

#### Master of Technology in Enterprise Business Analytics

## Customer Relationship Management



Rita Chakravarti, Eric Tham, Nirmal Palaparthi, Institute of Systems Science National University of Singapore

© 2018 NUS. The contents contained in this document may not be reproduced in any form or by any means, without the written permission of NUS ISS, other than for the purpose for which it has been supplied.





#### **CRM Course Contents**

#### Day 1

- CRM Overview
- Customer life cycle
- CRM infrastructure
- Campaign management overview
- CRM developments
- Introduction to Assignments

#### Day 2

- Customer Lifetime Value
- Customer Loyalty and Demand
- Workshop using XL simulation on CLV

#### Day 3

- Customer Satisfaction
- Customer Segmentation and Profiling
- R Workshop on RFM analysis
- Latest trends in Customer Analytics

#### Day 4

- Customer Analytics
- Statistical Approach to CRM
- Cross sell/ Up sell / Look-Alike Model
- Attrition Model
- Time To Event Model

#### Day 5

Assignment Presentations





#### Contents

- CRM Overview
- Customer life cycle
  - Prospect marketing
  - Onboarding & Activation
  - Usage
  - Upsell & x sell
  - Service
  - Retention
  - Advocacy
- CRM infrastructure
- Campaign management overview

- CRM developments
  - Customer Journey Perspective
  - Context awareness and CRM
  - Analytics for the end consumer
  - Third party marketing
- Assignments
  - #1 Driving Alumni Engagement
  - #2 Enhancing Floater Experience
  - #3 Designing a Loyalty Program











#### CRM goals

- The objective of Customer Relationship Management is to take a Customer Perspective for managing profitability
- Some tenets of an ideal CRM program are
  - Target the Right Customer
  - With the Right Offer
  - And the Right Product
  - And the Right Messaging
  - At the Right Time
  - Using the Right Channel
- While a lot of focus is on the offers and promotions, a good CRM strategy relies a lot on providing excellent customer service

National University of Singapore

### CRM challenges



#### **Operational Challenges**

- Planning the right marketing campaigns
- Tracking responses of the campaigns
- Increasing customer satisfaction
- Channel Management
- Service Level Improvement

#### Strategic Challenges

- Segment marketing perspective
- Creation of a Customer Understanding repository
- Connecting all the customer related systems together
- Analytics to support smart interventions





### **Customer Understanding**

#### **Hypothesis:**

Superior customer understanding can power better relationships

#### **Steps:**

- Establish a customer understanding infrastructure by collecting all data about the customer
- Enhance the information with insights about the customer
- Personalize interactions using these insights
- Create a single view of customer across the organization

Level 1	Customer Demographics
Level 2	Lifestyle segments
Level 3	Behavioral Segments
Level 4	Customer Propensities
Level 5	Single View of Customer



### Segment Marketing Perspective

- Managing a combination of products and customers can become complex
- Segmentation helps manage this complexity
- A segment manager is responsible for the entire suite of products and services to be sold to a particular segment
- Different segments could have a different set of products and services they are targeted with
- Xselling ratio is one metric that a segment manager could be evaluated on



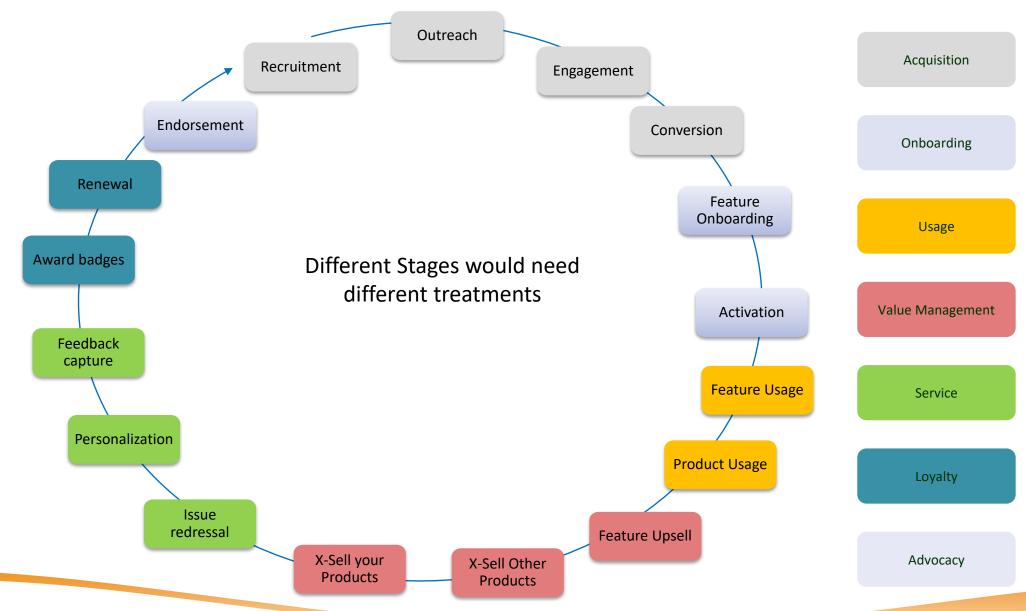








### Customer Lifecycle







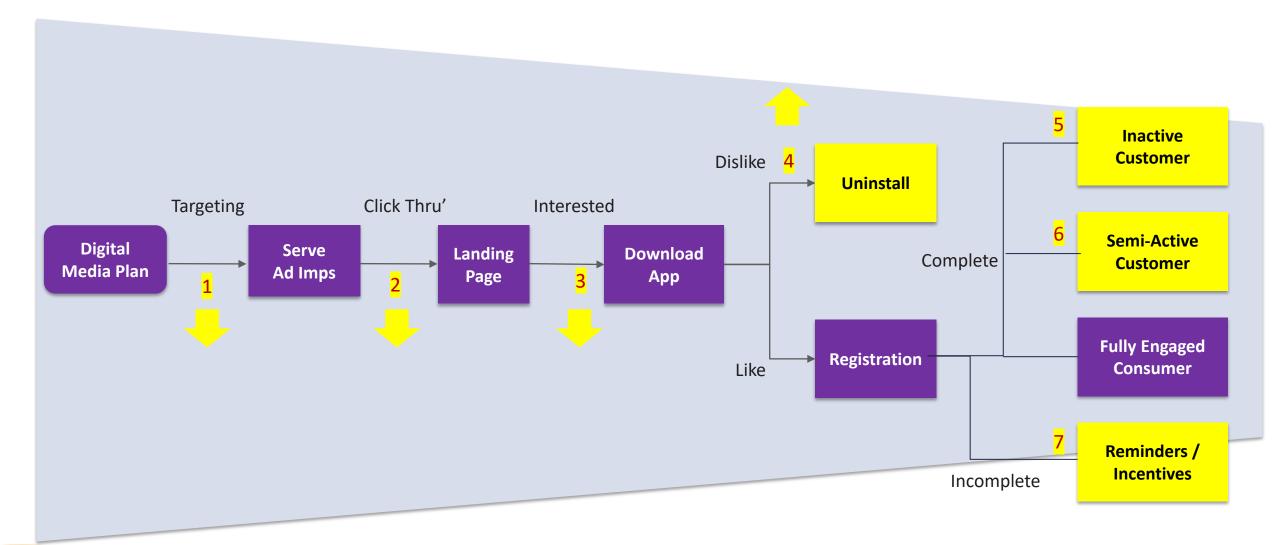




#### Prospecting approaches

- First port of call on Prospecting should be selling to internal customers (customers of other products)
- 2. The next option could be to use partnerships to X Sell to existing installed bases
- 3. Traditional mass media and offline channels are fast being replaced with digital acquisition purely from a cost of acquisition point of view

### Drop points during digital Consumer Acquisition





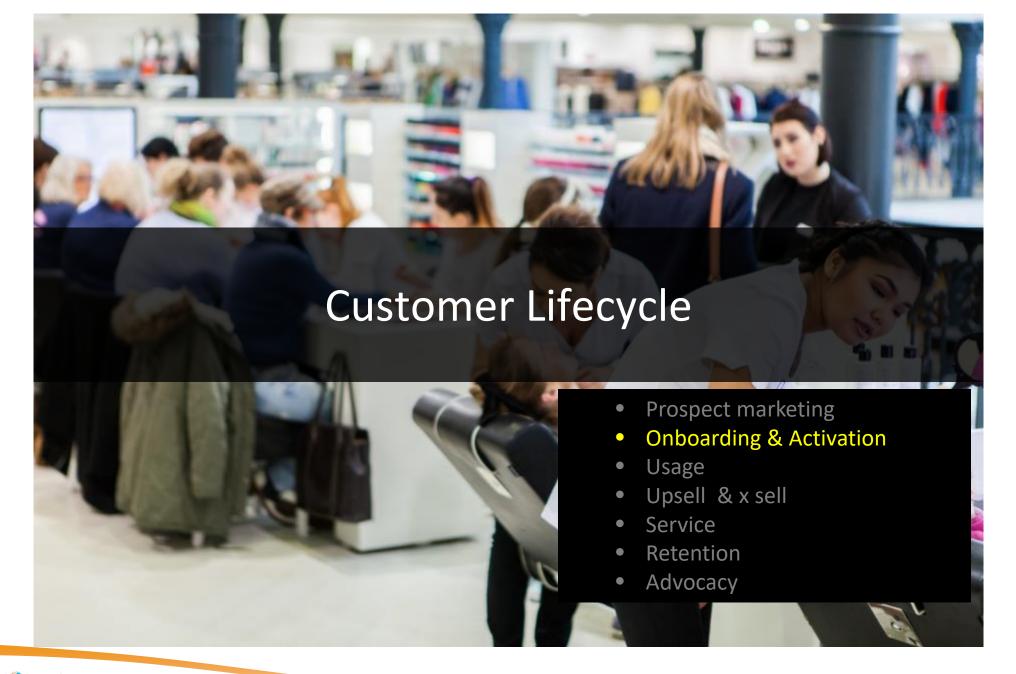


## Segmentation is key to drive Acquisition & Engagement

**Propositions** Source Channel **Prospect Engaged Incentives** Inspiration **Cohorts Cohorts** Dislikes Click Stream **Consumer Segmentation** Demographics **Transactions** Income Groups Loyalties Attitudes/Affinities **Acquired** Winbacks **Patterns** Media/Content **Journey Dropouts Cohorts Tastes** 

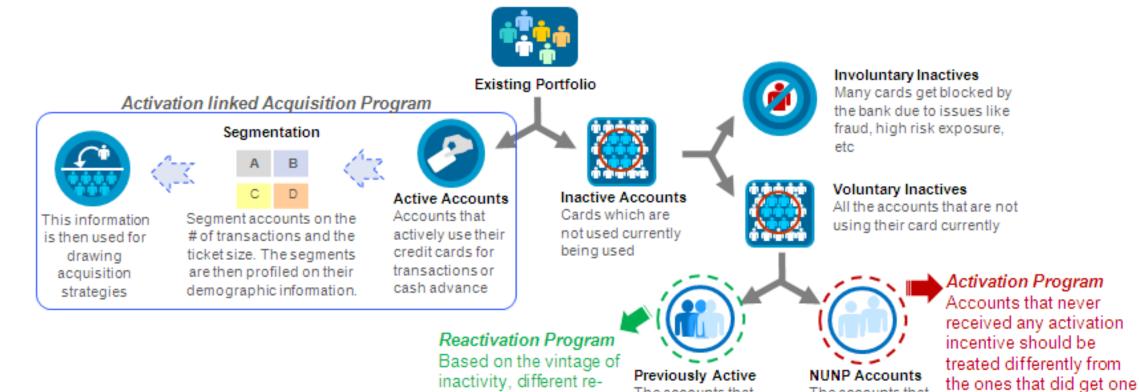








#### **Activation Program**



activation plans are

drawn





Page 16 © 2018 NUS. All Rights Reserved

The accounts that

over-time

lapsed into inactivity

The accounts that

have never been

active

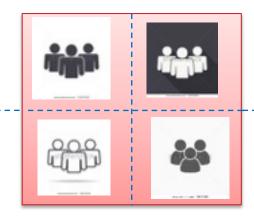
#### Activation Linked Acquisition: For New Acquisitions

**Active Accounts** 



Active Accounts of portfolio

→ Transaction behavior of active accounts analyzed (Transaction frequency, ticket size and top MCC spends)



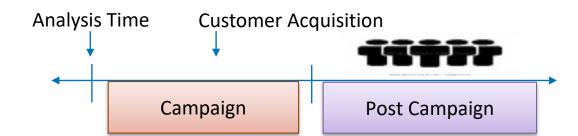
Segmentation & Profiling

- → Segment on transaction behavior
- → Profile the segments on demographics



Draw out the campaign

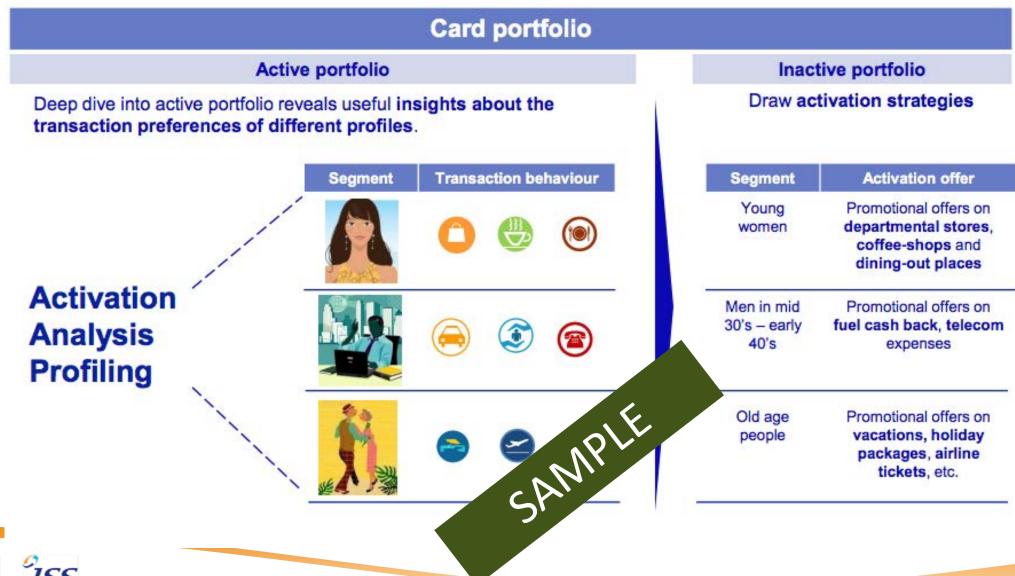
→ Analysis of transaction activity of active accounts enables marketing team to draw out effective activation strategies for 'never active' accounts







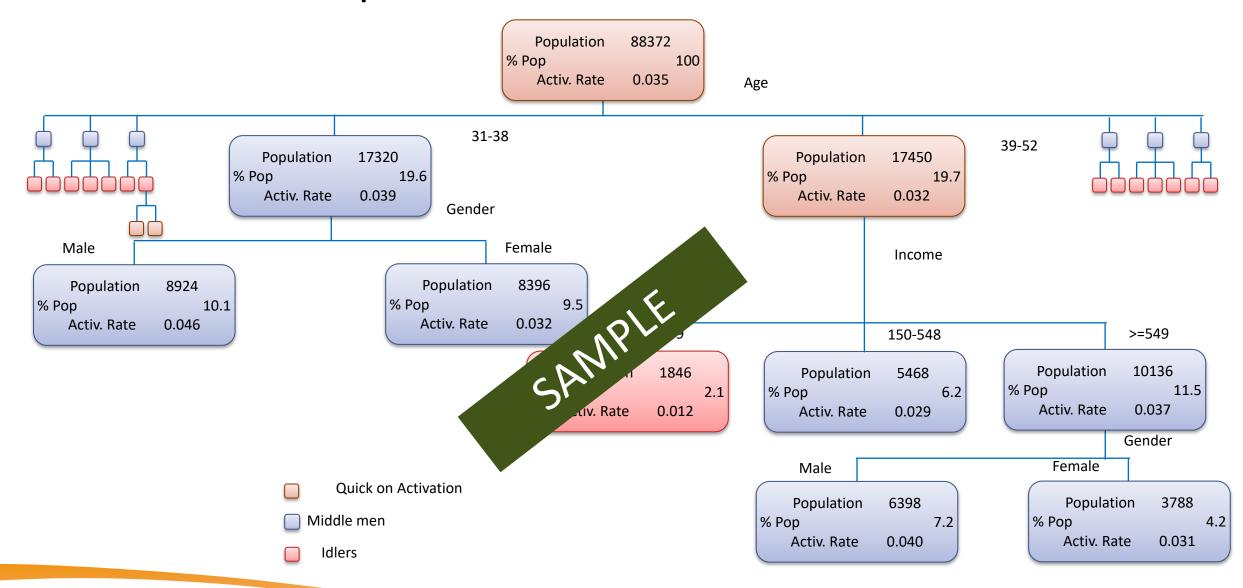
### Sample Activation Strategies







#### Deliverable - Output of Activation Classification Tree







#### Digital Activation best and worst practices

- → Digital products have taken activation to a whole new level
- → Some best practices in digital activation include
  - → Inline form validation
  - $\rightarrow$  Prefilled forms
  - → Social sign in
  - → Import contacts
  - → Allow Skip a step
  - → Use progress bars
  - → Minimal scrolling

- → Some avoidable practices in digital activation include
  - → Auto carousels
  - → Slow loading
  - → Unnecessary form fills
  - → Too many calls to action
  - → Button called Submit

- → See <a href="http://www.slideshare.net/conradwadowski/growth-hacking-user-onboarding">http://www.slideshare.net/conradwadowski/growth-hacking-user-onboarding</a> for an exhaustive list
- → Testing these practices and more is very important





#### Onboarding challenges

- →Regulatory requirements might include a Know Your Customer process, which if lengthy sees a high drop off rate
- →Onboarded accounts should be activated early on, and that is a challenge
- →Educating the customer of different features of the product is another challenge
- →Giving the customer an excellent first user experience is very important and is difficult to pull off without proper planning
- →All of the above challenges can be addressed with appropriate analytical support











# **Usage Analytics Approaches**

- ✓ Behavioral Segmentation
- ✓ Life stage Segmentation
- ✓ Customer Lifetime Value
- ✓ Trigger based approaches
- ✓ Partner programs





### Lifestyle Segmentation: Cluster Analysis

Collate Data Exclusions Cluster formation

Portfolio consists of customers with different needs

- → Newly Acquired customers
- → Inactive Customers
- → Customers attrited in analysis window

Determine customers for each offer

Form homogenous clusters of active customers on the basis of MCC level spends, transaction and demographic profile variables

Top Needs Identification

Determine customers who can be targeted for each type of offer by attaching them to the corresponding cluster

Identify main needs of a cluster by profiling across MCC spend categories





#### **Cluster Statistics**

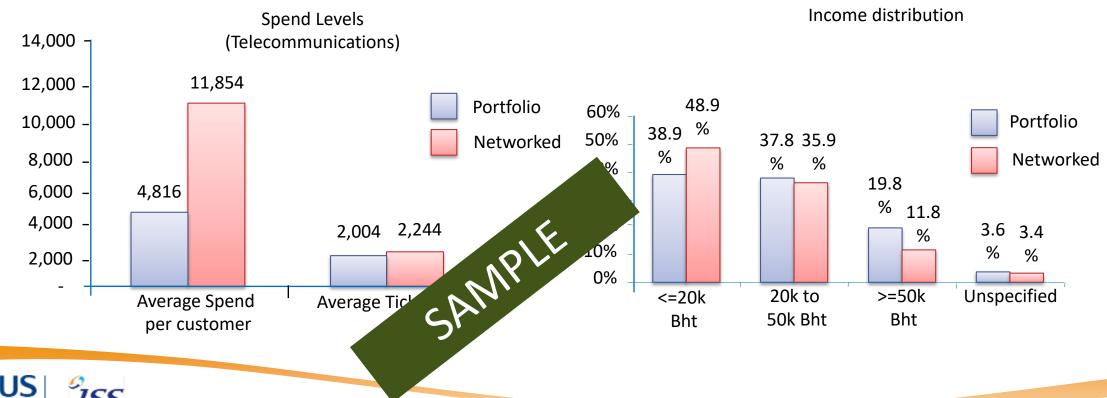
Cluster No	Cluster Name	Percentage of Total Customers	Avg. Retail Spend per year	Avg. Retail Txn per year	Avg. Cash Amount per Year	Avg. Cash Txn per year
1	Networked	8%	48,722	24.83	2,060	0.38
2	Slumberjacks	15%	21,751	7.67	966	0.20
3	On the go	5%	159,020	19	2,352	0.22
4	Gizmo Geeks	5%	171,36	.40	2,668	0.28
5	Cash and Carry	7%	171,36 SAM	28.65	60,173	8.45
6	Average Joe	6%	235	49.76	1,405	0.23
7	Healthy Spenders	8%	64,954	28.09	980	0.16





### Cluster 1 | Networked – Telecommunications Spenders

- → 100 % Spenders in Telecommunications with high spends & transaction levels on the MCC
- → High % of customers(>85%) transact only on 2 MCC groups ("Department and Discount Stores" and "Telecommunications")
- → Low Income Cluster with nearly 50% of the customers falling in the lower Income Groups



National University of Singapore © 2018 NUS. All Rights Reserved

### Cluster 3 | On The Go- High Spenders

- → 100 % Spenders in Lodgings and Accommodations.
- → 43% of the total spend in Lodgings and Accommodation MCC from 4.9% customers comprising this cluster
- → High Income cluster comprising of twice the proportion of high income customers(40%) as compared to the portfolio(20%)
- → Seem to be frequent travelers. However only 40% of the customers use their credit card for transportation services
- → Lowest proportion of Cash Transactors across the portfolio(8%)

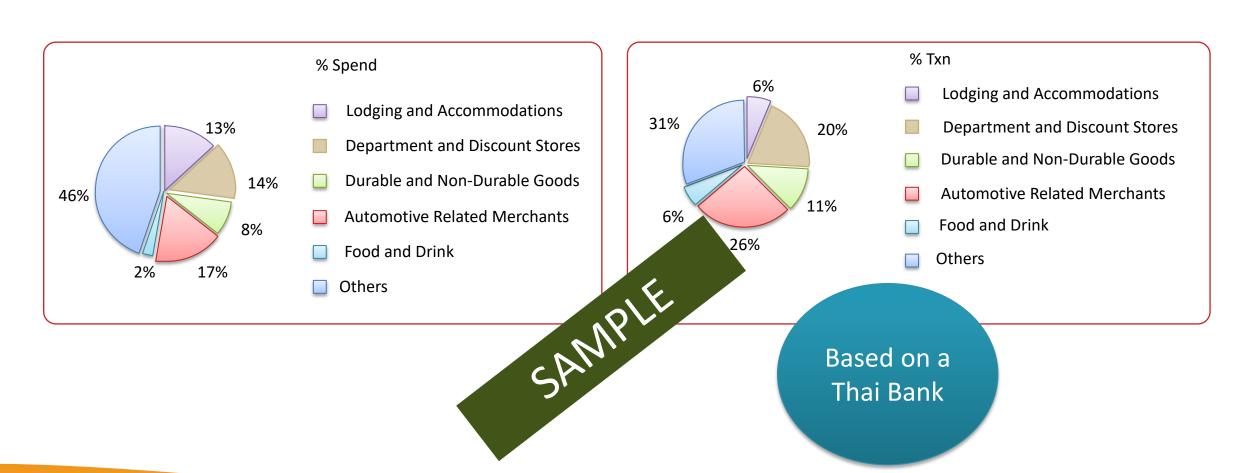






© 2018 NUS. All Rights Reserved

## Cluster 3 | On The Go (Contd.)

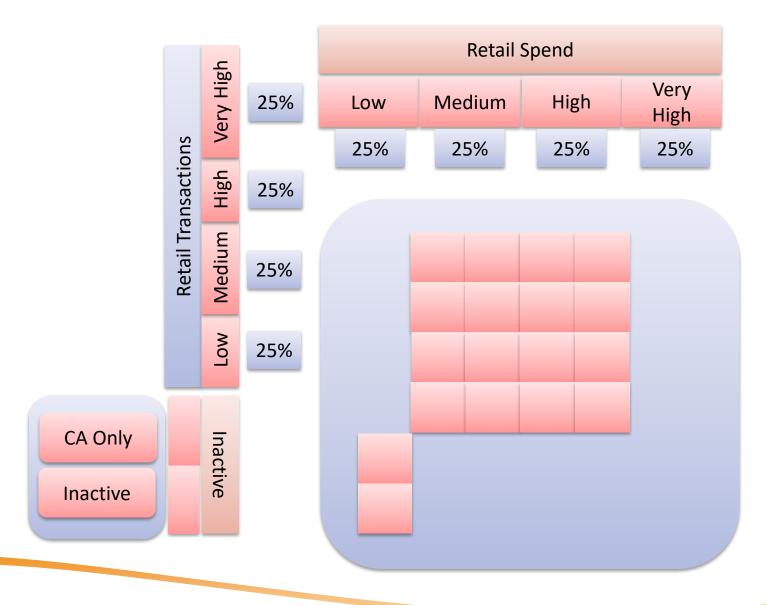






© 2018 NUS. All Rights Reserved

## **Behavioural Segmentation**







#### Behavioural Segmentation (Contd.)

#### 'Elite' Segment

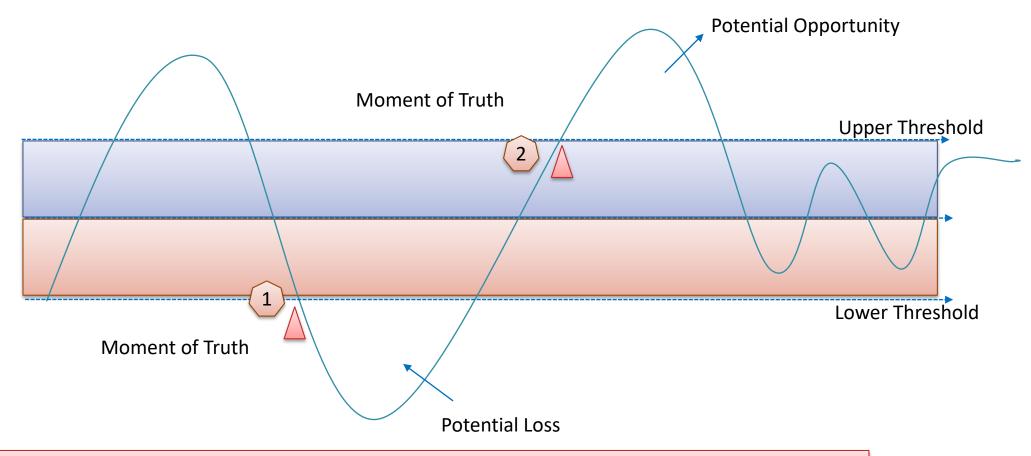






#### Moments of Truth

No such thing as an 'average' customer



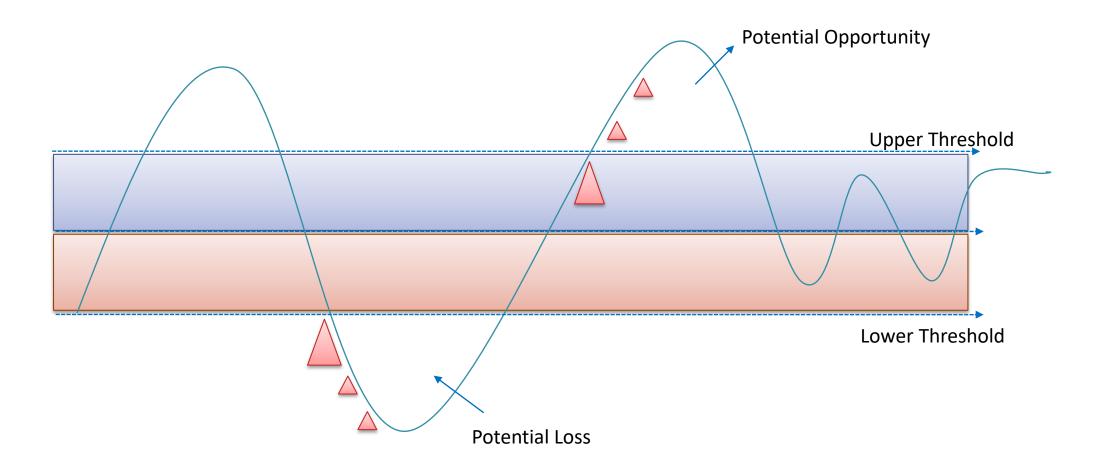
Action taken at the Moment of Truth directly influences the Potential Opportunity (or Loss)





## Multiple Moments of Truth

In reality, Action at each Moments of Truth is supplemented by secondary actions till such time the behavior change is effected

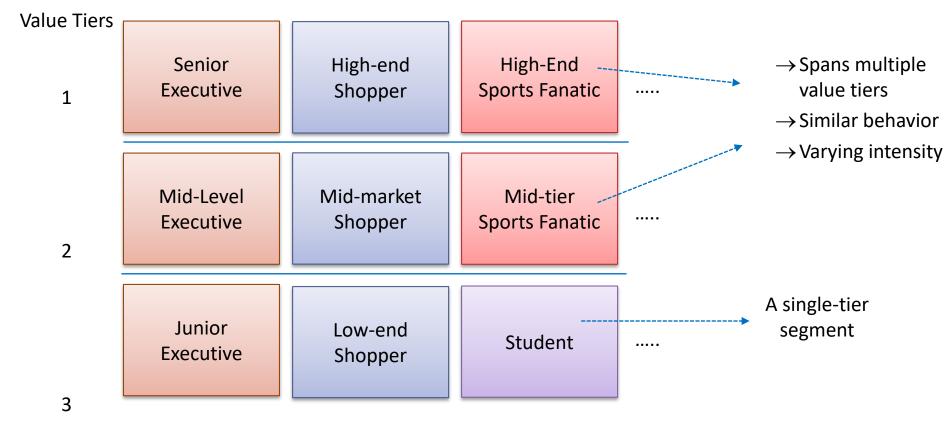






### **Determining Thresholds**

Hidden within each Value Tier are 'lifestyle' segments

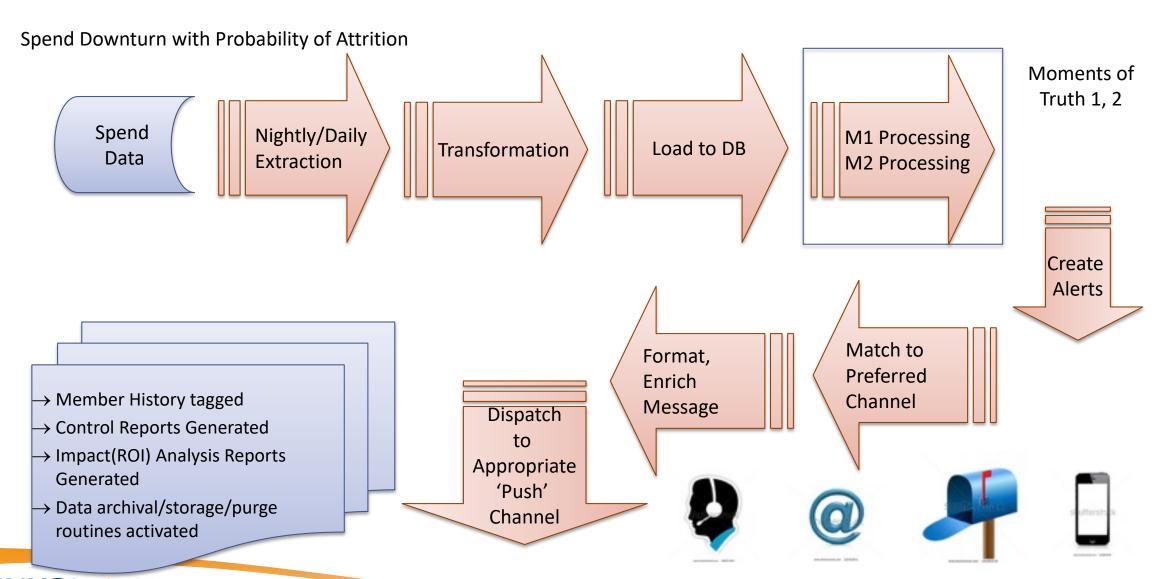


The spend boundaries of each lifestyle segment define the thresholds for its members





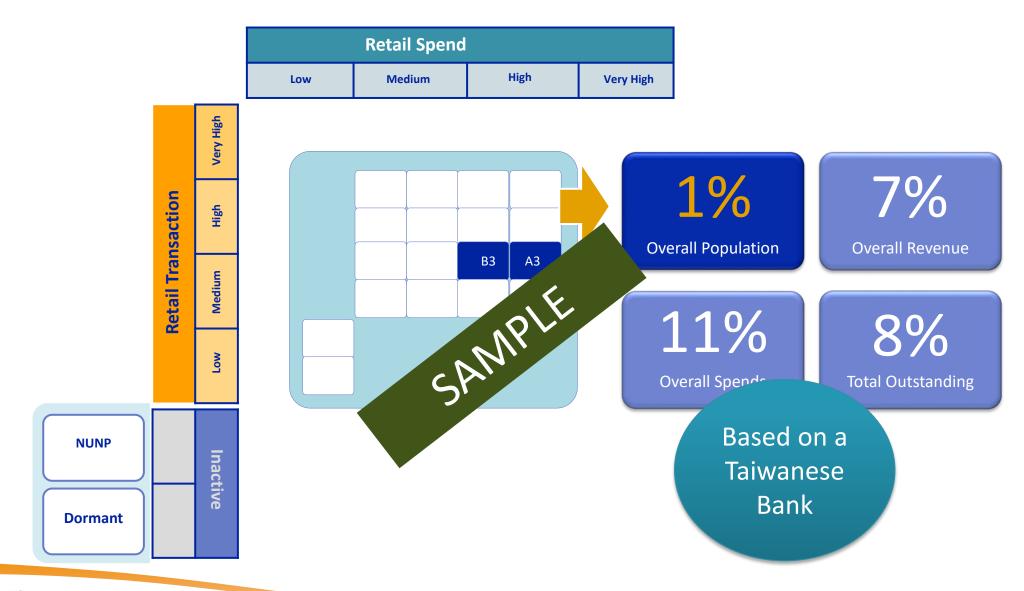
### Threshold triggers in Practice





์เรร

## Sample High Spenders Segment





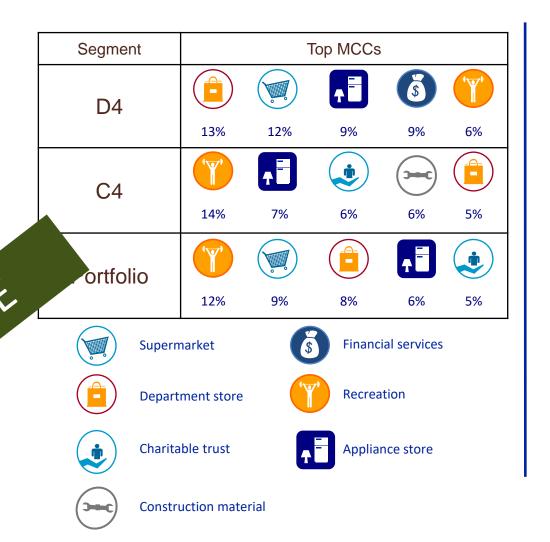


### Sample Spend Increase program

✓ Customers in the low segment actively spend in departmental stores

✓ There is lot of scope to introduce a tie up card with these merchants which will provide specific discounts when the customer spends at these outlets

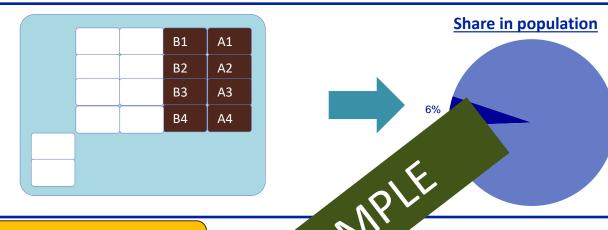
Based on a Chinese Bank







### Installment induce program



Based on a Chinese Bank

### **Program details**

### **Targeted Segment**

Customers who are high ticket spenders

#### **Filters**

- Customers in very high and high POS segment
- Customers who have done a transaction with a ticket size of 1,000 rmb or above in the analysis window

### **Deferred payment**

- ✓ A customers doing a high ticket transaction (> 1,000 rmb) should be considered for this scheme
- ✓ In case of deferred payment the customer is allowed to start making his monthly payment after a month instead of making it immediately
- ✓ This should be for customers who are willing to convert their outstanding into installments for a longer period of time (12 months and above)
- ✓ The customer should be communicated via sms as soon as he makes a transaction of 1,000 rmb or above







### Tactics to increase customer penetration

- →Pre approved accounts
- → Product Bundling
- →Event based Targeting
- →Next best Offer during incoming calls





## Incoming Call is Your Best Bet

- →X Selling during an incoming call is far more effective and cheaper than on an outgoing call
- →This would need a system of computing the Next Best Offer to be put in place







Page 40

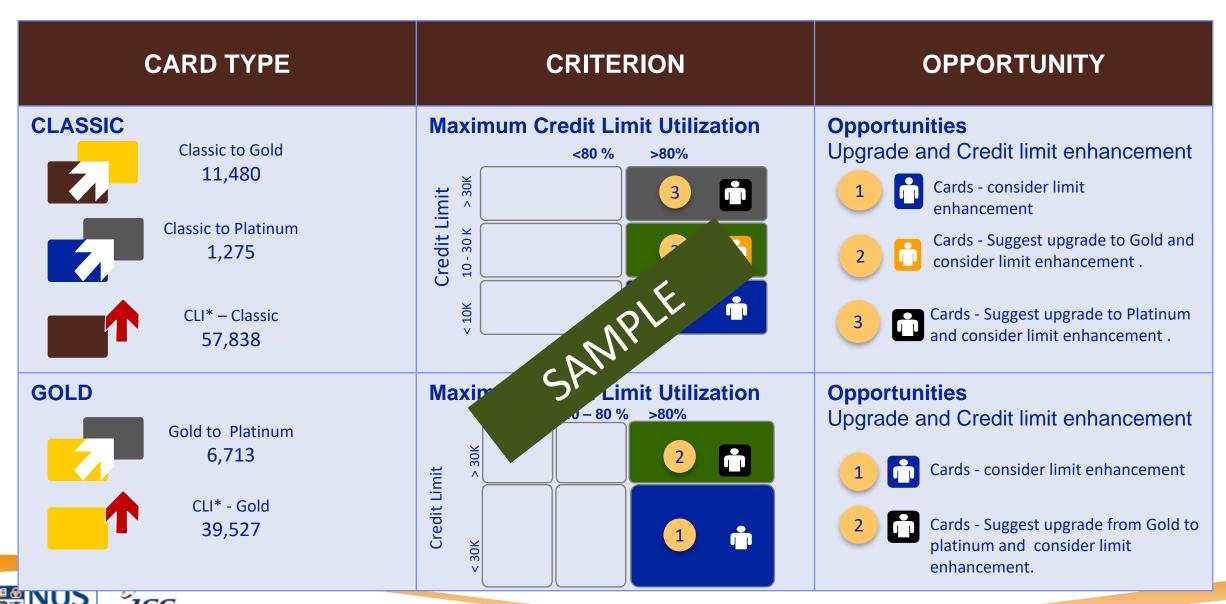
## Next Best Offer Analytics

- →Action can take multiple forms
  - » Purchase recommendation
  - » Pricing Recommendation
  - » Advertising Recommendation
  - » Promotion Recommendation
- →Recommendations can be based on multiple factors
  - » Product affinity
  - » Pricing affinity
  - » Behavior affinity
  - » Lifecycle affinity
  - » Attribution analysis





# Case study: Card Upgrade Program: Opprtunity



National University of Singapore © 2018 NUS. All Rights Reserved

## Case study: X-Selling Credit Cards to Savings Accounts

#### STRATEGY, PRODUCT AND CHANNEL SELECTION

#### CROSS SELL STRATEGY – Definition

Define the following:

- → Profitability objectives
- → Target segments
- → Growth objectives

#### **PRODUCT DESIGN**

- → Core value proposition
- → Type of card, credit line
- → Rewards, terms and features

#### **CHANNEL SELECTION**

- → Direct mail/telemarketing
- → Package/statement insert
- $\rightarrow$  E-DM
- → Inbound 1-800-number

#### **CUSTOMER SELECTION**

#### PROSPECT LISTING

Liabilities (SB/CA/CDs)

- → Other assets (PL/AL/ML)
- → Third party database
- → Co-brand partner database

### MERGE CUSTOMER DATA SOURCES

- → Demographic information
- → Transactional behavior
- → Bureau information

### DETERMINE RIGHT CUSTOMER - ANALYTICS

- → Propensity to respond
- → Prospect level profitability
- → Credit bureau score

#### **DETERMINE PRICING OPTIONS**

- → APR (Go-to/differential)
- → Fee structures (BT/Late fee, etc.)
- → Behavioral scores based offers

#### CARD DESIGN AND PACKAGING

- → Pre approved vs. pre qualified
- → Design of card/envelope and letter

#### TARGET CUSTOMER SELECTION

- → Select customers on basis of scores
- → De-dupe check
- → Policy exclusions

**EXECUTE CROSS SELL CAMPAIGN - FULFILLMENT** 

Capture data when customer responds Scoring of customers (for approval-rejection decision and Credit line assignment)





# Case study: X-Selling Credit Cards to Savings Accounts

→ A conversion rate of 2% of Savings Accounts to credit cards can increase card base by 750,000 and POS spend by \$960Mn

#### **Current statistics**

- $\rightarrow$  Savings Account Base (S) = 39 Mn
- $\rightarrow$  Other Account base (OA) = 13 Mn
- $\rightarrow$  Credit Card base (C) = 5 Mn
- $\rightarrow$  Conversion Rate (R) = C/OA = 38%
- $\rightarrow$  Avg. spend per card = \$1,279 per annum

Assuming 5% success in procuring credit card customers from

#### Potential results from cross-sell

- $\rightarrow$  No of credit cards = 750,000
- → Potential spend increase = \$960Mn
- $\rightarrow$  Potential revenue increase = \$74 Mn in the first year and cumulatively \$313Mn in three years

Based on a Brazilian Bank

se with the given conversion rate of 38% in Year 1



## X-Selling Mutual Funds to Savings account customers

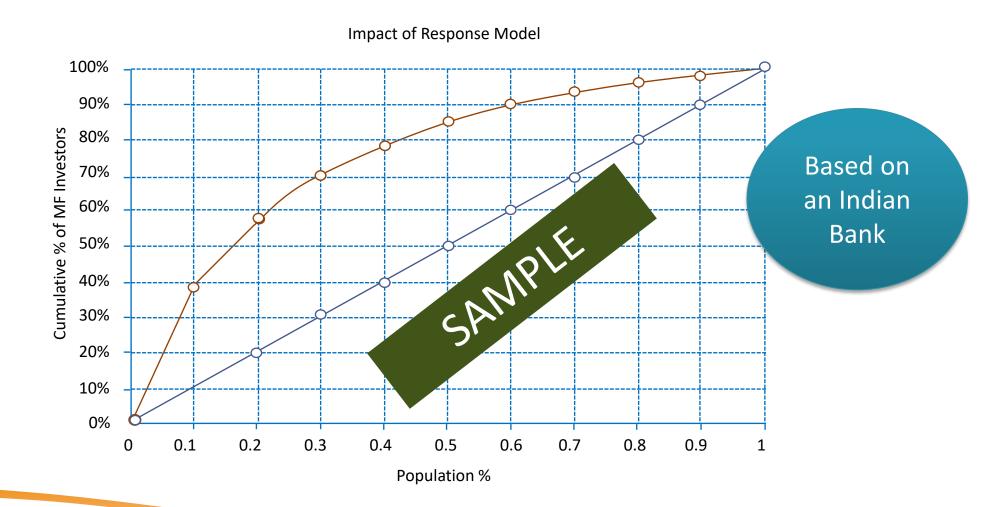
Category	Variable	Nature of Impact	Weightage
Type of Customer/ Risk taking ability	Type of account	Saving Account customers have a greater propensity of taking up MF	Low
Involvement with the Bank	Month on book	Propensity for Mutual Funds has a direct linkage with MOB	Low
	Months since last transaction happened	More frequent the transactions with the bank, greater is the likelihood of taking up Mutual Funds	
	Whether uses DD/PO	Usage of DD/PO has a difference with propensity of taking N Funds	Based or an Indiar
Availability of Funds/ Investment	Whether has investments	Propensity of the presence of the other investigation of the presence of the other investigation of the presence of the other investigation of the other inv	Bank
	Average Balance maintained	Aver a direct relationship with propensity for Mutual	Hign
	Whether has Dividend transactions	ds has a direct linkage with number of dividend	Medium
Lifestyle	Whether has credit card payments	maving credit card payments is a direct indicator of likeihood of taking up Mutual Funds	Low
Balancing of Portfolio	Whether has FD	Having an FD is a strong indicator for taking up Mutual Funds	Low
Volatility	Whether has inward charges	Having inward charges indicates high level of volatility so, greater propensity of taking Mutual Funds	Low



ISS

Page 45

### 70% of MF investors captured by 30% of population

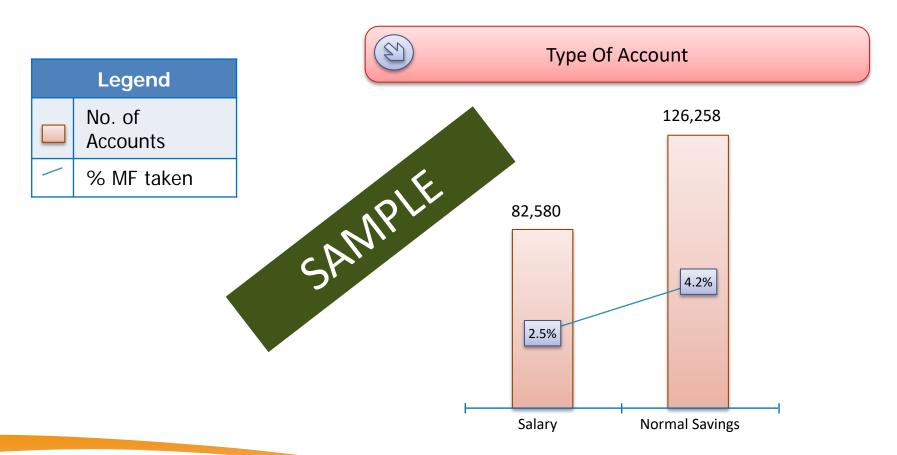






## Effect of type of account

Salaried customers tend to be more conservative in their investment patterns, in comparison to Saving customers which comprises of a wide variety of people with differing risk appetites



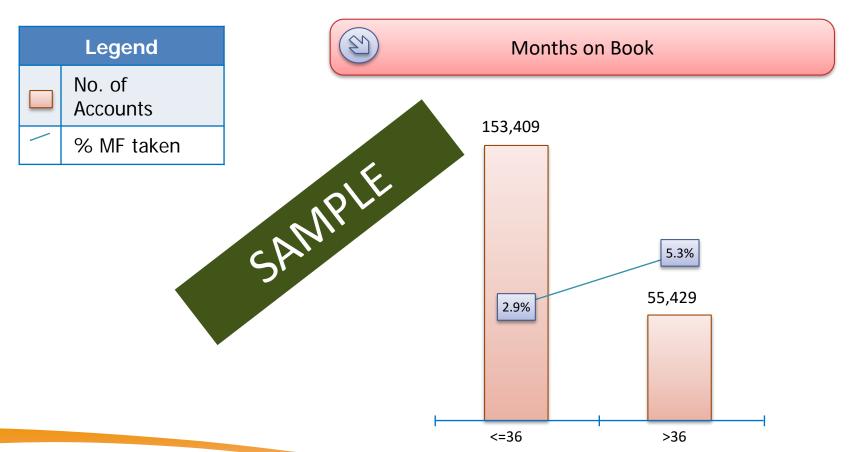






### Effect of of time on books of the bank

Longer the period since the customer is on book, greater is the chance of investing in Mutual Funds



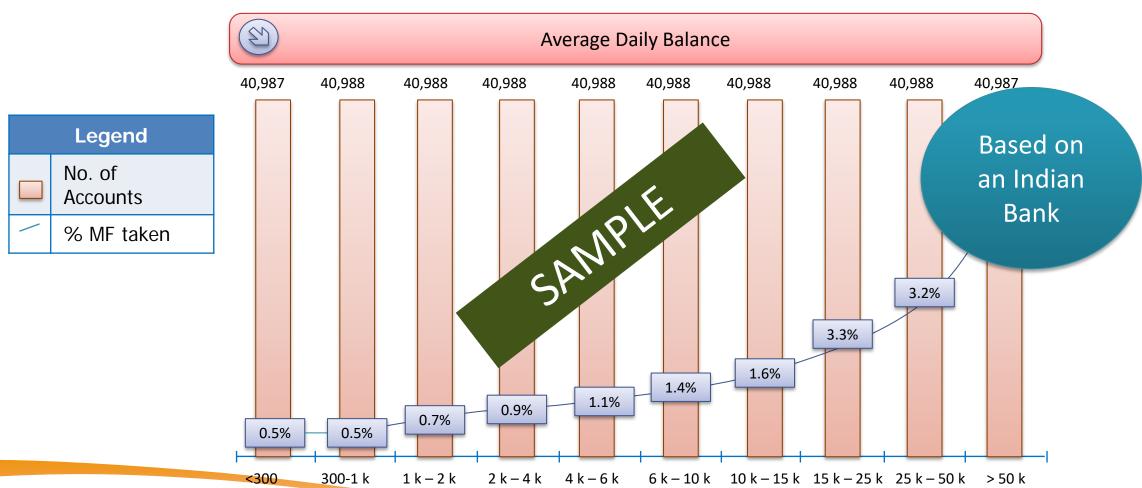
Based on an Indian Bank





## Effect of increasing balance

With increasing balance, there is more disposable funds and hence greater propensity to invest in Mutual Fund







### Bancassurance approaches

- →Selling Insurance products to banking customers is called bancassurance
- →Possible approaches
  - »Slicing of Bank database: Segmentation
  - » Targeting Customer Lifestages
  - » Event Trigger Approach
  - » Response modeling from previous campaigns
- →Which one is correct?
  - » Depends on the bank, its target market and strategy
- →All or a combination of the above can be used

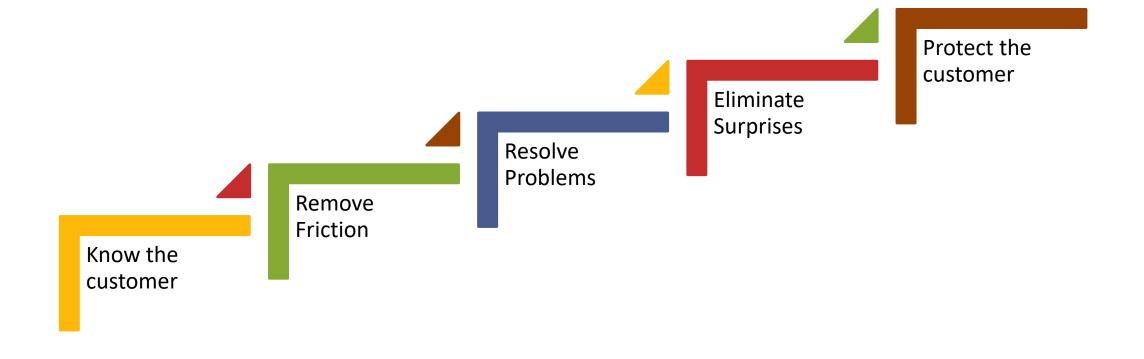
http://www.slideshare.net/ashish5jan/bancassurance-marketing

















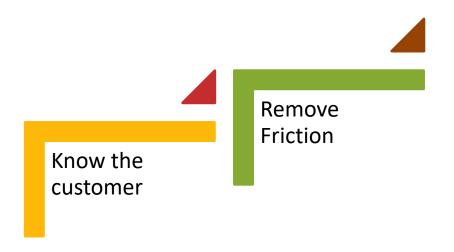
### **Know the Customer**

- → Not having to repeat info
- → Keeping information accurate
- → Knowing channel preferences
- → Keeping in touch with life events and customer episodes





Source: http://www.slideshare.net/TeleTechSocial/bankings-most-important-currency-customer-trust-39031848



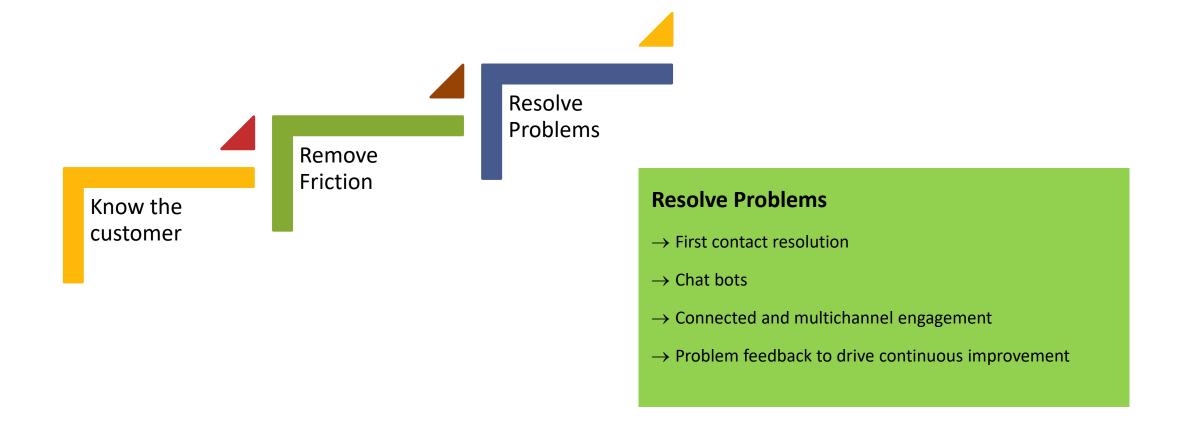
### **Remove Friction**

- → Connect the customer to the right answer the first time
- → Make contact and engagement easy
- → Seamless channel and product handoffs



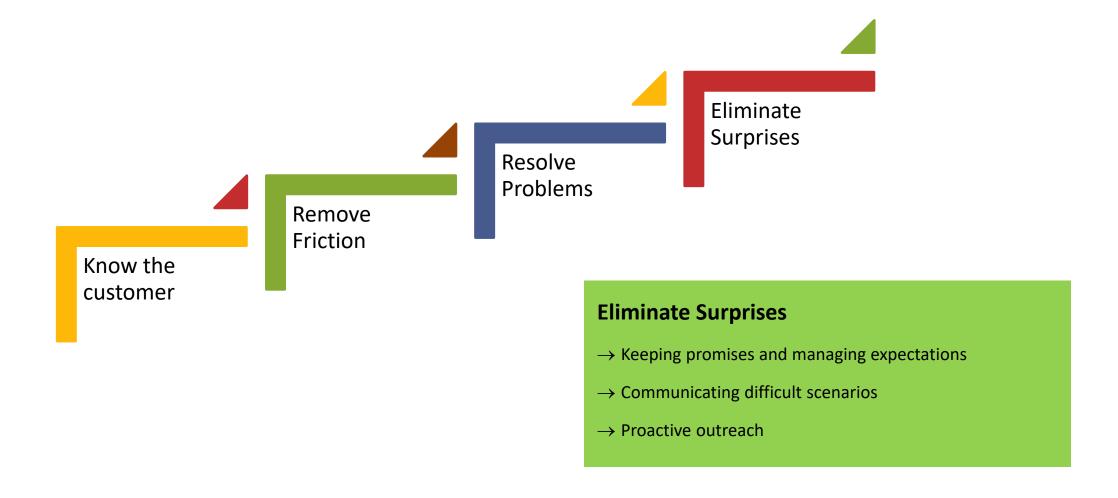


Source: http://www.slideshare.net/TeleTechSocial/bankings-most-important-currency-customer-trust-39031848





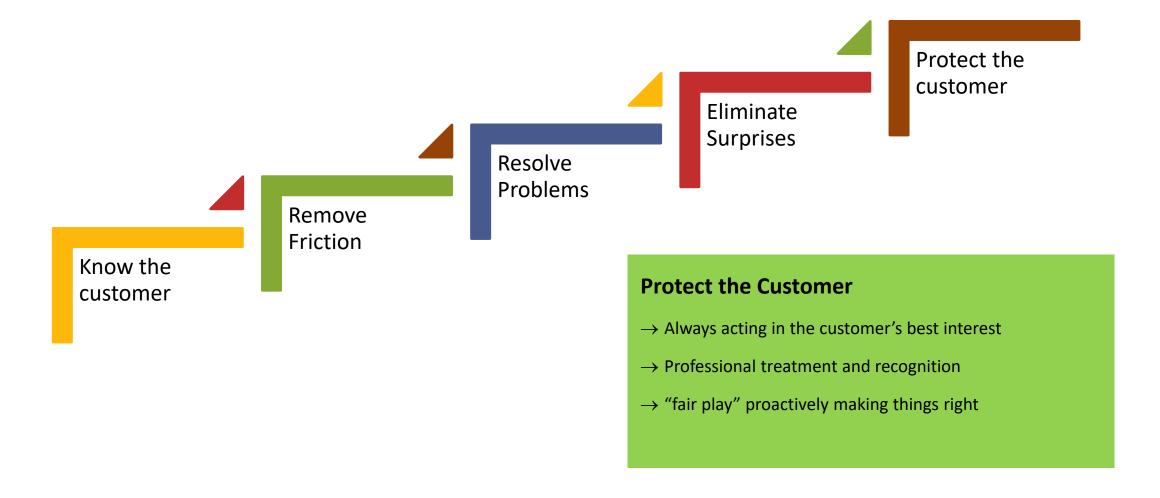






















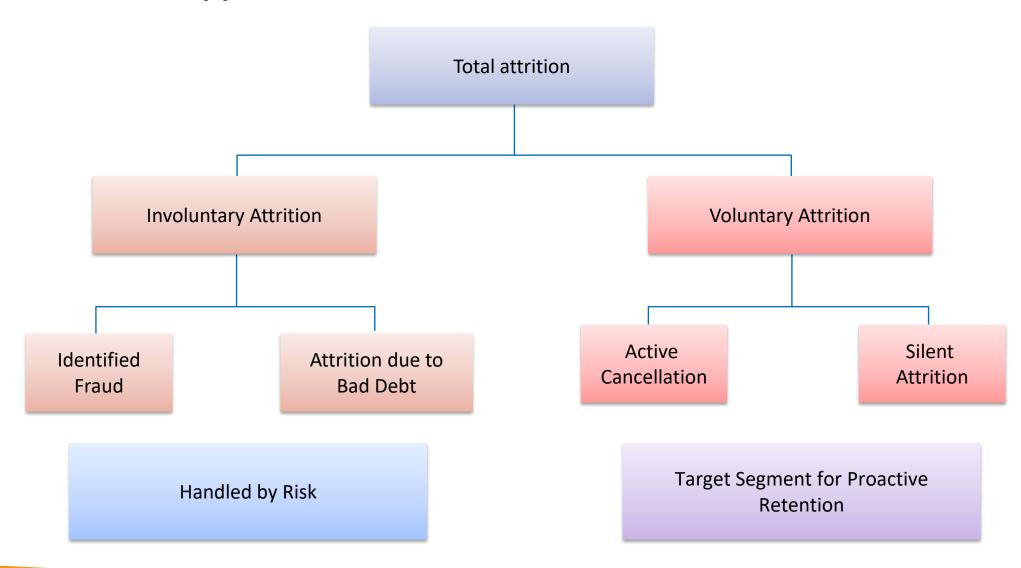
## Factors affecting Retention and Loyalty

- →Great Service
- →Good service recovery
- → Relevant Offers
- →Personalized Messaging
- →Good Reward Program
- →Good Customer experience





# Different Types of Attrition







## Strategies to arrest different types of Attrition

#### Reasons for attrition

#### Non-Structural Reasons

- $\rightarrow$  Competition
- → Service issues like
  - » Authorization declines
  - » Fees & Charges
  - » Non receipt of statement

#### Structural Reasons

- $\rightarrow$  No avenues for usage
- → Doesn't know how to use
- → Doesn't feel the need to use

- → Active customers more likely to attrite for non-structural reasons
- → Inactive customers more likely to attrite for structural reasons

### **Retention strategies**

### **Loyalty Strategies**

- $\rightarrow$  Fee waiver
- → Enhanced bonus points
- → Limit enhancement
- → Free add-on/schemes
- → Induce usage of sticky features

### **Activation strategies**

- → Customer education
- → Attractive schemes for inducing usage
- → Limited time enhanced bonus points

- → Active customers likely to be retained through loyalty strategies
- → Inactive customers likely to be retained by activation strategies





### Retention Program best practices

### → Proactive Strategies

- → Institutionalize retention segmentation
- → Proactively reach out to "at risk" profitable customers
- → Track silent attrition
- → Erect switching barriers (for example, sticky features, loyalty/rewards programs)
- → Proactively manage customer needs

#### → Reactive Tactics

- → Deploy trained retention specialists
- → Rigorously assess customer value at the point of defection
- → Create procedures to identify reasons for defection
- → Proactive Strategies work better than Reactive tactics



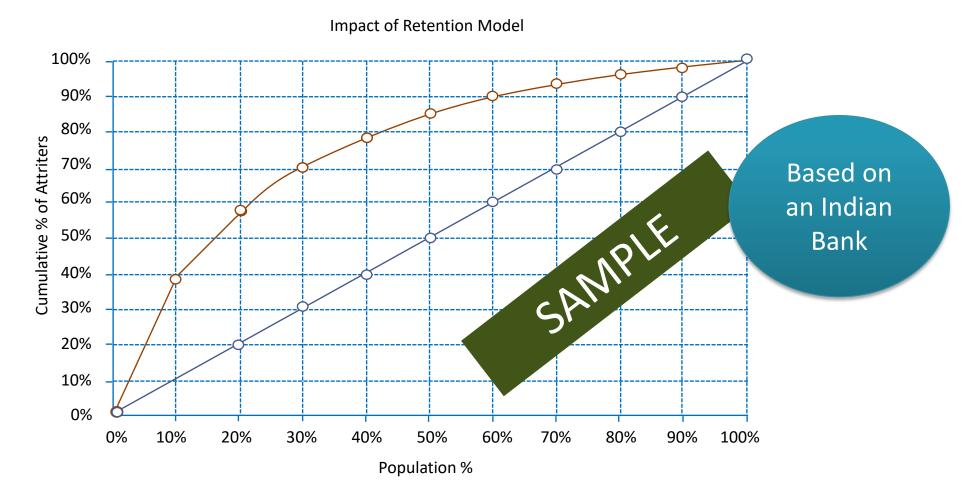


Category	Variable	Nature of Impact	Weightage
Mode of Operation	Joint v/s Non=Joint	Attrition rate is low when the account is operated jointly	Low
Transactional Involvement	User initiated Debit Transactions	More the number of user initiated debit transactions in Q2, lower is the attrition indicating greater involvement	Low
	Cheque credit transactions	More the number of cheque credit transactions, greater is the involvement and hence lower is the attrition	· ¬h
	Sum of Active months	More the number anths in which the custon lesser is the trition an Ind	
Monetary Involvement	Whether has AQB Charge	Those you ave AQB charge in the whole more your low chance of attrition	<
	Ratio of Last month Average Balance to Max Average Balance	ratio, greater is the attrition	High
Recency/Frequency	Months since last credit happened	ore distant the last credit from the end of the observation period, greater is the chance of attrition	Low
Account Usage for Investment	Whether has investment product	If the customer has a investment product, then attrition rate is much lower	High





As much as 75% of the attriters are captured by going after just 30% of the population

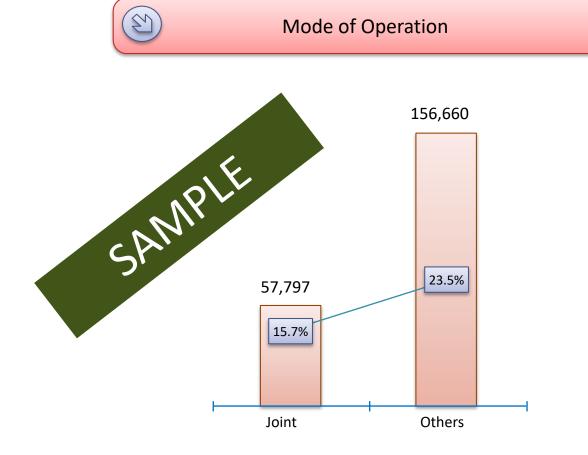


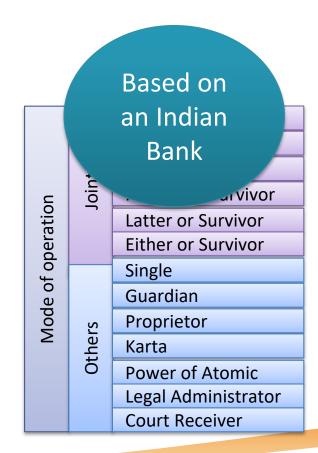




Accounts which are opened as joint accounts have much lower attrition as compared to other accounts

Legend		
	No. of Accounts	
/	% Attrited	



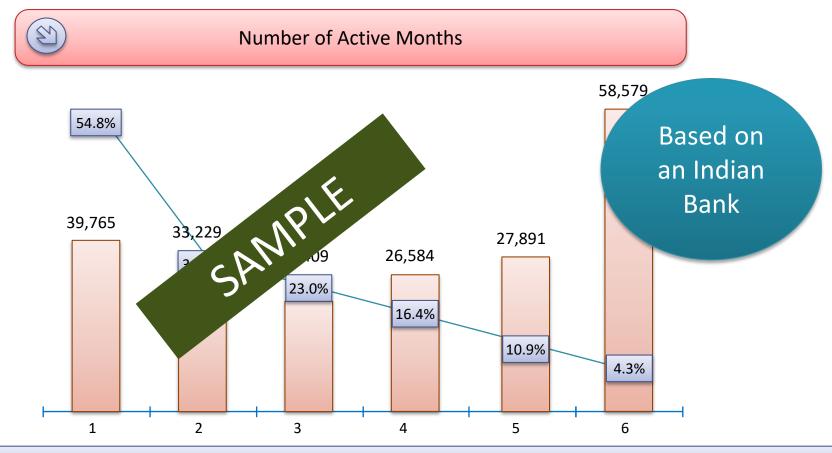






More the regularity of transactions, lesser is the attrition rate

Legend		
	No. of Accounts	
/	% Attrited	



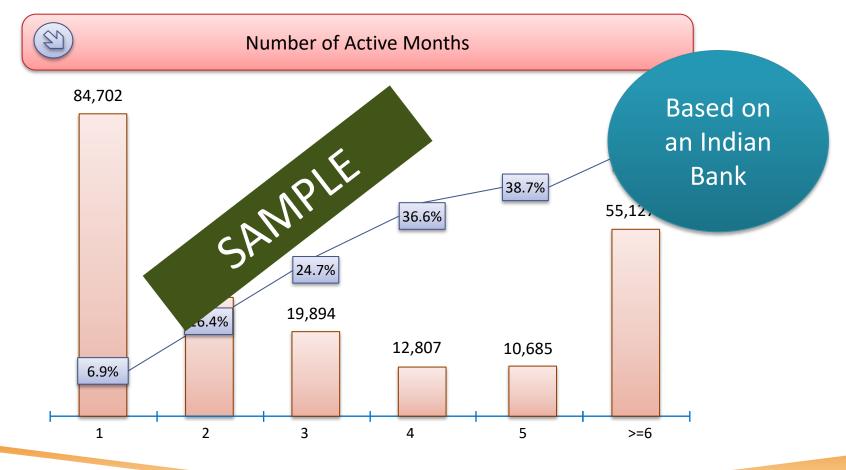
Number of Active Months is defined as number of months in which the customer has any user initiated transaction





Longer the interval between two credits, greater is the chances of attrition

Legend		
	No. of Accounts	
	% Attrited	







Page 67







## **Advocacy Analytics**

- →Member get Member
  - →Analytics could identify members who can become recruiters of new customers
- →Reviews are powerful, even with strangers
  - →Solutions like Sentiment analysis and Social Listening should focus on identifying good and bad reviews and interacting with them





### Social Media Return on Investment

```
Loyalty ROI: visit a site 9x more stay 5x as long (Source: McKinsey)

Brand ROI: 4x un-aided brand recall (Source: NFO)

Acquisition ROI: $0-10 vs. $10-$400 per customer acquisition
```

Support ROI: 5x-10x more cost effective than phone support

Meet Offline (Center for Digital Futures) One fifth (20.3%) meet at least once a year

http://www.slideshare.net/Silkcharm/social-media-and-mutuals-banks-credit-unions

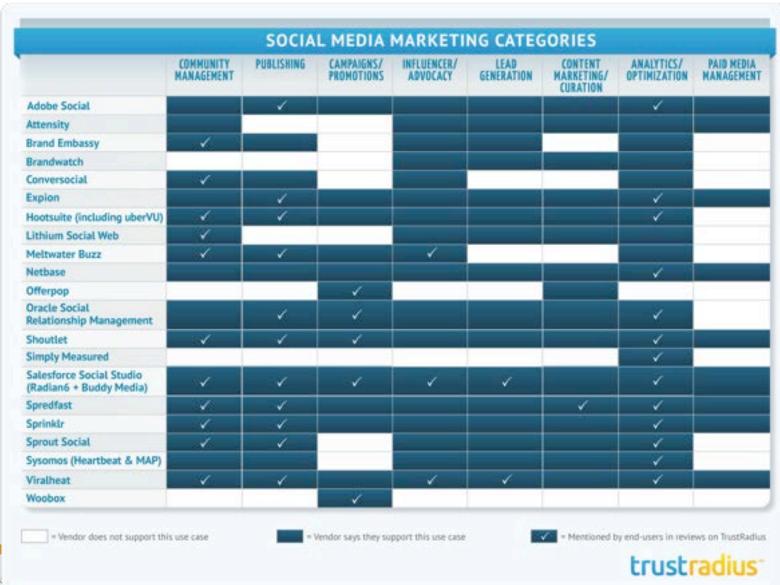








### The CMO is inundated with marketing automation tools





https://www.trustradius.com/social-media-management-

## CRM: CRM Lead management

Oracle Marketo Salesforce IBM bpm'online HubSpot Pegasystems Act-On SugarCRM CRMNEXT ABILITY TO EXECUTE Impartner @

As of August 2017

@ Gartner, Inc

Figure 1. Magic Quadrant for CRM Lead Management

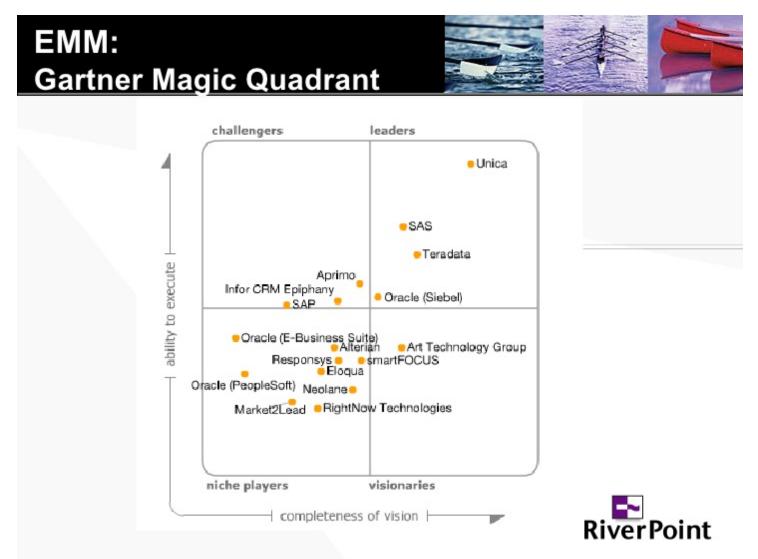
Source: Gartner (August 2017)

COMPLETENESS OF VISION





# CRM: Enterprise Marketing Management







## CRM: CRM Customer Engagement Center

Figure 1. Magic Quadrant for the CRM Customer Engagement Center

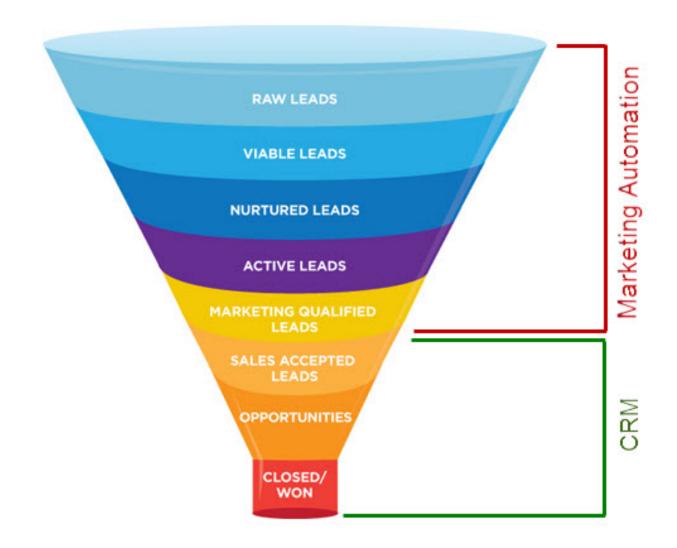


Source: Gartner (May 2017)





## Difference between CRM and Marketing Automation







### Salesforce.com

### $\label{thm:come} \mbox{Welcome to the Sales force Customer Success Platform.}$

We're the Innovative company behind the world's #1 CRM platform that employees can access entirely over the Internet – there's no Infrastructure to buy, set up, or manage – you Just log In and get to work. And now our new Lightning Platform gives you the fastest, most complete way to put your customers at the center of everything you do.



#### Sales Cloud

Sell smarter and faster with the world's #1 CRM solution.



LEARN MORE



#### **Wave Analytics**

Get analytics on any data, from any device.



LEARN MORE >



#### **Service Cloud**

Support every customer. Anytime.

Anywhere.



LEARN MORE >



### **App Cloud**

Bulld apps fast. Bulld business faster.



LEARN MORE >



#### **Marketing Cloud**

The future of marketing is 1-to-1 customer Journeys.



LEARN MORE >



#### **Community Cloud**

Relmagine customer, partner, and employee engagement.



LEARN MORE >



#### **IoT Cloud**

Rethink the Internet of Things.



LEARN MORE >

See all products





### Microsoft Sales Solution

### Start with smarter sales capabilities

Actionable insights Personal engagement Customer management Sales performance

### Customer management

Help your salespeople zero in on the right leads, contacts, and opportunities as they build out your pipeline. Dynamics 365 for Sales provides social insights, up-to-date company information, and an embedded sales process—so your reps know how and when to engage.







© 2018 NUS. All Rights Reserved

# Microsoft Marketing Solution



#### Create a 360-degree view of customers

Get a unified view of your customers across sales and marketing, providing a new understanding of their journey.

#### Deliver better customer experiences

Take a more proactive approach to sales and marketing. Anticipate customer needs, uncover insights, and personalize across all customer touchpoints.

#### Drive your business forward

Align sales and marketing activities to extract more customer value. Sell faster and more efficiently—while creating and measuring marketing ROI.

### Rely on a trusted partnership

Support your digital transformation strategy with the experience and innovation of Microsoft and Adobe—at global scale using an industry-leading cloud.



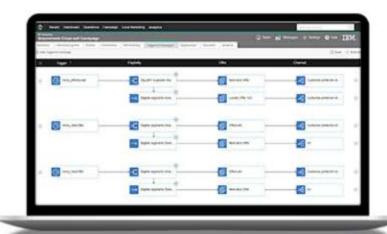


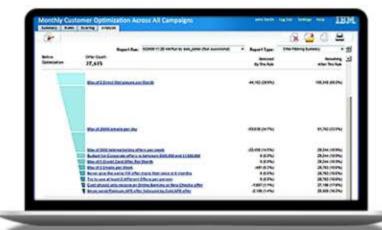
Page 79

### **IBM Unica**



### IBM Unica products





# IBM Campaign (formerly Unica Campaign)

Provide sophisticated campaign management to automate marketing programs across channels.

### IBM Interact (formerly Unica Interact)

Deliver the optimal personalized messages in real-time across marketing channels.

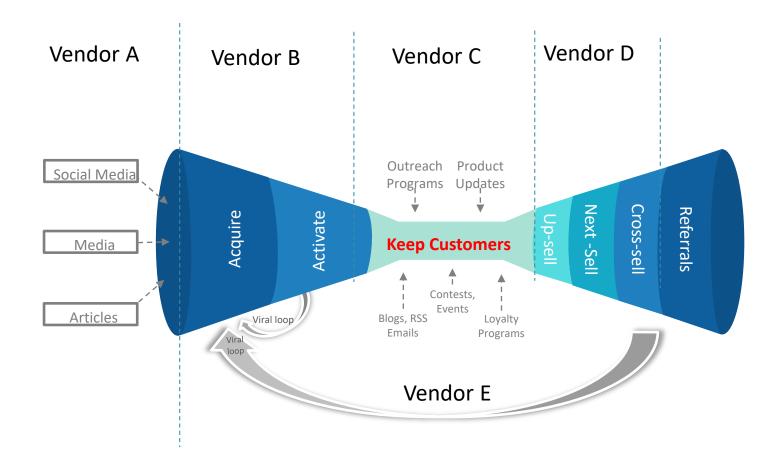
# IBM Contact Optimization (formerly Unica Optimize)

Determine the optimal contact strategy for individual customers.





# CRM Data Challenges arise in MultiVendor Environments













# **Channel Purposes**

- $\rightarrow$ Run campaigns
- →Collect feedback
- →Regular transaction enablement
- →Customer interaction with product
- →Collect data
- →Customer education
- →Customer reporting
- $\rightarrow$ Troubleshooting





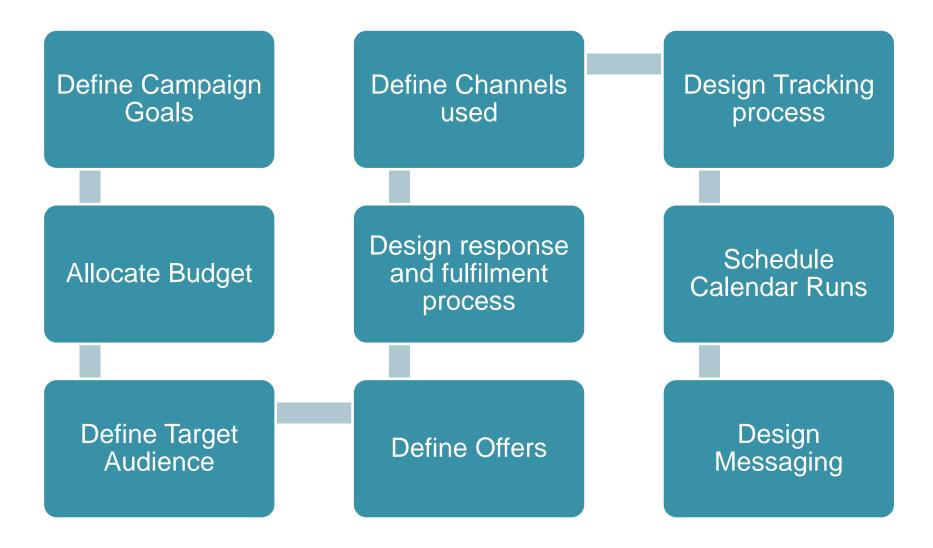
# Types of Channels

- → Mass Marketing Channels
  - » Limited personalization at a segment level
- $\rightarrow$ 1 on 1 Channels (Personalization at an individual level possible)
  - » Outgoing Channels
  - » Incoming Channels
  - » Digital Interactive Channels





# Campaign design







## Partners needed for marketing success

- →Advertising Agency for creatives
- →Campaign execution agencies
- →Merchants for schemes
- →Media agencies for offline and online campaigns
- →Developers for digital property development
- →X Sell partners for providing X Sell products
- →Analytics consulting companies







# What is a Customer Journey

### What is a Customer Journey, and how is it different?

### A Journey is ...

 an event that marks the defining experience of key lifecycles of a customer

... defined around a discrete beginning and end across time

. . . typically multi-touch, multichannel and therefore crossfunctional in nature

... anchored in how customers think about it, not the way functional silos do

Journeys represent an evolution in thinking over traditional touchpoint (or 'moment') approaches Journeys are increasingly the way customers interact with companies

of all customer interactions happen during a multi-event, multi-channel journey

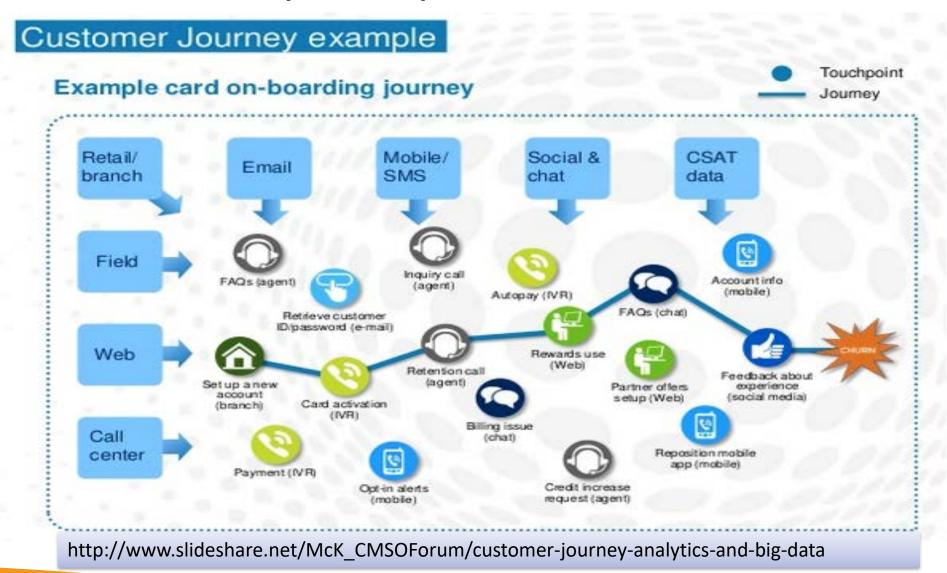
of all customer journeys involve more than one channel of interaction

http://www.slideshare.net/McK\_CMSOForum/customer-journey-analytics-and-big-data





## Customer Journey Example

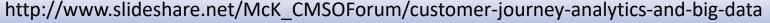






## Impact of Managing the Customer Journey

### and drive substantial impact along all key business levers **Business lever** Impact Call/visit reduction Service operations 10% to 20% of customer service cost 15-20% trapped between channels Cross selling Churn decrease Retention, cross/up-selling 10-20% Journeys account for 5% to 20% 10-25bps of churn / sale CSAT lift Cost Customer experience (CE) avoidance. Journeys are 30% to 40% more 5-10 ppts predictive of CE than touch 5-15% points







# In every Industry only a few Journeys matter

Acquisition

Onboarding

Usage

Value Management

Service

Loyalty

Advocacy





## Case Study

### Example: Customer journey analytics identify cost and CX improvement opportunities for U.S. retail bank

- Context . Large global bank; ~780MM multichannel customer interactions/year
  - Looking for ways to decrease service costs while improving NPS

Big data/ customer journey approach



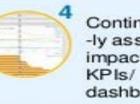
Map key journeys and quality check



Identify pain-points and root causes



Assess value stake, develo p and prioritize initiatives



Continuous -ly assess impact with dashboard

### Example insights

- ~2MM customers abandon web registration, 23% of those call agent
- ~870MM calls/year after successful web payment
- ~510MM calls/year after abandoned web payment
- ~20% of callers setting up new account payment unsuccessful at secondary verification (CVV, SSN)
- 45% of users initiating a chat call to speak with an agent



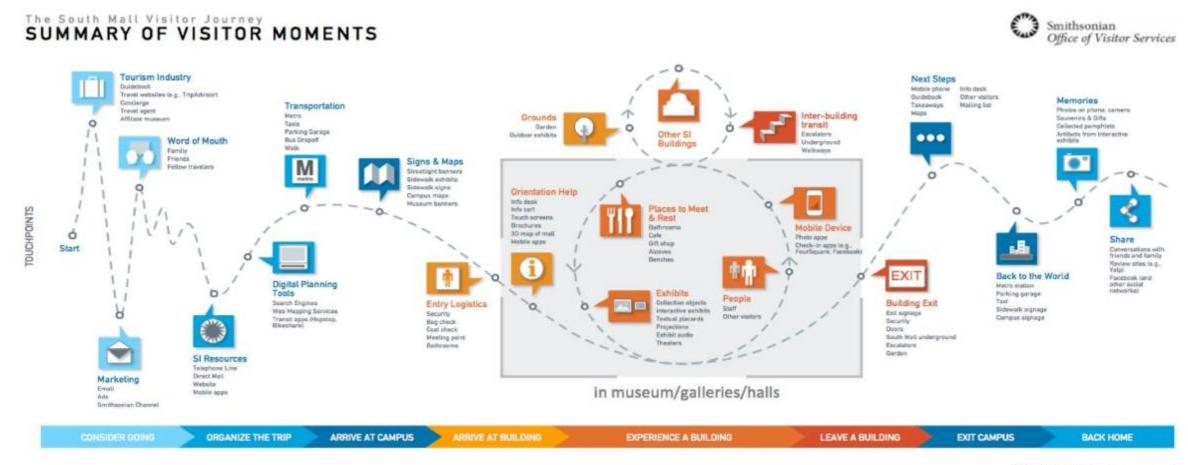
http://www.slideshare.net/McK CMSOForum/customer-journey-analytics-and-big-data





Page 92

# Touchpoints analysis discovers new channels



©All Rights Reserved.

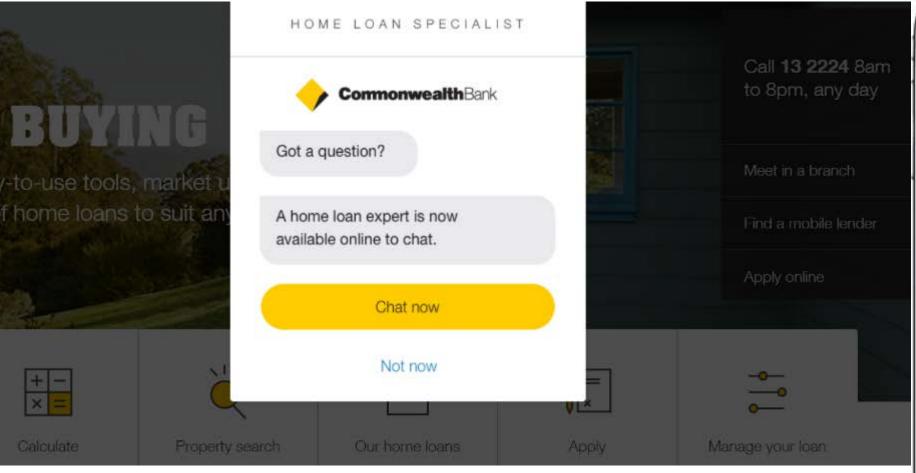
https://www.toptal.com/designers/product-design/customer-journey-maps







### Capturing upstream Touchpoints: Commonwealth Bank

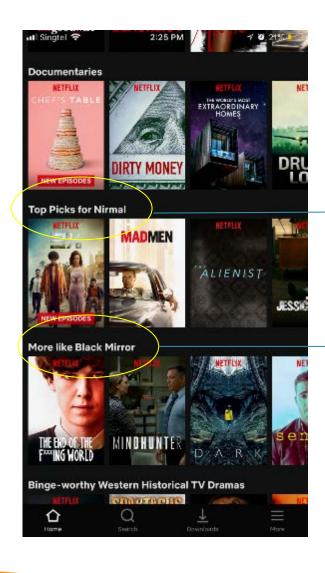








## Netflix data collection



Personalised Recommendation

Touchpoint using recent interaction







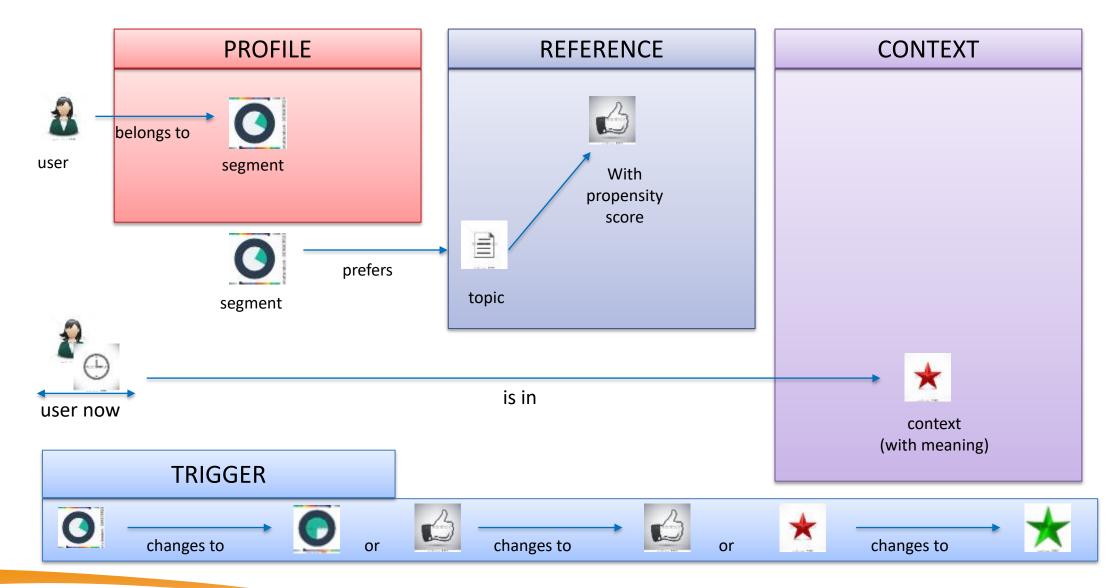
### Introduction to Context Awareness

- →With mobiles becoming ubiquitous, real time interactions have become very important
- →Banks now need to take into account how to target context that a customer is in to time the interactions and the content to a nicety
- →Context is an extremely difficult concept to model and needs a proper framework
- →We propose our framework for understanding context awareness





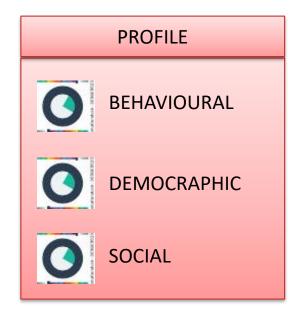
### Context Awareness Framework

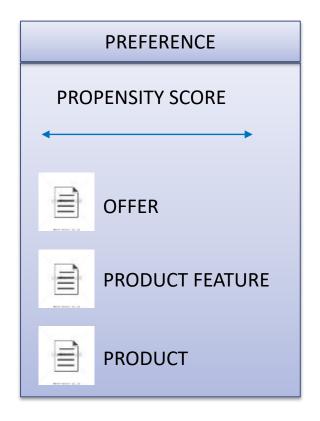




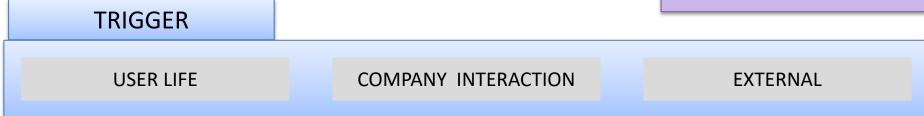


## Context Awareness Framework (Contd.)













# **Examples of Context Concepts**

Profile	Preference	Context	Trigger
Demographic  Male Married	Offer     Dislikes dining offers     Prefers Japanese food	Location • At a mall • At home	User Life • Got married • Came home
Behavioral	Product Feature  • Married Users prefer joint accounts	Time • Lunch time • Newly Married • Is Christmas week	Bank Interaction Initiated funds transfer Saw Offer
<ul><li>Social</li><li>Many Friends</li><li>Active Conversations</li></ul>	Product  • Dissatisfied users don't like to be sold another product	Activity • Driving • Busy	<ul><li>External</li><li>Network goes down</li><li>External Identity server down</li></ul>
		Environment • Raining • Crowded	
		Transactional  Redeeming Rewards  Amidst a funds transfer	











# Real time end customer prescriptive analytics

Ideal **Prescriptive State Analytics** consumers are Customers **Proactive Analytics** consumers are Reactive **Bank Staff** Starting State Non Real time **Real time** 





# Analytics for the End Customer

- →Analtytics has now moved beyond bank staff as consumers to end customers as consumers
- →Some of the analytics that is being consumed by end customers include
  - » Recommendations around Quantified Self
  - » Personalised PFM
  - » Personalised Concierge applications
- →The capabilities that enable end customer analytics include
  - » Gamification
  - » Personalisation and
  - » Real time delivery





## Personal financial management: Analytics Approach

### **Goal Recommendations**

 Recommend appropriate aspirational goals of people from wishlists

### **Financial Trajectory**

 Model customer's spend behavior, Income pattern and monthly balances

### **Appropriate Interventions**

Intervene appropriately and use game mechanics to

- Track progress
- Motivate
- Course correct





## Month end balance prediction

### **Data Preparation**

- Use Automated Categorization to categorize transactions
- Identify the patterns of income and expense
- Identify fixed and variable expenses
- Isolate non-fixed categories for both income and expense
- Create a time-series for all nonfixed categories for income and expense

### Modeling

- Predict possible monthly variable income/expenditure through simulations and identify the probability for each outcome
- Calculate the weighted average variable monthly income/expenditure over different probabilities
- Identify the best probable variable income and expense for each month

### **Scoring**

- Add the predicted income to fixed income to calculate the overall income for each month
- Add the predicted expense to fixed expense to calculate the overall expense for each month
- Balance is calculated by subtracting the expenditure from the income



## Personalization and timing of interventions

### Set up

- Use Month end balance prediction on customer data to arrive at balances and predicted expenses
- Add carry forward balance
- Identify the maximum expense limit using both variable (predicted) and fixed expenses
- Identify the goals (saving goals and expense goals)
- Create positive and negative messaging personalizable templates (Create variations)

### Rules

- Create in month goal breach triggers with fixed thresholds
- Create across months goal breach triggers with fixed thresholds
- Create in month goal achievement triggers with fixed periodicity
- Create month end goal achievement triggers

### **Execute and Improve**

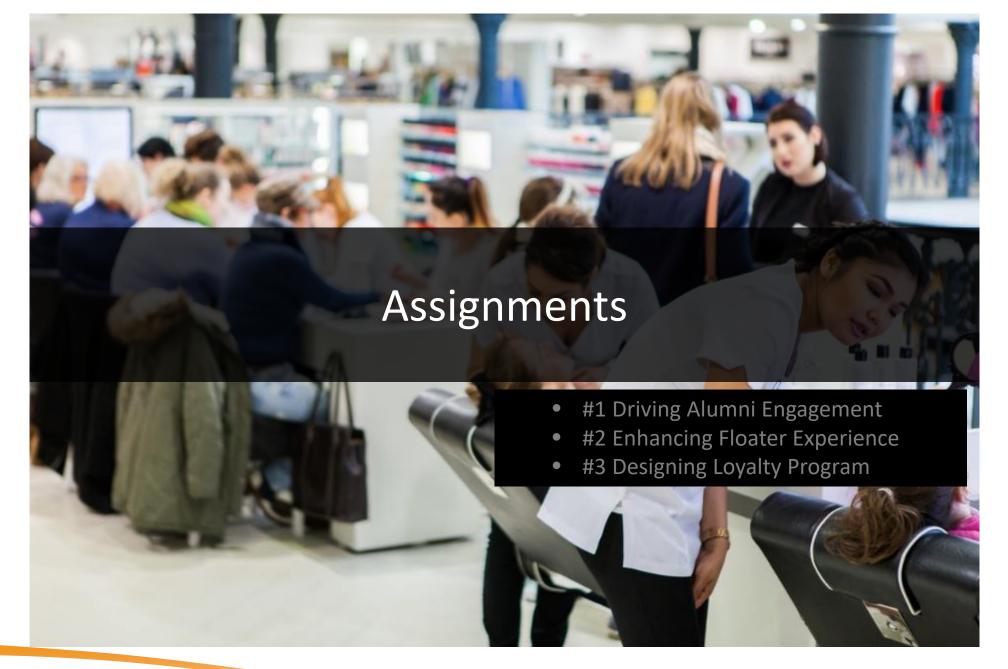
- When triggered, populate messaging template with personalized data
- Send the personalized message to the customer
- Test and Learn over time on
  - message variations
  - threshold variations
  - periodicity variations
- Goal achievement rate across customers would be the metric for these tests



# Third Party Marketing

Advantages	Disadvantages	
Easy to scale up when you don't have your own infrastructure	Privacy concerns about data collection	
Overcomes the cold start problem	Service quality issues	
Staffing is not a challenge	Low visibility into entire process	
	You need to ensure domain expertise	







## #1 Driving Alumni Engagement

- IIMA is considered one of the best Management institutes in the world
- The Alumni in Singapore is over 400 strong and are leading professionals across various sectors
- The Alumni association in Singapore has an executive committee that is elected every year and is in-charge of Alumni activities
- Attached please find the report of activities for the year 2017
- A subscription fee of 100 SGD is charged for membership every year
- The association has the following challenges
  - People keep switching jobs and cities, hence the contact details keep changing very often
  - The participation rate in alumni activities is extremely low
  - The Alumni belong to various batches all the way till 1975 graduates and hence have differing interests
  - The members list is a maximum of 138 paid up people in 2017
- Objective of assignment
  - Come up with a CRM strategy to improve Alumni Engagement over a period of 3 years
  - Outline the infrastructure required to support the strategy
  - What is the budget you would require to be able to carry out your strategy effectively? (You have no other sources of funding other than subscription fee)





2018 NUS. All Rights Reserved

## #2 Enhancing Floater experience

- Palm Avenue Float club is a float club in Singapore
- Floating is done in sensory deprivation tanks and are known to be relaxing and beneficial to health
- The website http://palmavefloatclub.com/ has the details of the club
- The club has a loyal and strong clientele and people who float swear by it (if done right)
- The club has the following challenges
  - Low awareness of the float club
  - Apprehensiveness around floating sessions
  - Limited loyalty options
- Objective of assignment
  - Come up with a CRM strategy for the club
  - Outline the infrastructure required to support the strategy
  - What is the budget you would require to be able to carry out your strategy effectively? (You have no other sources of funding other than float fee)





2018 NUS. All Rights Reserved

### #3 Designing a Loyalty Program

- An online fashion retailer wants to create a loyalty program for their customers
- They want to offer the customers future discounts for showing loyalty by purchasing regularly
- The retailer has the following challenges
  - Fashions keep changing all the time
  - People have different aesthetic tastes in fashion
  - The number of SKUs is very large
- Objective of assignment
  - Come up with a CRM strategy for the retailer
  - Outline the infrastructure required to support the strategy
  - What is the budget you would require to be able to carry out your strategy effectively?





2018 NUS, All Rights Reserved