



INTRODUCTION TO SUTRA MANAGEMENT

MAR 2024



Dubai | New Delhi | Jakarta | Hanoi
Kuala Lumpur | Toronto | Singapore

www.sutra-management.com



Sutra helps the clients in implementing business strategy in an efficient and cost effective manner

SUTRA'S VALUE PROPOSITION



Industry / regional expertise



Data Sciences & technology expertise



Rich talent pool coupled with experience of serving 250+ clients

High value-impact in faster implementation times

SUTRA'S OFFERINGS :



Business Outcomes

- AI transformation
- Targeted Campaigns
- Digital Marketing
- Product Innovation
- Risk / Compliance / Fraud



Insight Generation

- Risk Modeling
- Customer Analytics
- BI / Dashboards
- Analytics & AI Frameworks

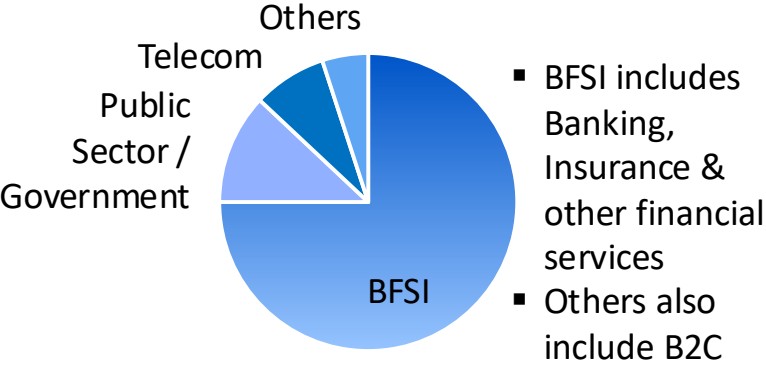


Data management

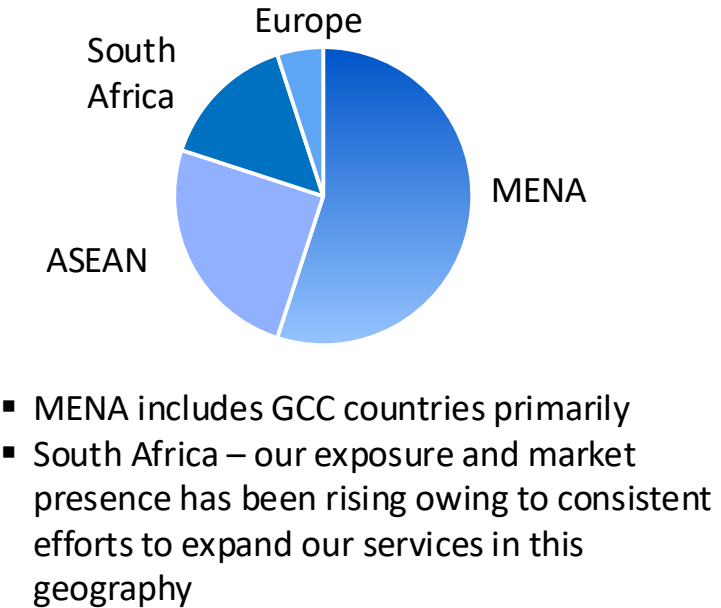
- Data Warehousing
- Data Mining
- Big Data
- Data procurement

About us

Verticals presence



Geographic presence



We deliver services through our team of over 100 consultants...



...and our seven office locations*



* Effiya

We provide end to end advisory services that translates big data initiatives into sustainable, value creation initiatives in the organizations

01

CONSULTING SERVICES

Align with the head of business to develop and implement consulting solutions

- CLM strategy , Next Best Offer / Action
- Enterprise wide risk management
- AI & Analytics roadmap / transformation program
- Forensics – Fraud management strategy, AML
- Operational excellence
- Operations strategy for corporate turnaround



02

ANALYTICS SERVICES AND AI SOLUTIONING

Design and implement AI solutions & analytics strategy for the organization

- AI driven customer experience
- Model development and implementation
- Model lifecycle management
- Machine learning
- Text mining
- Model Validation
- Data mining



Sutra's ADVISORY SERVICES

DATA GOVERNANCE AND MANAGEMENT

- Data management strategy including Big data
- Data integration strategy
- Data cleansing and standardization
- Design and implement data management solutions like: Data warehousing, data marts, data streams, data lakes etc.



03

TECHNOLOGY SERVICES

Design and develop web based business solutions. Conduct system integration for implementation of analytics solutions

- Development of web based custom business solutions
- Real time solution integration
- Model Ops



04

A quick snapshot of projects at Sutra management

TOP 3

Served almost all the top 3 banks in GCC countries

Helped develop **Analytics & AI strategy** for multiple corporate houses, banks and insurance companies



Created **\$12 million** bottom line impact through analytics initiatives for a Saudi bank



Implemented **AI** solutions for **enhancing customer experience** on social media interactions, complaints and branch interactions for one of the largest banks in GCC

Helped a leading bank in Singapore to deepen their relationship with SME and Corporate customers, and **generate new leads**, by using machine learning & NLP



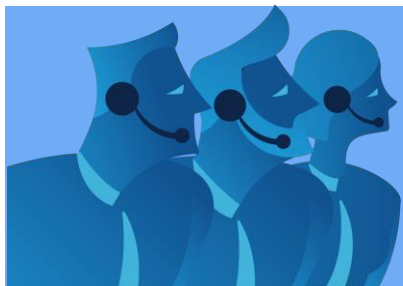
Helped several Insurance clients in South-East Asia to design and implement solution for **IFRS 17 compliance**

IFRS9
IFRS17

Served **20+** BFSI clients across the globe, in the areas of credit risk strategy, IFRS 9, MRM, Risk score-cards and Basel implementation



Developed ML models for one of the largest banks in Europe, to identify high risk transactions for **Anti-money laundering**



Helped a leading Telecom company in GCC leverage ML & AI for implementing **NEXT BEST OFFER** strategy, focused on increasing customer lifetime value, wallet share and retention



Helped executive office of crown prince of one of the GCC countries to leverage big data from **17 MINISTRIES** to generate strategic insights on the fly

Categories

- Oil and gas
- Public sector and government authorities
- BFSI



CASE STUDY 1

ENERGY DEMAND PREDICTION FOR UPSTREAM OIL AND GAS COMPANY

THE CLIENT



Client is one of the largest integrated oil and gas company in the world



Client wanted to predict the demand for energy for its various upstream activities like gas-oil separation, gas processing plant, sea water injection etc. thereby predicting, optimizing the energy demand

APPROACH

Developed models

Developed machine learning model with 96% prediction accuracy on energy demand

96%
accuracy

SOLUTION



Implemented data pipeline

Implemented solution on SAS Viya for ongoing automation of predictions that helped in energy production mismatch



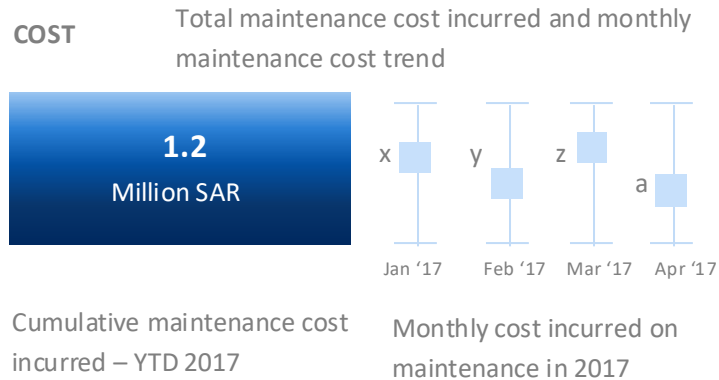
CASE STUDY 2

BUSINESS INTELLIGENCE ON ASSET PERFORMANCE ANALYTICS FOCUSED ON EQUIPMENT RELIABILITY AND DELIVERY EFFICIENCY

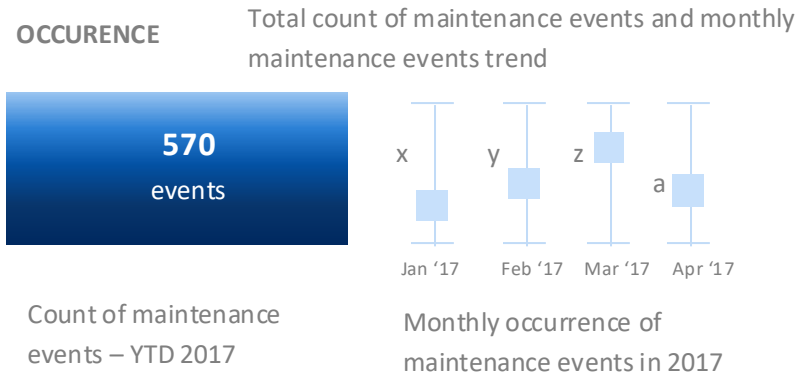
We provided strategic insights around maintenance cost trends for each refinery – with key drivers for the expenses, actual vs planned trends, repeat disruption trends and expenses, through powerful data visualization



Efficiency of delivery



Reliability of equipment



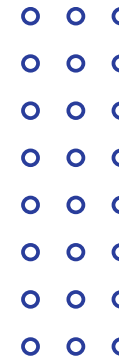
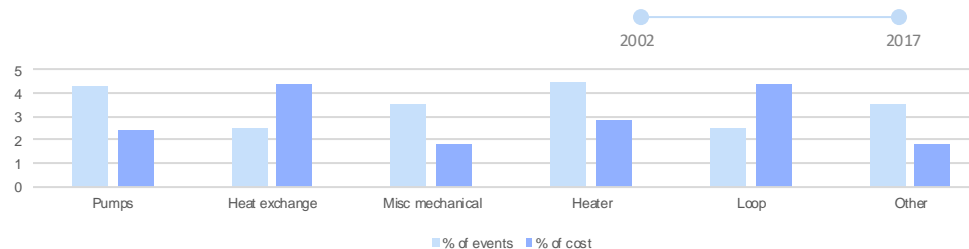
EFFICIENCY

Actual vs planned maintenance cost



ASSET RELIABILITY

Asset category contribution to maintenance cost and occurrences



CASE STUDY 3

POC ON HEALTH AND SAFETY ANALYTICS FOR THE FACILITY



Hazard type and severity prediction through Machine learning and Unstructured data analytics

Develop solutions for improving workplace safety by identifying the following:

- Predict type/category of hazard using text analytics based classification models
- Predict hazard severity through machine learning and deep learning techniques

CHALLENGE

Use dimensions:



- Employee Suggestions
- Unsafe Condition Report
- Safety Inspections and investigations
- Near Miss cases
- Historical Incident Reports and others

APPROACH

Apply big data machine learning:



Text Analytics, Neural networks, Deep Learning, Random Forest etc.

Achieve:



Real time monitoring of work-place safety

OUTCOME



Reclassify hazard narratives to better prepare for future incidents

Identify common drivers for safety related incidents and take preventive actions for ensuring safer work-place for team

Address intelligence needs for HSE leader, engineer and employees



Categories

- Oil and gas
- **Public sector and government authorities**
- BFSI



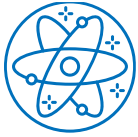
CASE STUDY 1

PREDICTION OF METALLIZATION RATE FOR A STEEL MANUFACTURING PLANT

THE CLIENT



Client is a GCC based steel manufacturing plant



Client intends to optimize the operation conditions for metallization rate from direct reduction of iron

APPROACH

Developed models

- Developed a predictive model to predict metallization rate using various manufacturing inputs
- Converted insights of the optimal mix in the form of dashboard based on inputs and grade of iron ore

SOLUTION



- Real-time prediction on low metallization for client to make changes in process parameters
- Dashboard delivered



CASE STUDY 2

LATE TO GATE PREDICTION FOR AN AIRLINES

THE CLIENT



Client is one of the largest airline company in GCC



Client had problems of late passengers driving higher operating cost and penalties from EU bound flights

Our team provided analytical solution through the following:

APPROACH

- Developed a late to gate prediction model capturing information across dimensions like passenger booking, Skywards program, trip details etc.
- The client wanted to identify segment with around 30% late to gate which was achieved

SOLUTION



Delivered successful POC resulting in sale of SAS license to the airlines which was an IBM shop



CASE STUDY 3

DRIVERS RISK SCORECARD AND DRIVER RISK SCORE BUREAU FOR A LICENSING AUTHORITY

THE CLIENT



Client is the licensing authority of one of the GCC countries



Client intended to create monetization service through assessing drivers risk. Objective was to identify drivers with high risk of committing accidents

APPROACH

Our team provided analytical solution through the following:

- Developed model to predict high risk drivers for committing high severity and low severity accidents
- Developing a mechanism for the monetization, providing a custom solution that acts as driver risk bureau for insurance companies

SOLUTION



Developed and deployed predictive models

Developed a Java based custom solution that provides on demand driver risk report including token, authentication and encryption

Developed dashboard for the business teams to provide inputs on effectiveness of training institutes and specific targeting of high risk drivers



CASE STUDY 4

DEVELOPING SKILLS FOR NATIONALIZATION OPPORTUNITIES

THE CLIENT



Client is the strategy planning department for the executive office of a GCC country



Objective was to identify skill infrastructure investment that can create sufficient jobs for their nationalization program

Our team provided analytical solution through the following:

- Identified capacity and subjects where the country is typically strong at – population was generally weak in STEM subjects
- Identified sectors that will grow in the next five years and the skills that are required for the sectors

APPROACH



Identified approximate demand of jobs by skills that will be required in five years

Mapped the course capacity for those skills

Provide guidance on areas to prepare trained manpower

SOLUTION



CASE STUDY 5

PREDICTING CASE DURATION FOR CIVIL SUITS

THE CLIENT



Client is a judicial authority in GCC country



Client intended to create workflow to reduce congestion in the court

APPROACH

Predicted case duration based on multiple factors like:

- Case specifics
- Level of appeal
- Ponties
- Judge

SOLUTION



Created differential queue based on predicted case duration and case type.



CASE STUDY 6

DEVELOPING CONTROL CENTER FOR OPERATIONS MANAGEMENT FOR HEALTH SERVICES

THE CLIENT



Client is a health authority for one of the GCC countries



The client struggles to manage fluctuating patient visit that increases the waiting time.

Client also intends to maximize the service utilization across hospitals

APPROACH

- Worked with the strategy team to design OPD and emergency control center
- Provided historical view to understand trends for specific phenomenon observed
- Integrated with Cerner system for information

SOLUTION



Implemented the control center and dashboard with near real time updates



CASE STUDY 7

REPEAT CRIME PREDICTION FOR CRIMINALS

THE CLIENT



Client is a judicial authority in GCC country



Client intended to increase awareness of judge during hearing

APPROACH

Leveraged historical data on:

- Crime scene details
- Criminal demography
- Criminal past record
- Criminal family history

SOLUTION



Developed a predictive model

Integrated it to generate scheduled scoring at end of day

Judge could see a score through a click during hearing



CASE STUDY 8

END OF SERVICE PREDICTION FOR A STATE OWNED PENSION FUND

THE CLIENT



Client is a state owned pension fund that intends to improve the financial security of its citizens and maximize its revenues.



Client intends to do it by maximizing its retention of contributors opting for pension rather than opt out with end of services

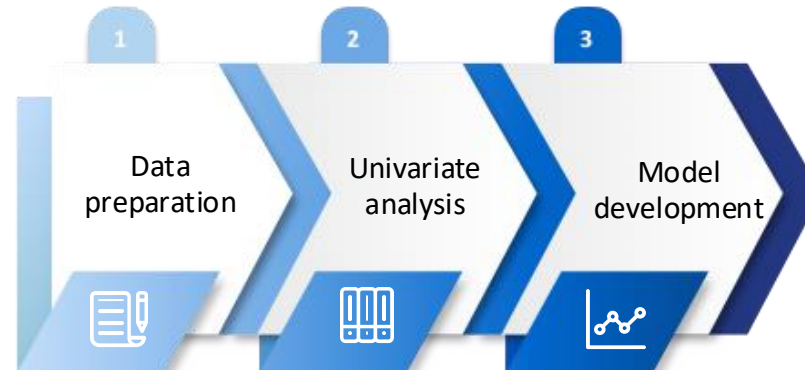


APPROACH

Use information on:

- Demography (Age, gender)
- External data (MoF, WPS)
- Fund size
- Macroeconomic factors
- Contribution
- Other attributes
- Employment related

Develop predictive model



SOLUTION



Predict outcome – End of Service vs. pension salary | Execute campaign to retain end of service opt out customers

Categories

- Oil and gas
- Public sector and government authorities
- **BFSI**



CASE STUDY 1

FINANCIAL TRANSACTION MONITORING ALERT SCORING FOR A EUROPEAN BANK

THE CLIENT



Client is one of the largest bank in European country



The client intended to improve false positives on their transaction monitoring alerts

APPROACH

Our team provided analytical solution through the following:

- Developed machine learning models for alert scoring
- Reduced the false positive rate by **over 25%**

SOLUTION



Implemented an automated mechanism for end of day scoring of alerts

Without making change in existing alert generation process and case management process, inserted alert score

Classified high priority and medium priority alerts



CASE STUDY 2

DEVELOPING REAL TIME NBA STRATEGY LEVERAGING CUSTOMER JOURNEY ANALYTICS

THE CLIENT



Client is a financial institution in GCC



Client intends to leverage deep learning models to understand customer journeys that lead to cross sell and wallet share

APPROACH

- Developed a set of deep learning models mapping multiple journeys
- Increased the predictive power in excess of 5% GINI over existing models

SOLUTION



Deployed the models for real time recommendation engine leveraging ESP and VDMML from SAS



CASE STUDY 3

AUTOMATION OF OUTBOUND CALLS

THE CLIENT



Client: one of the largest collections company in India



Client wanted to cut down on outbound calling cost for their agents. This was a game changer as client could offer 25% more discount on price per call

Our team provided analytical solution through the following:

APPROACH

- Created supervised machine learning algorithm to mimic agent with Indian accent
- Created mechanism to auto transfer to agent based on response types

SOLUTION



Deployed solution on asterisk by leveraging functionalities of IP phone

Managed over 70,000 automated calls before handing over the solution to the client



CASE STUDY 4

DEVELOPING COLLECTIONS STRATEGY FOR A GCC BASED BANK

THE CLIENT



Client is a large bank in UAE.



Client intends to further improve their provisions and reduce collections operations cost by leveraging analytical strategy

APPROACH

- Used modeling insights and segments to create priority groups
- Developed the contact strategy
- Developed collections strategy, leveraging the analytical models
- Implemented the models through SAS scripting to directly integrate model outputs to Finone

SOLUTION



- Reducing the Net Credit Losses for the bank (**~USD 10 million per annum**)
- Improving the efficiency of the collections team by reducing the lineup of self curers and initial low intensity of collections on safer segment
- Optimizing provisions by providing empirical evidence on safer delinquent segments for rebuttal in IFRS9 (**USD 14.5 million per annum**)



CASE STUDY 5

SEGMENTATION AND DISPOSITION CLASSIFICATION THROUGH TEXT MINING

THE CLIENT



Client is one of the largest banks in UAE



Client has initiated a Proof of Concept on usage of text mining for the segmentation of customers using agent texts for late-stage collections

APPROACH

- Extract information from agent call transcripts
- Conduct topics and aspect modeling on the text transcript
- Combine the extracted features of topics and aspects to classify dispositions
- Develop segments with their recovery likelihood

SOLUTION



- Late recovery cases are outsourced activity
- Classification method points to cases to be in-sourced along with resolution strategy



CASE STUDY 6

DEVELOPING MODIFIED CHURN MANAGEMENT STRATEGY USING SOCIAL NETWORK ANALYSIS

THE CLIENT



Client is a telecom company in Africa



Client intends to modify the churn management strategy **for leaders and influencers** over and above traditional churn strategy

APPROACH

- Developed and implemented a modified churn leveraging the social network factors
- Added these dimensions to existing churn prediction to create prioritization logic

SOLUTION



An automated SAS script driven package for prioritization groups



CASE STUDY 7

FALSE POSITIVE REDUCTION FOR TRANSACTION SCREENING AND CUSTOMER ONBOARDING

THE CLIENT



Client is one of the largest remittance house in GCC



Client intended to implement a real time name screening and payment screening solution. Client did not have a benchmark on accuracy of name matching algorithms

APPROACH

- Developed a machine learning driven module that improves the name matching algorithm by optimizing the false positive while retaining the recall rate
- Implemented a real time solution that manages all the algorithms and generate the response for a payment screening within less than **1,000** milliseconds

SOLUTION



Final false positive rate dropped to less than 24% with name and country combination which is much better rate as compared to other solutions available

The solution handles structured and unstructured text to do name and payment screening



CASE STUDY 8

GENERATING SALES LEADS FOR SME AND CORPORATE THROUGH SUPPLY CHAIN DATA

THE CLIENT



Client is one of the largest banks in UAE



Client intended to create an automated lead generation system - using transaction data of their own customers

APPROACH

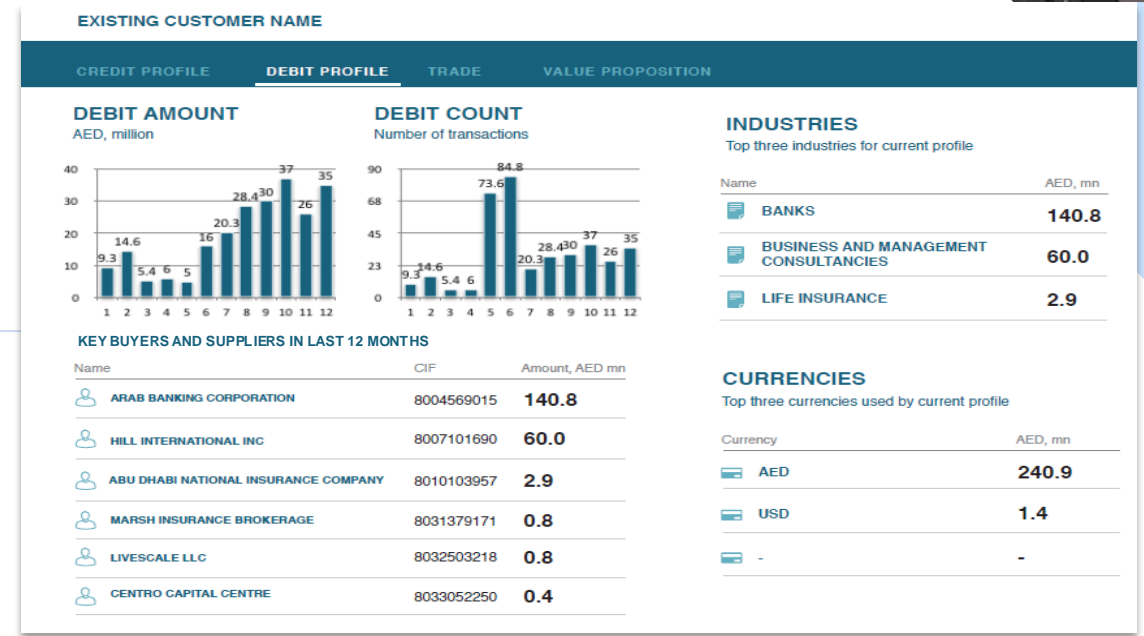
- Extract customer details like customer name, transaction type, transaction amount etc.
- Standardize the details to create a supply chain database of trading partners of companies
- Create profile of topmost supply chain partners viz. buyers and suppliers
- Map the partners to bank's existing customers to understand coverage
- Create value proposition and prioritize lead list for the partners to be targeted

OUTCOME



Bank now can:

- Prioritize lead list based on bank's focus and propensity to acquire
- Pass the lead lists to sales team
- Execute the acquisition campaigns for the prospects



Sample solution screen

CASE STUDY 9

DEVELOPING 'CUSTOMER VALUE PROPOSITION' FOR CORPORATE / SME CUSTOMERS

THE CLIENT



Client is one of the leading banks in South East Asia. Having undertaken the engagement for an augmented data infrastructure through text mining, client wanted to undertake value added activities to increase revenues

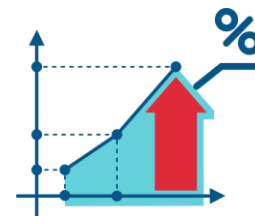
APPROACH

- Sutra helped the client by developing a comprehensive go to market strategy comprising of 3 essential parts
- A segmentation exercise to identify which companies to target and their characteristics to design segment specific offerings
- Develop propensity models to determine what products to pitch with. A total of 9 propensity models were developed
- Developed a key people score to identify who to contact in the organization based on the position they enjoy in the organization and the strength of their relation with the bank

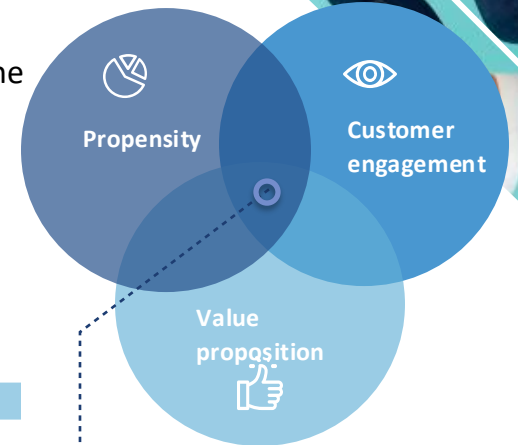
OUTCOME



- 6 distinct groups were identified based on their CASA and other banking behaviour, which helped differentiate focus for each segment
- 9 analytical models were developed for different products to focus on target segments
- Helped RMs to make client specific sales plan and pitch



HIGHER CONVERSION AND WALLET SHARE



STRONG SALES PITCH FOR BETTER CONVERSION



Thank you!

