

# **MATH2191 – APPLIED RESEARCH PROJECT**



## **PROJECT REPORT: MEASURING MEMBER ENGAGEMENT ACROSS SUPERANNUATION BRANDS**

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**SCHOOL OF SCIENCE**

**SUBMISSION DATE: 2 NOVEMBER 2025**

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## Acknowledgement

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## 1. Executive Summary

This report represents a comprehensive analysis of member engagement within Future Group, one of Australia's leading superannuation brands. Through ethical investment, the organization envisions delivering positive social and environmental impact that shapes a sustainable future for Australians' retirement savings. To attain this goal, Future Group focuses on understanding the structure of member engagement levels, which extend beyond transactional data and are segmented into three categories, Committed, Comfortable, and Disengaged, according to their recent contributions and rollover activity. Then, Integrated with demographic information, this project was established with the objective of developing an analytical framework and interactive dashboards that are capable of measuring, tracking, and visualizing engagement patterns over time via Power BI, supported by a robust Databricks SQL pipeline to provide actionable insights for the business decision-making process.

The data preprocessing phase involves cleaning, standardizing, and transforming transactional data and members' demographic information across Future Group's brands, Future Super, Childcare, and Guild, within Databricks to create SQL views that ensure consistency and reliability before importing into Power BI through an Extract, Transform, Load (ETL) operation. A new calculated table, Member Last Contribution by Quarter, along with multiple advanced measures, was created using Power BI DAX queries to identify and capture member contribution behaviour and engagement trend on a quarterly basis. Via this approach, the resulting three dashboards were developed to deliver dynamic insights:

- **Quarter-on-Quarter Engagement Dashboard:** Analyses changes in engagement patterns across quarters and brands, highlighting shifts in member behaviour.
- **Quarter View Engagement Dashboard:** Displays different types of contributions (Employer, Member, and Rollover) and Percentages of contributions associated with each engagement segment
- **Member Demographics Dashboard:** Presents a detailed view of member distribution by age, gender, state, and engagement segment, along with churn and join trends.

Key findings indicate that Comfortable members constitute the majority of the member base and transaction volume, making them the most financially active group. Committed members observed a moderate but steady growth over time, suggesting that targeted strategies are yielding improvements in financial participation. On the other hand, Disengaged members, despite displaying a minimal proportion, witnessed a significant contribution to churn, reflecting a strong relationship between low engagement and attrition, highlighting the importance of early intervention against vulnerability to fund switching or inactivity behaviours. Furthermore, the dashboard reveals opportunities for regional and generational diversification as most members were aged between 31 and 50, and geographically concentrated in New South Wales and Victoria. With these results, the analytical framework lays a robust foundation for engagement tracking, churn reduction, and strategic initiatives guiding, strengthening the industry's insight into how personalized engagement and meaningful analytics support the sustainability of superannuation funds.

## **2. Introduction**

### **2.1. Background and Context**

Superannuation, often referred to as Super, is a mandatory retirement savings scheme in Australia. Under this system, a percentage of an employee's salary is regularly contributed to a long-term investment fund. Employers make these contributions on behalf of their employees, and the money is invested to generate growth over time. The purpose of Superannuation is to help individuals build financial security for their retirement years. For most Australians, Superannuation is more than a savings plan; it represents stability, independence, and peace of mind in the later stages of life. Superannuation funds play a vital role in protecting the financial future of Australians. However, their long-term success relies on how effectively they connect and engage with their members. One such organisation, for which this report has been developed, is Future Group.

Future Group is one of Australia's leading Superannuation brands. It supports over 415,000 members and manages around 17 billion dollars in funds under management and advice across multiple brands, making it one of the largest Superannuation groups by membership. Guided by its vision to build a sustainable future for Australian retirement savings, Future Group is committed to generating positive social and environmental outcomes through responsible investment and meaningful member engagement.

### **2.2. Problem Definition**

Every superannuation company, including Future Group, strives to strengthen member engagement. However, Future Group views engagement as more than just financial transactions. For the organisation, engagement reflects a member's loyalty, active participation, and long-term commitment to their chosen Future Group fund.

Many individuals hold multiple superannuation accounts, and Future Group's objective is to position its fund as the primary account for its members by strengthening engagement. To achieve this, the company has developed a key engagement metric based on specific financial indicators to measure and analyse member engagement patterns effectively.

Under this metric:

- Committed members are those who have completed a rollover and made a recent contribution within the past six months.
- Comfortable members are those who have either completed a rollover or made a recent contribution.
- Disengaged members are those who have neither completed a rollover nor made any contributions in the past six months.

## 2.3. Problem Objective

The project aims to enable continuous tracking, analysis, and insight generation through a Power BI dashboard built on strong analytical foundations. It will focus on refining, modelling, and visualising the engagement metric described above to provide a comprehensive view of member engagement across Future Group's brands.

## 2.4. Project Scope

The project scope encompasses the following analytical activities:

- Data extraction from SQL source tables.
- Data cleaning and standardisation to ensure consistency and accuracy.
- Creation of analytical data views for member and transaction entities to support downstream reporting.
- Data integration and transformation within Power BI to establish a unified data model.
- Data modelling to define relationships and enable robust analysis.
- Development of interactive Power BI dashboards presenting:
  - a. Quarter on Quarter Engagement
  - b. Quarter View Engagement
  - c. Member Demographics

## 3. Literature Overview

Superannuation funds play a pivotal role in securing the financial futures of Australians, yet their success increasingly depends on how effectively they engage members (Clinton, 2023). Engagement is multidimensional, encompassing personalisation, digitisation, equity considerations (such as gender and age gaps), churn prevention, and the measurement of outcomes. Drawing on academic and industry literature, this review synthesises perspectives to provide a holistic understanding of engagement across superannuation brands and its impact on business growth.

Superannuation engagement is measured in different ways, reflecting both fund priorities and business objectives. Some rely on behavioural indicators such as contributions, with UniSuper classifying members with recent contributions as "active" (Bateman et al., 2013), while others judge engagement by decision-making, where SMSF members are most engaged and default users least (De Zwaan, Brimble and Stewart, 2015). Mainstream funds emphasise trust, value, and efficiency (CoreData/Conexus, 2025; Investment Trends, 2024), whereas impact-focused groups stress on ethical investments. (Denniss, 2013; Braddon, 2017; Future Group, 2025).

Low member engagement in the Australian superannuation industry is a significant driver of churn, often leading to a structural problem of "hidden churn" where inactive accounts are quietly eroded (Clare, 2007). The prevalence of multiple accounts and member disengagement means traditional metrics fail to capture the full scope of member loss. The research indicates that a direct relationship exists, with a lack of engagement being a primary symptom of a disengaged customer base (Vaughan, 2018).



Personalisation is central to superannuation engagement, with mass personalisation driving trust, loyalty, and retirement adequacy (Russell Investments). Digital tools like including apps, dashboards, and AI enhance transparency but remain underutilised, as many funds rely on compliance-driven communication (CFOtech, 2023). SS&C Technologies (2023) show digital-first providers achieve stronger retention. Engagement is further shaped by gender inequities (ASFA, 2012; Monash) and age differences, requiring tailored approaches such as engaging apps for younger members and simplified advisory tools for older cohorts.

Analytical dashboards enable executives to identify trends, predict churn, retention, and monitor drivers of member engagement by consolidating lagging, leading, and actionable indicators (Kumar and Jain, 2025). High-impact dashboards center on transparent and simple presentation while delivering meaningful KPIs that are strategically aligned with business objectives (Few, 2006; Zingde & Schroff, 2020). Interactive dashboards with predictive features besides descriptive analysis also improve the speed and quality of strategic decisions (Eckerson, 2010; Zulkiflee et al., 2024). In the superannuation context, this allows funds to link member engagement with financial outcomes to strengthen evidence-based decision-making processes.

The literature shows that engagement is measured differently across superannuation funds, reflecting their objectives. Traditional measures emphasise contributions and investments, but newer approaches highlight ethics and social responsibility. Gender, digitalisation, and demographics also shape engagement. Tools such as dashboards and multidimensional frameworks now track behaviour, while digital platforms and personalisation improve outreach. Overall, engagement is not just about financial choices but also about values, inclusivity, and effective use of technology.

The reviewed literature provides a strong foundation for this project, which aims to measure and visualise member engagement across Future Group's superannuation brands. The use of KPIs such as churn rate, contribution frequency, and digital interaction aligns with industry best practices. Additionally, the segmentation of members into Committed, Comfortable, and Disengaged groups is based on principles demonstrated in the academic work of Vaughan (2018), Rudd et al. (2021), and Clare (2007). The project's approach to using dashboards and visual analytics directly applies insights from Eckerson (2010) and Zingde & Shroff (2020), ensuring clarity, strategic relevance, and real-time responsiveness in decision-making. By aligning engagement metrics with demographic nuances and behavioural patterns, the current project embraces the evolving expectations of superannuation members while integrating industry insights and academic rigour to propose scalable solutions.

## **4. Data and Methodology**

### **4.1. Business Requirements**

Future Group aims to design an analytical framework to measure member engagement through a defined metric that classifies members into three categories: Committed, Comfortable, and Disengaged. These categories are determined based on contribution related activities, including employer contributions, member contributions, and rollovers.

The primary business requirement is to utilise both membership and transactional data to segment members according to their engagement level. The framework must therefore be capable of identifying members who are highly engaged, moderately engaged, or disengaged based on their recent contribution behaviour.

In addition to financial activity, member demographic information such as state, gender, age group, join date, and membership duration is incorporated to provide deeper insights into engagement patterns.

The final requirement is to visualise these insights through a Power BI dashboard that supports analytical exploration, quarterly performance comparisons, and trend monitoring. The dashboard will serve as a central analytical tool for tracking engagement, understanding member behaviour, and supporting strategic decision-making.

## 4.2. Data Collection and Access

The dataset for this project was pre-stored within the Databricks environment, and individual user accounts were created for each student to securely access the data. Users connected to Databricks through a host connection to build SQL views and import the processed data into Power BI for analysis and visualisation.

Data was sourced from two primary categories: transactional data and member demographic data, both located within the production environment of Databricks.

- Transaction Tables
  - a. `production.bronze.laneway_monthly_transactions`
  - b. `production.silver.future_registry_transactions`
- Accounts:
  - a. `production.silver.childcare_accounts`
  - b. `production.silver.guild_accounts`
  - c. `production.silver.future_member_accounts`

The transaction tables contained detailed records of financial activities, including contributions and rollovers for members across the Childcare, Future Super, and Guild brands. The account tables were used to identify the specific accounts from which each transaction was performed. This was particularly important to distinguish transactions carried out by members who may hold multiple accounts across different brands or within the same brand.

### b) Member Demographic Tables

Member demographic data was sourced from multiple tables under the `production.silver` schema:

- Contacts:
  - a. `production.silver.childcare_contacts`
  - b. `production.silver.guild_contacts`

- c. production.silver.future\_contacts
- Members:
  - a. production.silver.childcare\_members
  - b. production.silver.guild\_members
  - c. production.silver.future\_members

### 4.3. Data Preparation

The data pre-processing phase involved transforming the existing tables within the Databricks environment into SQL views rather than extracting them externally. These views were created in the Production.Silver environment and directly imported into Power BI for analysis and visualisation. Three main views were developed:

- silver.memberdata
- silver.laneway\_transactions\_rmit
- silver.future\_transactions\_rmit

#### Memberdata

The Member Data View was created to consolidate information from all member-related tables across the three brands: Future Super, Childcare, and Guild. This unified view provided a standardised structure to represent demographic and membership data. The key attributes included:

- a. member\_number
- b. member\_key (brand name and member ID)
- c. sex
- d. birth\_date
- e. join\_date
- f. exit\_date
- g. postal\_code
- h. state
- i. country
- j. Brand

#### Transaction Data Views (silver.laneway\_transactions\_rmit and silver.future\_transactions\_rmit)

Two separate transaction views were created to capture financial activity for different brands. Laneway Transactions View included transactions for Childcare and Guild members. Future Registry Transactions View included transactions for Future Super members.

Each transaction view contained the following key columns:

- unique\_id (transaction ID)

- account\_id
- member\_number
- member\_key
- effective\_date (the date on which the transaction occurred)
- description (narrative of the transaction)
- debit\_amount
- credit\_amount
- transaction\_type

The transaction type column was derived within the SQL view using business logic provided by the organisation. This logic classified each transaction as Member, Rollover, or Employer based on account codes, subcodes, transaction types, and transaction descriptions.

#### Date Standardisation

A custom date function, `production.silver.standardize_date`, was implemented to standardise irregular dates stored in string formats across all tables. This function applied regular expressions to detect and convert varying date formats into a consistent structure. The standardisation process was applied to all date fields in both member and transaction views, ensuring uniformity and reliability in time-based analysis.

#### Integration in Power BI

All three views were imported into Power BI, where the two transaction views were merged to form a consolidated Transaction Data table. Using the integrated data, a new calculated table titled `Member_Last_Contributions_ByQuarter` was developed which had quarter-wise totals for measuring member contribution behaviour and engagement trends.

## 4.4. Schema Model and Dashboard Design

### 4.4.1. Schema Model

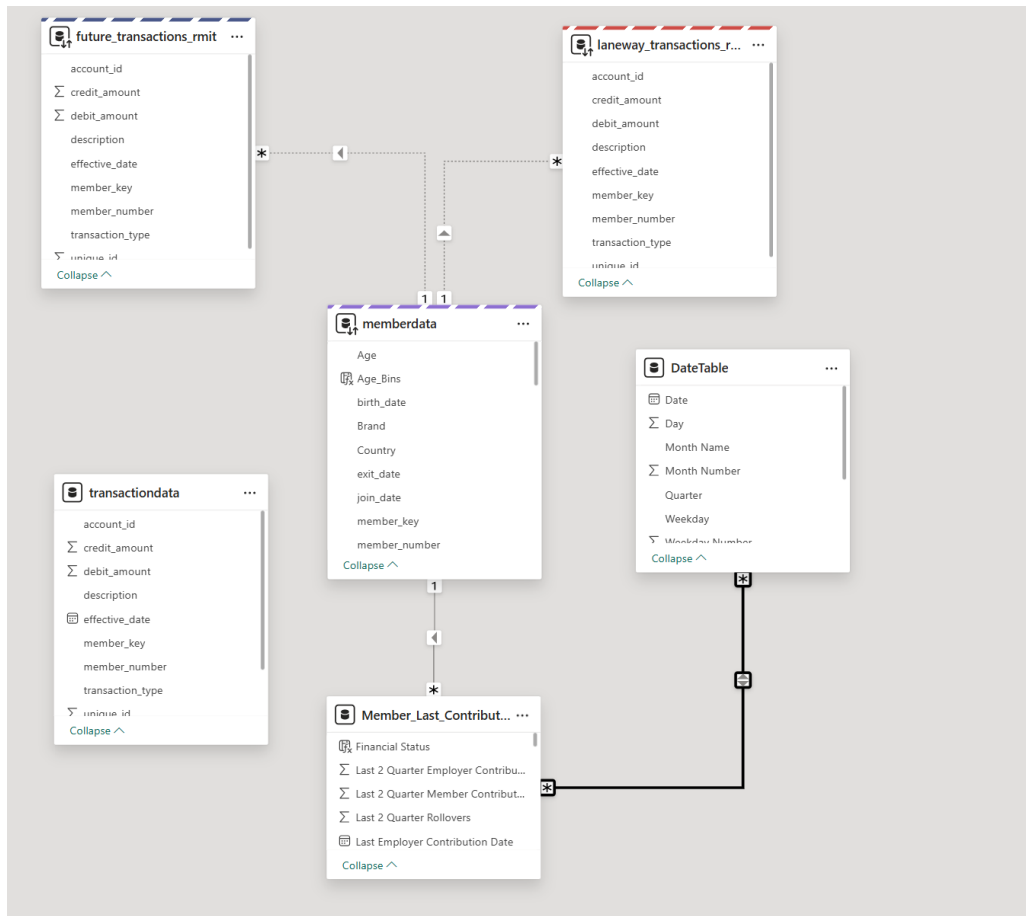


Figure 0: Schema Model

In Power BI, the following tables were used to build the data model:

- MemberData
- Laneway\_Transactions
- Future\_Transactions
- TransactionData (an appended table combining Laneway and Future Transactions)
- Member\_Last\_Contribution\_by\_Quarter (a calculated table created using MemberData and TransactionData)
- DataTable

Relationships

- MemberData has an active one-to-many relationship with Member\_Last\_Contribution\_by\_Quarter via Member key.
- MemberData has inactive relationships with Laneway\_Transactions and Future\_Transactions via Member Key.
- DataTable is linked to Member\_Last\_Contribution\_by\_Quarter to support time-based analysis via YearQuarter.

#### 4.4.2. Dashboard Design

Three interactive dashboards were developed in Power BI to visualise member engagement, contribution trends, and demographic insights across Future Group brands.

##### 1. Quarter-on-Quarter Engagement Dashboard

This dashboard provides a comparative analysis of engagement across quarters. It presents transaction amounts, active member counts, and engagement percentages to evaluate performance shifts over time. It includes:

- Segregated views for each brand
- Filters by Age group, year, gender.
- Total transaction amount by engagement category
- Active members, Transaction Amounts in numbers and percentages by quarter and engagement status (Committed, Comfortable, Disengaged)
- Quarter-on-quarter change in contribution amounts and member counts
- Disengaged Last Quarter vs exited this quarter visualisation

These visuals help identify quarterly engagement trends, such as increased Comfortable members or rising disengagement patterns, and assess the impact of each category on overall fund activity.

##### 2. Quarter View Dashboard

The Quarter View Dashboard offers a detailed breakdown of engagement and contribution activity within a selected quarter. It displays:

- Segregated views for each brand
- Filters by Age group, year, gender, quarter.
- Contribution amounts segmented by engagement status (Committed, Comfortable, Disengaged)
- Total number and value of employer, member, and rollover contributions
- Transactional amount by state to understand geographic contribution trend
- Comparison of transaction rates by contribution type and engagement level

This dashboard provides a clear view of how different contribution types influence engagement within each quarter.

3. Member Dashboard

The Member Dashboard focuses on demographic insights of members. It includes:

- Segregated views for each brand
- Filters by year, quarter.
- Total joined members, current members, and exited members
- Engagement distribution across demographic variables such as age group, gender, and state
- Churn rate and join rate by engagement status
- Member distribution by state, highlighting regional engagement variations

Together, these dashboards present a comprehensive analytical view of member behaviour and engagement performance. They enable Future Group to track key metrics, identify disengagement trends, and make informed, data-driven decisions to strengthen member relationships and improve retention strategies.

5. Results

The project successfully delivered three comprehensive Power BI dashboards, Quarter-on-Quarter Engagement, Quarter View Engagement, and Member Demographics. These dashboards were developed to visualize and analyse financial engagement trends across three Future Group brands as the data for the other two brands was not present. Each dashboard presents data covering the period from 2024 through the third quarter of 2025 and includes interactive views for each brand (Figure 1), namely, Child Care, Future Super and Guild.



Figure 1: Interactive view for Future Group brands

5.1 Quarter on Quarter Engagement Dashboard

5.1.1 Visualisations

The first dashboard, Quarter-on-Quarter (QoQ) Engagement, provides an overview of quarterly performance across all years included in the analysis. It focuses on the transaction amounts as well as all active members, presented in both percentages and absolute numbers. The dashboard includes three interactive slicers (Figure 2) for Age Group (0–18, 19–30, 31–50, 51–70, and >70), Year (2024, 2025), and Gender (Male, Female, and Other) allowing users to filter and explore engagement patterns.

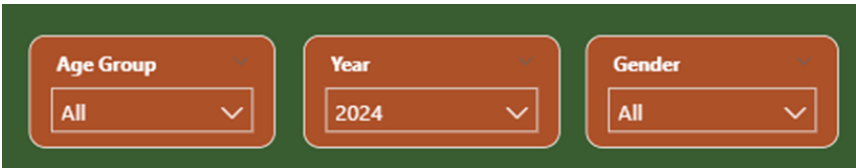


Figure 2: Financial Engagement Slicers

The transaction amount is represented using four key card visuals (Figure 3). The first three display the total transaction amounts for Committed, Comfortable, and Disengaged members, respectively, while the fourth card presents the overall transaction sum across all financial engagement categories.



Figure 3: Transaction Card Visualization

The next visual, a clustered bar chart (Figure 4), displays data on active members and their financial engagement status across different quarters. It consists of two main subcategories: Active Members by Engagement Status, which shows the number of active members in each quarter broken down by financial engagement category, and Amount by Engagement Status, which presents the total transaction amount per financial engagement status for each quarter.

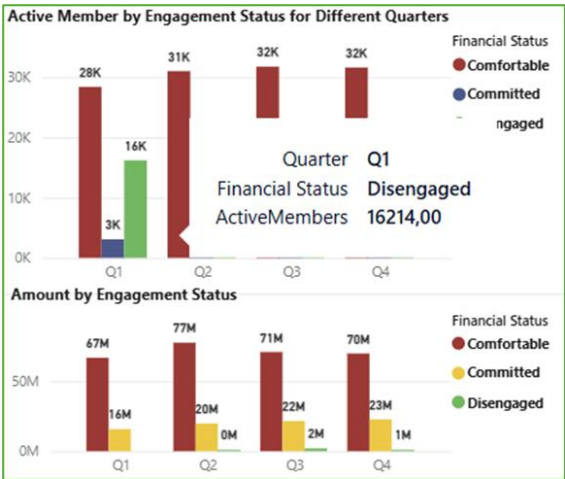


Figure 4: Active members by engagement status

The following visual (Figure 5) in the QoQ dashboard presents data on Active Members and Transaction Amounts by Financial Engagement Status across the four quarters of the selected year, using a matrix table format. The first table shows the total number of active members per engagement category for each quarter, while the second table reports the corresponding transaction amounts.

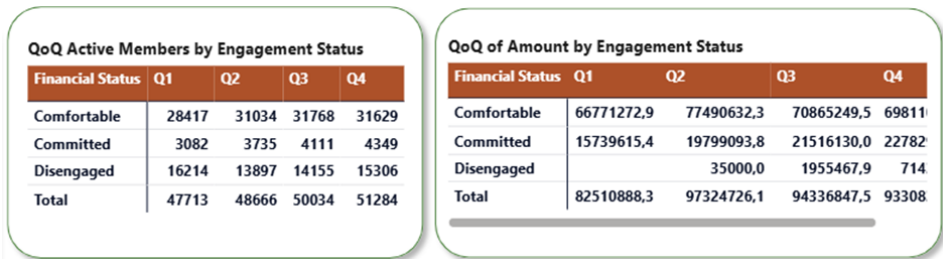


Figure 5: Active Members and Transaction Amounts by Financial Engagement Status QoQ



Finally, Figure 6 illustrates the percentage distribution of Active Members and Transaction Amounts by engagement category across all four quarters. These visuals also use a matrix layout to represent the proportional share of each category relative to the total for each quarter. The first table displays the percentage composition of active members by engagement status, while the second table presents the corresponding percentage contribution to total transaction value.

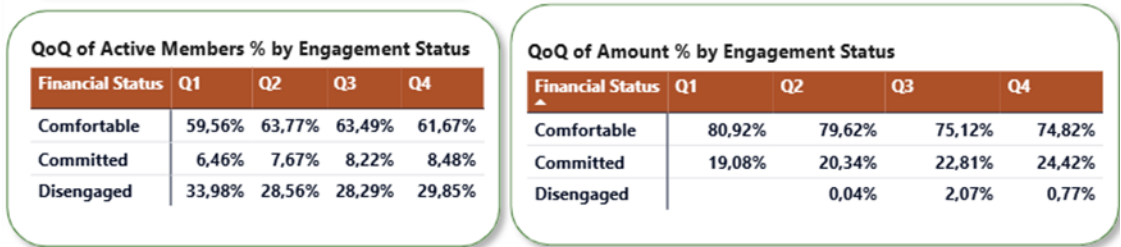


Figure 6: QoQ Analysis of Member Activity and Transaction Amounts by Engagement Status

5.1.2 Key Results

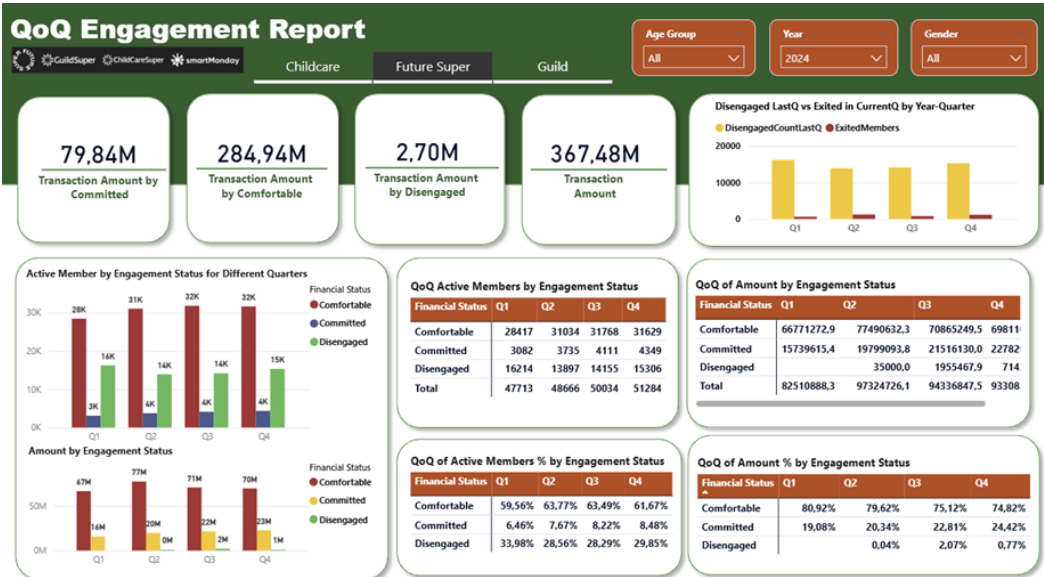


Figure 7: Overview of QoQ Financial Engagement Dashboard

The QoQ(Figure 7) dashboard analyses quarterly engagement data across three financial engagement categories, Comfortable, Committed, and Disengaged for the year 2024. The total transaction amount recorded was 367.48 million, with the Comfortable group contributing 284.94 million, the Committed group contributing 79.84 million, and the Disengaged group contributing 2.70 million.

The Comfortable members represented the majority across all quarters, increasing from 28 417 in Q1 to 31 629 in Q4. The Committed members also grew gradually from 3 082 in Q1 to 4 349 in Q4, indicating improved engagement over the period. The Disengaged members declined from 16 214 in Q1 to 13 897 in Q2, before slightly increasing to 15 306 in Q4. These results suggest sustained engagement and retention within the Comfortable category, growing participation among Committed members, and moderate fluctuation in disengagement throughout the year.

### 5.1.3 Insights Gained

The QoQ dashboard (Figure 7) reveals Comfortable group contributed the largest share of total transactions, accounting for approximately 77.6% (284.94 million) of the total transaction amount. This dominance indicates that financially comfortable members remain the most active and valuable to the fund, both in terms of participation and monetary contribution.

The Committed group demonstrated notable growth over the four quarters, both in membership and in transaction volume. Active members increased from 3,082 in Q1 to 4,349 in Q4, reaching a cumulative transaction amount of 79.84 million. This increasing trend suggests that engagement strategies targeted at this group may be successfully encouraging stronger financial participation.

The Disengaged group accounted for less than 1% (2.70 million) of the total transaction value. Although disengagement initially declined from 16,214 members in Q1 to 13,897 in Q2, it slightly increased again towards Q4 (15,306 members). This fluctuation implies that while disengagement is relatively contained, periodic re-engagement efforts are necessary to prevent future attrition.

Total active membership increased from 47,713 in Q1 to 51,284 in Q4, representing a 7.5% annual growth. This indicates overall improvement in member retention and acquisition, suggesting that engagement initiatives are positively influencing participation across all categories.

Despite moderate fluctuations, the proportional breakdown of engagement status remained consistent. Comfortable members maintained around 60–64% of the total active base each quarter, Committed members grew from 6.5% to 8.5%, and Disengaged members floated between 26% and 30%.

### 5.1.4 Interpretation

The findings demonstrate that member engagement within Future Super in 2024 was dominated by the Comfortable group, which contributed both the highest transaction amounts and the largest member share. This concentration suggests that sustained engagement among financially comfortable members is a critical driver of fund performance. The consistent growth in the Committed segment indicates that intermediate members are becoming more financially active, representing a promising opportunity for conversion into the Comfortable category through tailored engagement initiatives. The overall rise in total membership throughout the year highlights the fund's capacity to attract and retain participants despite market fluctuations.

In summary, the engagement trends observed in 2024 suggest a healthy and stable member base, underpinned by strong participation among the Comfortable and Committed groups. Continued focus on nurturing Committed members and preventing disengagement will likely strengthen both financial performance and long-term member retention in subsequent periods.

## 5.2 Quarter View Dashboard

### 5.2.1 Visualisations

The Quarter View dashboard provides a concise analysis of engagement for each quarter. Similar to the QoQ dashboard, it includes three views corresponding to the three brands, however, it introduces an additional slicer for Quarter, which was not available in the QoQ dashboard (Figure 8).



Figure 8: Quarter View Slicer

The transaction amounts (Figure 9) are represented using key card visuals that display the total contributions made by members, employers, and rollovers. These components collectively form the financial engagement categories Comfortable, Committed, and Disengaged. Beneath the key cards, a multi-row card visual further breaks down the percentage contribution of each engagement category, illustrating the proportional share of total transactions attributable to each group (e.g., Comfortable members contributing the majority of the total transaction amount) the minimal Disengaged share (0.77%) in the total transactions is likely due to transactional fees.



Figure 9: Breakdown of Transaction Amounts by Source and Financial Engagement Status

The next visual (Figure 10) presents the number of transactions per quarter for each financial engagement status. Adjacent to it is a donut chart that illustrates the distribution of active members across the different financial engagement categories.

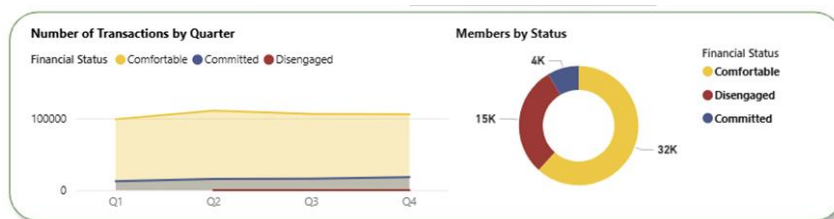


Figure 10: Number of Transaction & Members by Status

The subsequent visual in the Quarter View is a clustered bar chart (Figure 11), that presents the financial contributions by quarter categorised by source rollovers, employer contribution and member contributions.

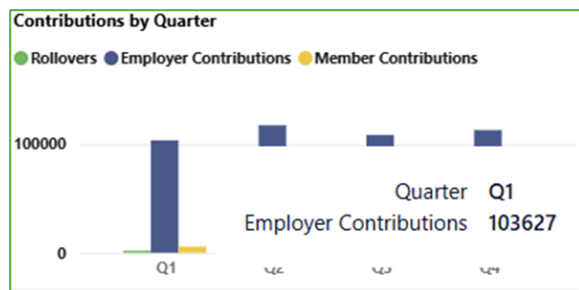


Figure 11: Contributions by Quarter

The following visual (Figure 11) presents transaction amounts by state in a matrix format, segmented by financial engagement status. Below, transaction rates are further broken down by source: Employer, Rollover, and Member. A clustered bar chart complements this analysis by comparing transaction rates across engagement categories, highlighting differences among the various financially engaged groups.

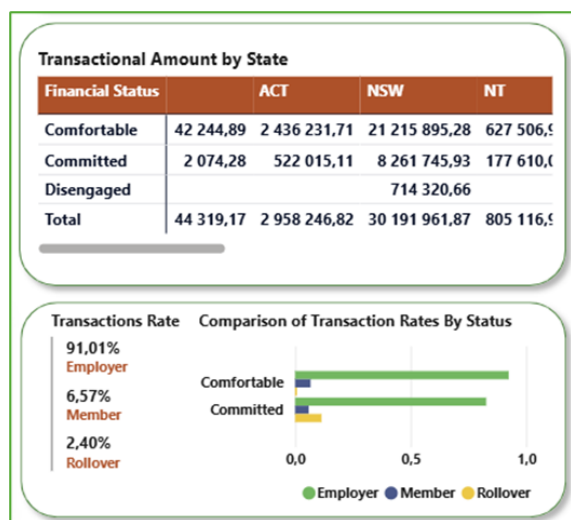


Figure 11: Transactional Amount by State and Transaction Rate Comparison

The final visualization (Figure 12) for the quarter view is a matrix table, where financial status categories are listed as rows. The columns display transaction amounts broken down by source, the total sum of members by source, and the aggregated totals. These values were calculated using the measures outlined in the data methodology.

Financial Status	Total Transactions	Total Transaction Amount	Total Rollovers	Total Rollover Transaction Amount	Member Contributions
Comfortable	105915	69 811 094,04	895	8 872 119,31	7093
Committed	18340	22 782 911,38	2092	13 816 363,88	1075
Disengaged	4	714 320,66			
Total	124259	93 308 326,08	2987	22 688 483,19	8168

Figure 11: Transaction and Member Breakdown by Financial Status and Source

5.2.2 Key Results

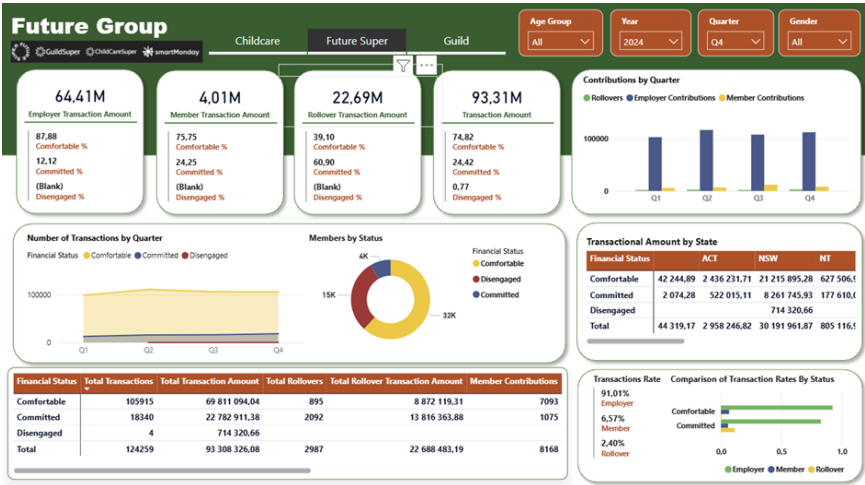


Figure 12: Quarter View Dashboard

The dashboard(Figure 12) presents a comprehensive summary of financial engagement for Future Super members during 2024, highlighting four key metrics: Employer Transaction Amount (R64.41 million), Member Transaction Amount (R4.01 million), Rollover Transaction Amount (R22.69 million), and the Total Transaction Amount (R93.31 million). The visualisation illustrates variations in engagement levels across the four quarters. Additionally, the dashboard provides detailed insights into total transactions, rollovers, and both employer and member contributions, offering a clear overview of fund activity throughout the year.

5.2.3 Insight Gained

The dashboard reveals distinct engagement patterns across financial statuses. The Comfortable members consistently account for the largest share of transactions and contributions, suggesting stronger financial participation. Committed members show moderate but steady involvement, while Disengaged members display minimal activity.

Regional patterns from the transaction-by-state matrix suggest concentration of financial activity in specific states, indicating uneven participation across regions. Additionally, employer transactions represent the largest contribution source, underscoring the importance of employer-driven engagement within the fund.

5.2.4 Interpretation

The visual analysis suggests that member engagement is strongly associated with financial status, where higher engagement levels correspond to greater transactional and contribution activity. The dominance of employer transactions indicates that employer contributions are the key driver of total fund inflows, while direct member and rollover contributions have a comparatively smaller impact.

## 5.3 Member Demographics Dashboard

The Member Demographic Dashboard was developed to provide a comprehensive view of member engagement and demographic distribution across each brand within Future Group. By breaking down the engagement into different demographic and regional segments.

### 5.3.1 Visualisation

The key cards (Figure 13) summarize the core metrics of member counts: Current Members, Joined Members and Exited Members. The corresponding compositions include the distribution proportion of members across engagement groups, which provides immediate visibility into the engagement mix shift.



Figure 13: Joined, Current and Exited Members

The Member Distribution by State (Figure 14) visual presents the number of current members across Australian states and territories. It comprises two components: a choropleth map of Australia, where each state is shaded to reflect membership volume, and a horizontal bar chart that ranks states in descending order based on member count. The map provides an overview of regional membership concentration, while the bar chart offers a comparative summary.

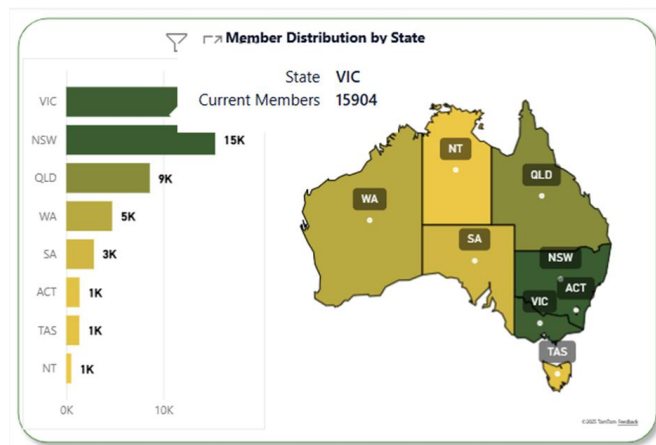


Figure 14: Member Distribution by State

The third visual (Figure 15) on the Member Demographic Dashboard displays the age distribution and gender distribution by engagement status. The left panel, titled Age Distribution by Engagement Status, presents a grouped bar chart showing the number of individuals within age brackets (0–18, 19–30, 31–50, 51–70, and >70) classified by engagement status. The right panel, Gender Distribution by Engagement

Status, displays a stacked bar chart representing the proportional breakdown of gender (Female, Male, and Other).

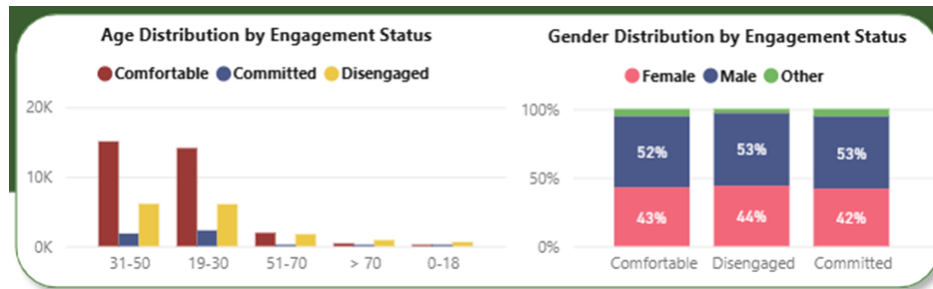


Figure 15: Age and Gender Distribution

The final visualisation (Figure 16) is a dual panel that examines member dynamics over time, segmented by engagement status. The upper panel presents quarterly churn rates for the engagement categories. The lower panel displays quarterly join rates for the same engagement categories using a stacked area chart. Together, these visuals offer insight into member retention and acquisition patterns.

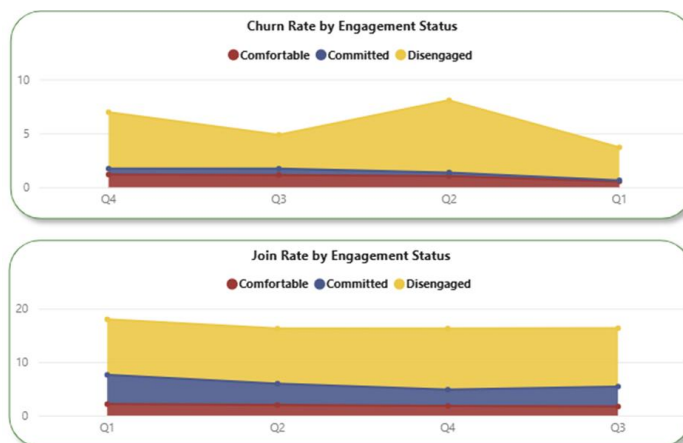


Figure 16: Churn and Join rate by Engagement

### 5.3.2 Key Results

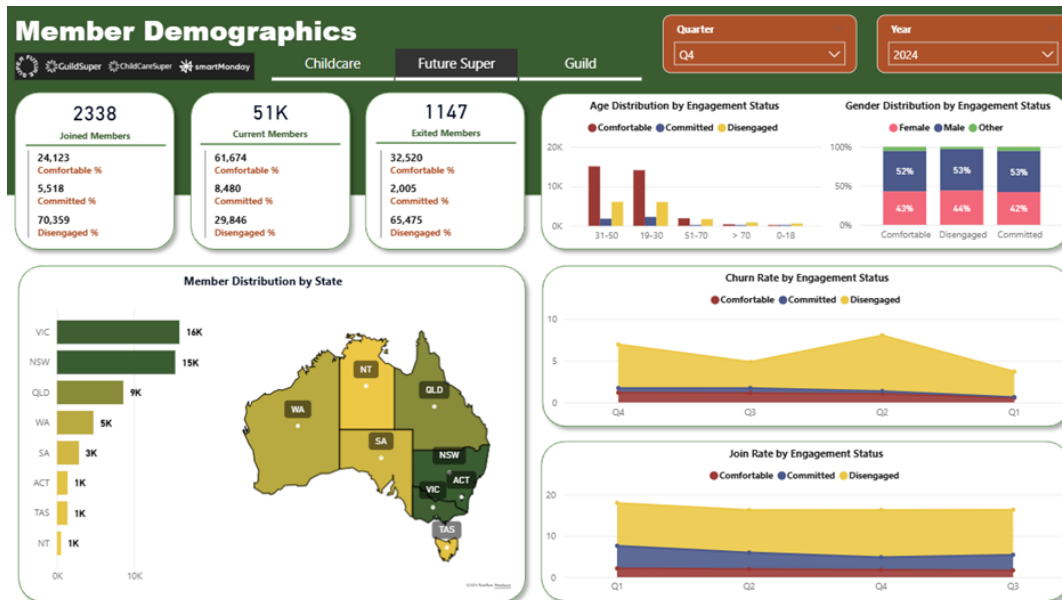


Figure 17: Overview of Member Demographic dashboard

Observing figure 17, the fourth quarter of 2024, the member demographic dashboard indicated that 2,338 new members joined, contributing to a total of approximately 51,000 current members, while 1,147 members exited during the same period.

Engagement distribution among these groups showed that a majority of members were Comfortable (around 61%), followed by Committed (approximately 8%), and Disengaged (around 30%). Similar trends were observed among both new and exited members, with most individuals identifying as Comfortable.

Geographically, membership was most concentrated in Victoria (16K) and New South Wales (15K). Age distribution revealed that the 31–50 age group dominated across all engagement categories, while gender representation was relatively balanced, with females accounting for approximately 43–44% and males comprising 52–53% across engagement groups.

Finally, Churn analysis showed that Disengaged members experienced the highest churn rates, particularly in the second quarter, while join rates remained steady, driven primarily by Comfortable members.

### 5.3.3 Insight Gained

The findings indicate that while the organization maintains a healthy overall membership base, as the majority of members are Comfortable rather than Committed. This suggests a stable but not deeply loyal member population. The disproportionately high churn among Disengaged members points to a clear retention challenge, emphasizing the need for targeted strategies to re-engage this segment. The age profile (31–50) aligns with the primary working demographic, suggesting that engagement programs should continue to focus on this group while also exploring ways to attract younger members. Geographically, the dominance of Victoria and New South Wales reflects established market strength, but it also indicates opportunities for membership growth in less represented regions such as South Australia and Tasmania. Overall, the data underscores the importance of fostering stronger emotional and behavioural commitment among members to improve long-term retention and organizational resilience.



### **5.3.4 Interpretation**

The relationship between engagement status and churn highlights a strong correlation: as engagement decreases, churn increases. This aligns with established member retention theories in organizational behaviour and service management.

Gender distribution stability suggests that engagement strategies are not significantly biased by gender. The steady join rate and high proportion of Comfortable members might indicate that the organization's onboarding and communication strategies are effective in maintaining satisfaction. Regional trends could inform strategic resource allocation focusing marketing and engagement programs in underrepresented states may help balance the member base and promote national growth.

## **6. Discussion and Recommendation**

### **6.1 Significance of Results**

The results of this project highlight the importance of leveraging transactional and demographic data to assess and segment member engagement. By transforming an abstract concept into actionable performance indicators, the successful categorisation into different member engagement tiers provided a dynamic framework for interpreting member engagement behaviour. The three dashboards, from the business perspective, serve as a strategic platform for scalable analysis of data governance, transparency, and performance tracking. Together, these three dashboards empower Future Group's executives to visualize complex data patterns through an intuitive interface, assisting them in generating faster and more accurate insights, prolonging the company's competitive advantage, and fostering their members' long-term financial well-being.

In particular, the first two Quarter-on-Quarter View dashboards reveal an upward trend within the Committed segment and the sustained volatility within the Comfortable member group, delivering a live overview of how the member engagement shifts over time, which allows decision-makers to advance their goal of converting moderately engaged members into long-term, primary account holders. Furthermore, the Member Demographic Dashboard breaks down engagement into demographic patterns, such as age, gender, and region, enabling the organization to target underrepresented cohorts with specific outreach programs while the identification of the churn driver among Disengaged members can contribute to reinforcing member loyalty and strengthening fund stability.

### **6.2 Limitations**

While the project successfully achieved its analytical objectives, the most crucial limitation was the unavailability of data for the other two superannuation funds – SmartMonday and Verve. Therefore, the project focused solely on Future Super, Guild, and Childcare, which, to some extent, restricted the capacity to compare across all Future Group's funds, leading to the absence of potential patterns in terms of member engagement behaviour.

## 6.3 Alignment with Literature Review

The methodology and insights generated are strongly aligned with academic literature and industry reports:

- **Engagement Categorization:** This project's member engagement classification aligns conceptually with Bateman et al.'s traditional transactional measurement approach (2013), which defined those with recent contribution activity as "active" members. However, even though the expanded framework of engagement definition for this project incorporates contribution activity, the rollover activity is also added as another indicator of sustained engagement.
- **Dashboard Effectiveness:** The use of dashboards, consistent with Few (2006), demonstrated the power of clear, interactive visualisations in guiding strategic decisions. These tools enabled stakeholders to explore patterns across time, location, and demographics with ease. Additionally, according to Kumar and Jain (2025), the analytical dashboard integrated with meaningful and actionable metrics helps the organization identify and monitor drivers of member engagement.
- **Demographics vs Engagement:** As highlighted by the Association of Superannuation Funds of Australia (2012) and Monash Business School, variation in ages contributes to differences in engagement patterns. This was validated through the substantial concentration of higher engagement levels among older members approaching toward retirement phase (31-50 years old). However, in contrast to previous studies where younger member views superannuation as abstract with extreme gender inequalities, the younger age group nowadays witnesses extremely high engagement, as well as no difference in gender representation across groups, suggesting a potential shift in superannuation trends.
- **Churn vs Engagement:** the churn over time visualization observing a high churn rate among Disengaged members clearly confirms the significant relationship between churn and disengagement among superannuation members from Clare (2007) and Vaughan (2018), indicating that Disengaged members consistently account for the largest proportion of exits.

## 6.4 Recommendations

Based on the analysis and insights derived from the engagement dashboards, several key recommendations can be made for Future Group and the broader superannuation industry to enhance member engagement and retention.

- **Expand Engagement Beyond NSW and Victoria**

The analysis shows that New South Wales (NSW) leads in both member count and transaction volume, followed by Victoria. This indicates strong engagement within these two states but highlights potential for growth in others. The organisation should focus on increasing awareness and targeted outreach in regions such as Queensland, Western Australia, and South Australia to build a more balanced national engagement profile.

- **Focus on Converting Comfortable Members to Committed Members**

Comfortable members represent the largest segment and contribute the majority of transactions. Understanding the factors that drive their engagement, such as frequency of contributions and recent

rollovers, can help identify pathways to move them into the Committed category. Targeted campaigns and personalised communication could motivate these members to consolidate their super accounts and make Future Group their primary fund.

- **Include Data from Additional Brands**

Currently, the dashboards include data from Future Super, Childcare, and Guild. Integrating data from SmartMonday and Verve would provide a more complete view of engagement across all Future Group brands.

- **Investigate Quarter-End Transaction Spikes**

Transaction data shows consistent spikes towards the end of financial quarters, particularly around the end of the financial year. This may indicate that members tend to perform rollovers or make additional contributions during this period. Investigating the underlying causes of these patterns can help Future Group design strategies to encourage more consistent engagement throughout the year rather than seasonal peaks.

- **Analyse the Drivers of Member, and Rollover Contributions**

Employer contributions account for the largest share of overall contributions, followed by member and rollover transactions. Deeper analysis of the factors influencing member and rollover contributions could reveal opportunities to strengthen voluntary engagement and improve retention.

- **Address Disengagement to Reduce Churn Rate**

The churn rate is predominantly driven by disengaged members, highlighting the need for proactive engagement and retention strategies. Predictive modelling could be used to identify members at risk of disengagement, allowing early intervention through personalised communication, or incentives to maintain activity levels and reduce attrition.

- **Improve Engagement at the Time of Joining**

The analysis indicates that newly joined members are more likely to fall into the Disengaged category compared to the Committed or Comfortable segments. This suggests that engagement efforts should begin immediately after onboarding.

- **Incorporate Behavioural Segmentation**

Move beyond demographic segmentation (state, gender, age) and incorporate behavioural factors, such as frequency of logins, website visits, or prior contribution patterns. This will help tailor engagement strategies more effectively.

- **Integrate External Economic Indicators**

Future Group could enhance its analysis by integrating external data sources such as inflation rates, wage growth, and employment trends. This can reveal correlations between economic conditions and member contribution behaviour.

## **7. Reflection and Learning**

### **7.1. Team Reflections on Collective Learning**

Throughout the project, the team demonstrated significant growth in technical proficiency and analytical thinking. Key learning outcomes included enhanced Extract, Transform, Load (ETL) capabilities, particularly through the use of SQL and Power BI for data cleaning, filtering, and preparation. As a Team we deepened our understanding in efficient dashboard design, learning to construct calculated measures and data models that maintained performance integrity. These collective gains reflect a shared commitment to continuous improvement and a growing confidence in managing complex data workflows.

### **7.2. Team Dynamics**

The team operated with a complementary blend of skills, balancing technical expertise with structured documentation practices. Individual strengths were strategically leveraged, allowing members to contribute meaningfully to different phases of the project. This dynamic fostered a collaborative environment where knowledge-sharing and peer support were central to progress. The team's ability to adapt to evolving demands and stay united under pressure showed how well we worked together.

### **7.3. Team Challenges**

Several technical challenges emerged during the project, notably in optimizing memory usage, managing intricate data transformations, and ensuring precision in numeric comparisons within Power BI. These issues required problem-solving and a methodical approach to troubleshooting. Rather than hindering progress, these challenges served as catalysts for learning, prompting the team to refine its workflows and deepen its understanding of Power BI's computational logic and performance constraints.

### **7.3. Team Collaboration**

Successful project completion was underpinned by effective collaboration. The team consistently aligned around shared goals, communicated clearly, and coordinated tasks to maximize efficiency. Collaboration extended beyond task execution to include strategic decision-making, documentation, and quality assurance. The integration of diverse skill sets and perspectives enriched the final output and reinforced the value of teamwork in data-driven environments.

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## 9. Student's Contribution

Astha Bathla, Tshegofatso Priscilla Mulaudzi, and Phuong Vo Vinh Pham coordinated internal timelines and assisted with project planning, scheduling weekly meetings with both the academic and industry supervisors from Future Group. All team members took turns each week to communicate with supervisors, maintaining consistent updates and aligning expectations throughout the engagement.

Astha led the development of SQL queries in Databricks to extract and transform data while the other members - Tshegofatso and Phuong assisted and reviewed the query. Dashboard creation was split between members: Astha developed the *Quarter-on-Quarter Engagement* and *Quarter View Engagement* dashboards, with the assistance of Tshegofatso. In the meantime, Phuong created the *Member Demographics* dashboard, with some help from Akshay. Astha, Tshegofatso, and Phuong compiled the data dictionaries used for documenting metrics and variables.

Akshay Deorao Bhiwagade worked on drafting the initial versions of the report, presentation slides, and documentation, while Astha, Tshegofatso, and Phuong took responsibility for editing and refining the final report submission, incorporating feedback from the team and supervisors. Final drafts of the report and presentation were reviewed collectively, and improvements were implemented based on team discussions. All team members participated in project discussions, interpretation of results, and final editing of the deliverables to ensure accuracy, clarity, and alignment with project goals.