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Customer Modeling & Segmentation: A Practical Approach for Telecom

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Abstract:
Globally, the Telecommunication sector has grown up leaps and bounds, which has effect on several other business verticals as well, due to change in technology in the recent years like introduction of 5G technology, edge computing, cloud technology, IOT, Automation & AI etc. Earlier telecom sector was mostly for p-2-p communication like voice and text but these new technologies contributing havoc data disruption and inorganic growth of data every day. According to Forbes, in the end of 2019, we can expect 44 zettabytes data generated everyday which makes the analytics much more difficult to generate insight and take the further actions. When we talk about telecom services, we mostly talk about the data services to meet the daily need like banking transaction, insurance payment, reading newspaper, virtual classes, watching movies & other television programs, mobile money, virtual credit card etc. In today's date, measuring customer experience in the light of new technologies, attribute of networks, device experience, personalized and contextual product & service offerings would be the key to sustenance.

As competition is all time high, understanding the market need is the key to any service business, as well asthe market segmentation and customer modeling. The purpose of this study is to understand how the different parameters are influencing the customer structure and segmentation, internal and/or external dependencies on customer segmentation, why modelling is so imprtant while preparing the segementation, what analytics can be applied etc. Many modelling techniques like predictive or classical, available in the market e.g.; RFM (Recency Frequency Monetary Method), CRISP (Customer Response-based Iterative Segmentation Procedures) etc. and also the statistical technique like K-means clustering. In this study, a practical approach for telecom sector is shown and also the detailing of the parameters which are the influencing factor.

Keywords: *At least 5-6 keywords separated by comma.*

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I. Why the most customer relationship program relationship program ends up in failure:

Customer always have the urge to be associated with the popular brands which can give them satisfaction, that they are provided products/services up to the market and has some functional guarantee. Organizations use different tools to analyze customer data and try to create some sort of model to get the insight and can personalize & manage those relationship. But as the power brings more responsibilities, customers are now expecting the organization to come up with more personalized offer – they want the organizations to hold up their side of the bargain.

Firms spend huge amount behind the CRM (customer relationship management) software annually but lack the intelligence behind the relationship – means really unaware of the variety of the relationships that customers want to have. Collecting some demographic data like age, gender, household income, education etc., and matching them with purchasing behavior to create customer segment into profitability tiers, is a flawed method as this make the firms think of consumers, as mere resources to be garnered for the next cross/up-sell opportunity rather than certain kind of connections with the individuals.

As a result, most of the time services organizations maintain the relationships very haphazardly, which leads to unprofitability. They make blunders in maintaining the connections. When consumers expecting to be treated like a valued one, often done so as a mere party in a transaction or even worse, more like an adversary. Sometimes it can be opposite as well. The consumer is looking for a simple exchange, may observe an off-putting effort at building a friendship. Research shows customers are frequently frustrated by the inability of the firms to keep their relationship expectations. Some of the examples are:

In India, cold calling creates a real nuisance. Even a person has 2 credit cards from the same bank gets call to have another one. The person calling neither have done the homework nor have the idea of the customer's worth to the bank, makes the call just to meet the numbers. Sometimes banks handle this kind of activities in automated way and put the customer's mobile number under automated calling so customer start getting the calls twice in a day through IVR. This not only annoys the customer, but they started detesting the organizations for their reckless behavior.

A consumer of a grocery delivery start-up is actually happy to have the service that can keep him from one of his least preferredroutines: visiting the supermarketin a regular period. This he feels is a win-win situation as he wants this business to survive, so he proactively sends suggestion to fix the operational glitches and make the service better. But he gets no response—just some of those promotional e-mails mentioning him as a valued customer and encouraging place orders morefrequently**.** Discouraged, the customer stops sending his feedbacks, believing that the company isn't interested in developing a long-termrelationship.

II. Idea in Brief: Sometime dilemma can help to find the solution

On one hand we talk about creating a brand like I-Phone which can itself draw the customer with each of its' new release, on other hand we talk about segmentation so that personalized offer can be made. While the first one is talking about targeting and positioning, the second one talks about giving the control to customers. The question is which one is the right methodology that carves out the market, because not everything can be provided to everybody. Lego & Starbucks are the examples, where customers get more access, getting into discussion with the joints, sharing risks, advocating

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transparency etc. (*Source: Prahalad and Ramaswamy's book: The Future of Competition).

To reach to the resolution, we must first look upon the "Jobs to be done or job at hand", whichsolves the problem or make the living better. In most of the research, the procedure is defined how a segmentation can be done, but very little described, why this is required with the given customer scenario. Customer modeling or structure can answer the question why the segmentation is required to perform the job at hand in telecom scenario. Customer model can validate customer segment attributes, map legacy to new criteria, able to define the business rule according to new customer and segmentation model across all domains.

Customer segmentation should include the following six characteristics:
i. Identifiable: Consumers are identifiable in each segment and characteristics can be measured.
ii. Substantial: Any cost incurred should be targeted to that segment which is profitable.
iii. Accessible: Firms should have the capability to reach out to the segments through communication or distribution channels.
iv. Stable: Creation of a segment incur sizable cost & time. Segments created should be stable enough to cater certain lifestyle changes and be there for a longer period.
v. Differentiable: In B2C (or B2B) each segment should have differentiated needs.
vi. Actionable:Each of the segments should design in such a way that service provider would be able to provide product(s) / service(s) to the segments.

III. How the customer segmentation and modeling can be done in telecom: A sample approach

To model the customer, we first need to understand different types of roles:

Name	Description
Customer	Person or organization that buys products and services from the operator. It is modeled as an "active" Customer.
Plan Administrator	Person or organization that manages accounts on behalf of a Customer.
Personal Guarantor	Person or organization that gives guarantees against delinquency of another Customer's Billing Account.
Bill Recipient	Person or organization that receives bills on behalf of a Customer.
Bill Payer	Person or organization that pays bills on behalf of a Customer.
Payer	Person or organization that is the titular (holds the title) of a payment arrangement.
Authorized user	Person or organization that is authorized to use and make changes on someone else's Contract (Line of Service).
Small Business	Small Business (SB) organization that is associated to an individual account.
Employee	Person that is employee of operator or subsidiary of the operator.
Subscriber	Person or organization that only uses someone else's Contract (Line of Service).

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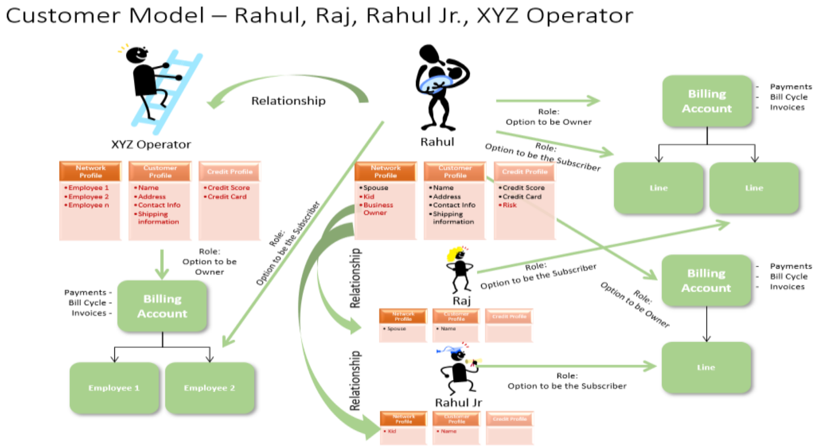
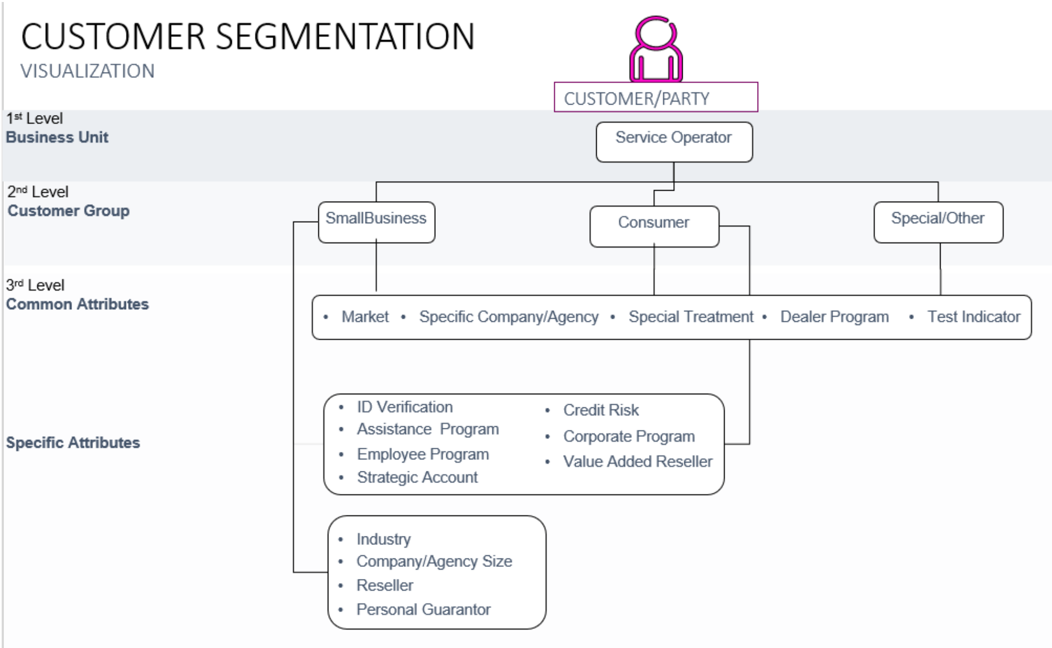
A sample of customer model:

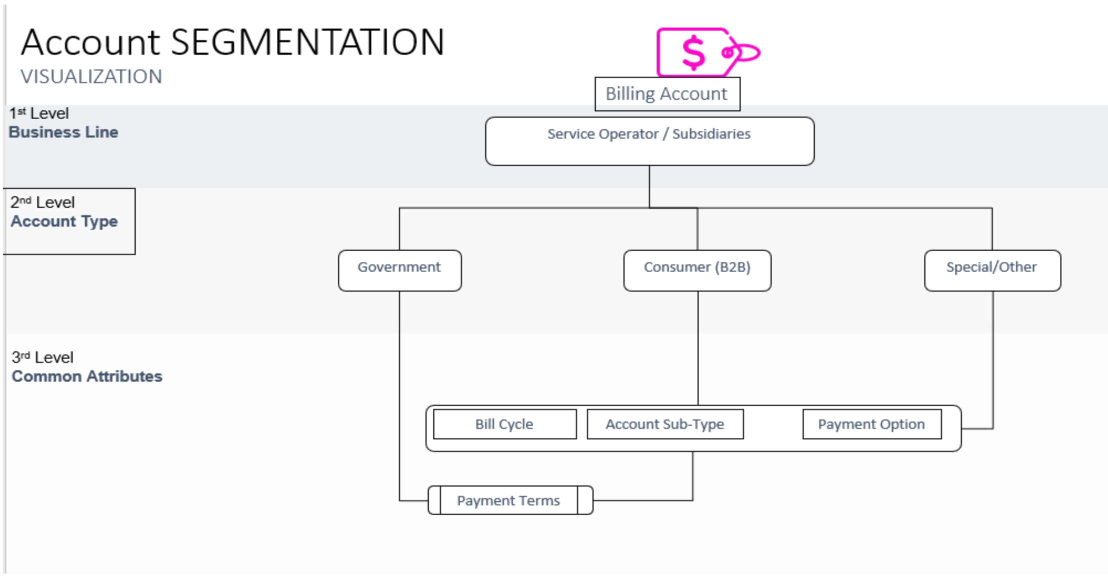


Also, while customer modeling, customer lifecycle should be maintained to know about the customer status. Following are customer status maintained as a part of the lifecycle:

Customer Status	**Status Reason**	**Description**
Interested	Prospect	→ Someone who has a profile on the system but does not consume services.
	Applicant	→ A Prospect who submitted credit information. The prospect is changed to an applicant customer when he/she submits credit information. A successful credit check can put the prospect in active status.
Active	Active	→ A real customer, i.e. someone who consumes services and or pays the bill. The interested customer is changed to an active customer, the billing account is created, and the bill cycle of the day is assigned to billing account.
Suspended	Deactivated	→ A customer who is not doing business with the operator anymore. The customer account is deactivated, all the contracts under the customer are in de-active state.

In India mostly operators are having a very retail customer base which is more than 80 million also the no# of B2B scenarios are huge. So, in a large-scale scenario like this can be handled by considering many parameters. Also, customer segmentation is done for B2C customer and for B2B it is account segmentation.





Finally following are the attribute rules through which segmentations are aligned:

Attribute Name	How is it used?
Business Unit	To identify the customer and account brand.
Customer Group	For everything - highest level attribute. This will drive the available values across all other Segmentation Attributes.

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Corporate Program	This will be utilized to build offers eligibility and specialized discount programs. In addition, this can be utilized for Care call routing.
Government	This will be utilized to build offers eligibility and specialized discount programs.
Special Treatment	Internal Use Company Use (Default) - This will be utilized for specialized offers and tracking for company use phones utilized by internal departments and paid for through expenses. VIP - Utilized for high profile accounts and celebrities. VIP ECR - Utilized for escalated customers who are currently being handled by the Executive Customer Relations (ECR) team. Internal Use Demo - Demo lines that are utilized for Retail Merchandizing,potentially with service blocking features to prevent fraud. Internal Use Test Phones - Engineering testing accounts utilized for network and provisioning testing or new service testing. External Use Giveaway - Marketing accounts utilized for strategic phone placement. External Use Event - Marketing accounts utilized for larger scale event giveaways (Cine Awards etc.).
Negotiated Payment Terms	This will be utilized to build offers' eligibility and specialized discount programs.
Strategic Account	This will be utilized to build offers' eligibility and specialized discount programs.
Test Indicator	To identify Test Accounts.
ID Verification	This will be utilized to build offers' eligibility
Size of Company	This will be utilized to build offers' eligibility and specialized discount programs. In addition, this can be utilized for Care call routing.
Industry Type	This will be utilized to build offers' eligibility and specialized discount programs.
Assistance Program	This will be utilized to build offers' eligibility and specialized discount programs. This will also drive validation requirements on the billing/mailing address.
Employee / Dealer Program	This is utilized to enroll Accounts within the Employee or Dealer discount programs
Reseller	This will be utilized to build offers' eligibility and specialized discount programs.

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IV. Summary

1. For a large operator it is not only the demographic data, but many other things are required to conclude on customer segmentation with a proper customer model.
2. Customer lifecycle needs to be maintained to have a proper customer model.
3. For the both customer model & customer segmentation, attributes are very important to understand the nitty gritty.
4. Segmentations are different for B2C & B2B.

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