the week/ month/ qtr./ half / year v's last year and forecast variances. This could be facilitated by creating a custom chat bot. Data that will be integrated includes IRI Scan Data, Stock on-hand Reports, Location Information, Ex-Factory data, and Investment Data. A chatbot interface will be use to request information. The requests will be processed using API.AI to break the request into metric, time, and item. This will then be formed into a Splunk search string which will be used to retrieve relevant information to be returned to the chatbot interface. *Example 1:* ***User**: What is our margin on snow peas in the last week.* ***Chatbot:** Margin on snow peas over last week is 12%* If the requests are incomplete the chatbot will ask for more information *Example 2:* ***User:** How is my snow peas last week.* ***Chatbot:** What metric would you like to know about snow peas?* The Chabot will also deliver alerts directly to the user if unexpected activities occur Example 3: **Chatbot:** Hi, just letting you know, snow peas sales this month is 35% lower than the same month last year. ***User:** What is our margin on snow peas in the last month.* ***Chatbot:** Margin on snow peas over last week is 9%* A definitive set of questions will be presented by McCain stakeholders.
Dependencies	UC1 and UC2 completion required to complete



UC3 Diagram: Improved Data Reporting Hierarchy

UC-5 Comparative Data Analytics

Use Case Element	Description
Application	**Comparative Data Analytics**
Use Case Description	This use case describes the comparative analytics of the performance of McCain bakery products across stores. Competitor presence will be mapped against the performance of McCain products in different stores to ascertain the effect this may be having. Comparable performance will be analyzed with respect to location, price, product and competitor presence. A dashboard will be built to communicate the findings. Significant information will be feed into an alert system from UC-4
Dependencies	Store Level Data

UC-6.1 Data Visualisation – Infrastructure Monitoring

<table>
<tr><th>Use Case Element</th><th>Description</th></tr>
<tr><td>Application</td><td>McCain's Data Visualisation</td></tr>
<tr><td>Use Case Diagram</td><td>Use Case 5.1: Accessing Company Wide Key Sales Metrics (current state)</td></tr>
<tr><td>Use Case Description</td><td>This use case describes how the users will have access to basic sales metrics (see table 3) across the entire company. These metrics will be available to at a granularity of company wide, category wide, and item specific, but most importantly will be visually comparable to each other. The metrics for this use case are exclusively for this use case contain no analytical elements and have been directly pulled from McCain own data, but presented in such a way that is easily processed. These metrics can be absorbed in modified time-slices in order to isolate time periods of interest.

All data will be visualised in comparison to previous year's data points. Similarly, product range will be shown with respect to margin percent. Similarly, margin on products will be represented with respect to that percentage of sales that the product constitutes.

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<tr><th>Element</th><th>Description</th><th>Equation</th></tr>
<tr><td>GP</td><td>Gross Product</td><td>Vol*[SP/NSV] – Cost</td></tr>
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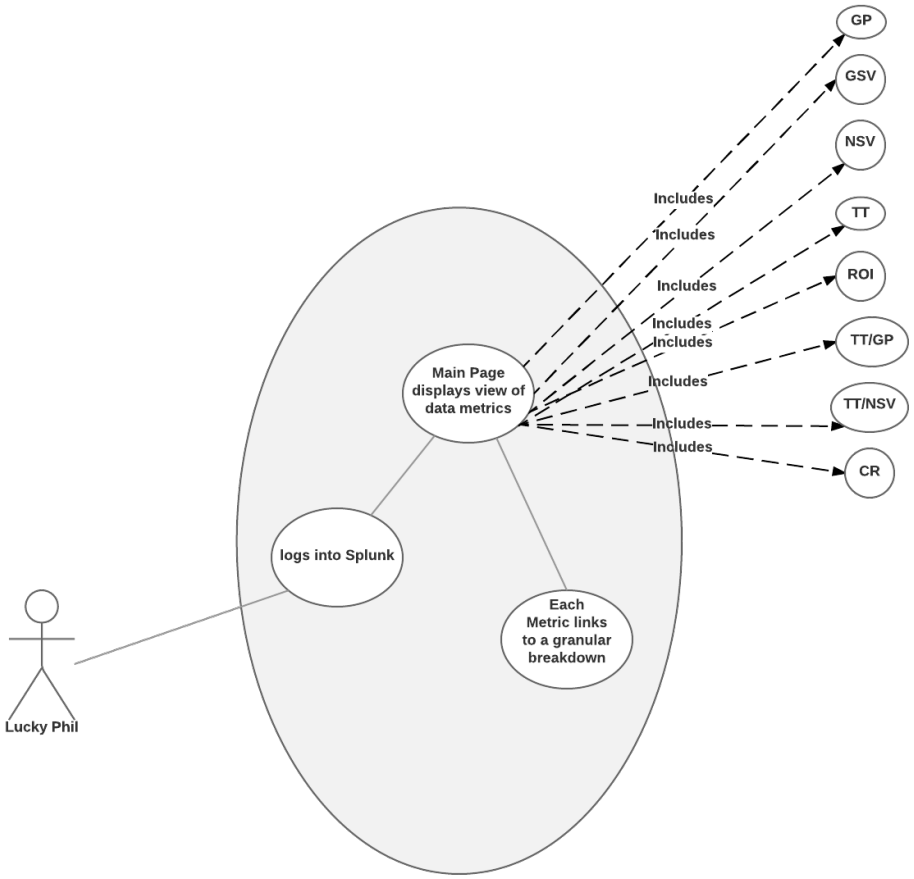
<tr><td>TT/NSV</td><td>Ratio of TT to NSV</td><td>N/a</td></tr>
<tr><td>TT/GP</td><td>Ratio of TT to GP</td><td>N/a</td></tr>
</table>
Table 3: Sales Metrics available on dashboard</td></tr>
<tr><td>Primary Actor</td><td>McCain User</td></tr>
<tr><td>Preconditions</td><td>• The data is up to date (last weeks data)</td></tr>
<tr><td>Trigger</td><td>• The actor logins in to Splunk program in order to access current state information</td></tr>
<tr><td>Current Flow</td><td>1. Actor Logs into Splunk.
2. Company wide metrics (current state) are visible from main page.
3. Access Category granularity from the categories menu.
4. Category wide metrics (current state) are visible from this category's page.
5. Access individual item granularity from the items menu.
6. Individual wide metrics (current state) are visible from this item's page</td></tr>
<tr><td>Alternate Flows</td><td>N/A</td></tr>
</table>



UC5.1 Diagram: Access Company Wide Key Sales Metrics

UC-6.2 Accessing Company-Wide Key Performance Metrics

Use Case Element	Description
Application	**McCain's Data Visualisation**
Use Case Diagram	Use Case 5.2: Accessing Company Wide Key Performance Metrics
Use Case Description	This use case describes how the users will have access to metrics that indicate the performance of individual items and how based on those metrics items perform against one another (see table 4) across the entire company. These metrics will be available to at a granularity of company wide, category wide, and item specific, but most importantly will be visually comparable to each other as a ranked list, or in the specific case of Pullback directly correlated to the promotions. The metrics for this use case are exclusively analytical and have been based on McCains provided data, but with added abstractions and investigation, and then presented in such a way that is easily processed. These metrics can be absorbed in modified time-slices in order to isolate time periods of interest.
Primary Actor	McCain User
Secondary Actors	McCain management and staff
Preconditions	• The data required is available within the database
Trigger	• The actor logins in to Splunk program • Views are automatically updated with all data with no filtering • Views are manually updated given input from actor
Current Flow	1. Actor Logs into Splunk 2. Actor accesses company wide metrics history from metrics buttons 3. Actor accesses desired category from category menu 4. Actor accesses category wide metrics history from metrics buttons 5. Actor accesses desired item from items menu
Alternate Flows	2a. Actor visualises the historical metrics for the whole company from this view 2b. Actor selects time scales, category/item isolation options, view options from available menu 4a. Actor visualises the historical metrics for the selected category from this view 4b. Actor selects time scales, category/item isolation options, view options from available menu 6a. Actor visualises the historical metrics for the selected item from this view 6b. Actor selects timescales, category/item isolation options, view options from available menu

Element	Description
TTI/GPS	Gross Product
ROPI %	Return on Promotional Investment
COGS %	Cost on Goods Sold
Pullback	Customer Loss after Promotions

Table 4: Performance Metrics available on dashboard

UC5.2 Diagram: Accessing Cateogrial Wide Sales Metrics

UC-6.3 Accessing Predicted Data On a Company Wide Level

Use Case Element	Description
Application	**McCain's Data Visualisation**
Use Case Diagram	Use Case 5.2: Accessing Trends on a company wide level
Use Case Description	This use case describes how the users will have access to future predictions across the entire company for a year in the future. These predictions will be available at a granularity of company wide, category wide, and item specific. The predictions will be for all given metrics.
Primary Actor	McCain User
Secondary Actors	McCain management and staff
Preconditions	• The data required is available within the database
Trigger	• The actor logins in to Splunk program • Views are automatically updated with all data with no filtering • Views are manually updated given input from actor
Current Flow	1. Actor Logs into Splunk 2. Actor accesses company wide predictions from metrics buttons 3. Actor accesses desired category from category menu 4. Actor accesses category wide predictions from metrics buttons 5. Actor accesses desired item from items menu
Alternate Flows	2a. Actor visualises the historical metrics for the whole company from this view 2b. Actor selects time scales, category/item isolation options, view options from available menu 4a. Actor visualises the historical metrics for the selected category from this view 4b. Actor selects time scales, category/item isolation options, view options from available menu 6a. Actor visualises the historical metrics for the selected item from this view 6b. Actor selects timescales, category/item isolation options, view options from available menu

UC53 Diagram: Accessing Predicted Data on a Company Wide Level

UC-6.4 Accessing Most/Least Profitable Item for Given Investment

Use Case Element	Description
Application	**McCain's Data Visualisation**
Use Case Diagram	Use Case 4: Most/Least profitable item for given investment
Use Case Description	This use case describes the view used to identify the product items that yield the most profit from the least investment alongside the product with the worst profit for said investment. The application should also be able to compare items and product categories to form a ranking and calculate what percentage of profit a product or category accounts for, i.e. its value to the organisation. This will be calculated according to the following metrics • TT/NSV for each dollar invested, how much return do we receive • NSV/TT for the profit attained, how much did we invest • **The key metric will incorporate TT/GP which measures how much gross profit we attain from each dollar investment**
Primary Actor	Application Operator (Marketing/Finance/Supply Chain Divisions)
Secondary Actor	McCain CEO and Executives
Preconditions	• All data provided by McCain has undergone ETL processes and been cleaned
Trigger	• User accesses product categories and identifies top and bottom performing products • User accesses overall metrics page and accesses top and bottom performing products
Current Flow	1. Actor logs into Splunk 2. Visualization of total companies best/worst performing products on main page 3. Actor clicks into Category Section 4. Visualization of best performing products for category
Alternate Flows	3a. Actor accesses company wide metric option 3b. Visulaisation of total companies best/worst performing products for that metric 4a. Actor accesses category wide metric option 4b. Visulaisation of categories best/worst performing products for that metric

UC-6.5 Accessing Comparison Data of Woolworths sales against McCain Data

Use Case Element	Description
Application	**McCain's Data Visualisation**
Use Case Diagram	Use Case 5: Comparing data of Woolworths and McCain
Use Case Description	This use case describes how the Actor is able to compare the Data from their own company against the Sales data provided by AZTEC. The actor will be able to create comparisons that can compare
Primary Actor	Application Operator (Marketing/Finance/Supply Chain Divisions)
Secondary Actor	McCain CEO and Executives
Preconditions	• All data provided by McCain has undergone ETL processes and been cleaned
Trigger	• User accesses product categories and identifies top and bottom performing products • User accesses overall metrics page and accesses top and bottom performing products
Current Flow	5. Actor logs into Splunk 6. Visualization of total companies best/worst performing products on main page 7. Actor clicks into Category Section 8. Visualization of best performing products for category
Alternate Flows	3a. Actor accesses company-wide metric option 3b. Visualisation of total companies best/worst performing products for that metric 4a. Actor accesses category wide metric option 4b. Visualisation of categories best/worst performing products for that metric