

Contact and Marketing Management System based on Big-data and Campaign Analysis

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Abstract— Marketing Management System, not a new term. It's been on the internet for a very long time and is practised in almost every organization. Each organization has its own marketing management application and practices, which are solely automated. Organizations today, invest a lot in new marketing strategies to increase their sales. But, are they gaining that amount of customers? We all know the answer to this question. Straight NO. What if they are targeting the wrong Customer base? Marketing isn't just about marketing to everyone on the go. That would be a waste of lot of resources and time. Our Proposed System combined with Big-data analytics will provide real time quality insights from Customer behaviour to his likes and interests. A tracker embedded in websites and mobile app will capture customer behaviour in real time. Now this data from all the sources such as social network, web browsing history. Etc. will be fed to a Big-data Analytic tool which will provide us with his likes and interests at a particular time and this will trigger the marketing management system to launch client specific campaigns according to their interests. This will in turn yield more positive response and increase the Sales of an Organisation minimizing the wastage of resources and time.

Index Terms: Big Data Analysis, Contact Management, Marketing Management, Campaign Analysis.

I. INTRODUCTION

The world is changing, and this impacts how organisations need to engage. Before involving you, customers are 57 percent through the buying cycle. When the customer does reach out, marketers are now at every step. Contact and Marketing management system is a marketing solution that enables your team to plan, execute, and measure campaigns across channels, from start to finish, bringing your marketing vision to life. Customers can be engaged one to one across channels, building the sales pipeline, and demonstrating the impact of the marketing investments in real time. Contact and Marketing Management System are information systems that help to efficiently maintain the contacts of an organization as well as automate various marketing activities needed by the organization to increase its outreach to new and existing customers. This system is often combined with Sales and Customer Service systems. This can be used to benefit selected customers by tailoring product/service offers to them specifically or in micro-segment. This can be used to reduce the cost to acquire customers, cost of selling, cost of serving, time of serving. Marketing management system combined with big-data analytics will give better customer

insights and help the organisation to select appropriate targets for marketing.

II. BIG-DATA ANALYSIS

Having big data doesn't automatically lead to better marketing – but it has the potential. Think of big data as your raw material, your necessary element. It's not the data that's so important. Rather, it's the insights that will be derived from the data, the decisions you make and the actions you take makes all the difference. Using Big-data, the analysis of all customer data, including social media, email, internet and call centre, allow marketing management and big data to segment customers according to their actions. Customer trends can be mined from big data and used to predict the requirements, which will fuel product development and promotional efforts. Big data enables provision of businesses with sales, marketing and performance metrics of customer service. With big data, organizations can predict and determine ROI and use it to endorse additional investment. Once the value or lack thereof in customer-facing operations is made clear, businesses can make appropriate corrections and better decisions moving forward. Using big data, businesses will be able to predict how customers are going to respond in the future, based on various demographics and behavioural

history. A powerful component of big data is the ability to define vital indicators such as customer sentiment, retention and cost vs. revenue per service call. Once the areas that need improvement are recognized, companies have the tools which will help them to rise above industry standards.

III. CAMPAIGN ANALYSIS

Just simply sending mass emails to all the targets on weekly or monthly basis without knowing their response will not shed light on exactly how much the organisation is benefited by such campaigns. This exhaustive technique will yield minimum response. The organisation should put in their extra effort only where it should. This is an effective technique and is the need of hour.

Tracking the response of your targets, keeping an eye on who actually is interested in your products will result in better planning of campaigns. The customers can be targeted on the basis of their interests. Also the organisation will come to know through the ROI that which type of campaigns yield more ROI and can modify their further campaigns accordingly. Campaign analysis will help an organisation to plan, modify, and execute the campaigns which will benefit the organisation effectively with the help of various past data and campaign insights.

IV. NEED FOR SYSTEM

Globalization has led firms to go beyond the borders of their home countries, making international marketing highly significant and an integral part of a company's marketing strategy. Marketing managers are often responsible for influencing the level, timing, and composition of customer demand. In part, this is because the role of a marketing strategies in increasing the sales of organisation.

The marketing campaigns launched today are generalised one. They are not intended for particular customer base. This causes the campaigns to be unnoticed and just a waste in case where customer is not interested in what was marketed to him. Also this would affect the overall view of an organisation in the mind-set of a customer. Take an example of Tele-marketing calls and people ignoring them. If people are targeted at random they would also start ignoring further campaigns. This would affect the organisation and all its marketing efforts would go in vain. On the counter part imagine a situation where person browsing some stuff on internet and likes or comments on some kind of stuff that he likes and the other day there is a mail which displays similar kind of products.

The interest of that person in that product will automatically go up and also the organisation will make a positive mark on that person, making him their customer. Hence there is a need of customer specific marketing based on his likes and interests.

V. PROBLEMS IN EXISTING SYSTEMS

There are various systems available for marketing management, for example MSD Dynamics CRM, Sugar CRM, Vtiger, Zoho CRM, Sales force CRM. Etc. Let us discuss each one of them one by one. We will start from Salesforce.com.

The very first drawback of Salesforce.com is that it does not have a very highly customizable campaign management module as industries require. It is focused mainly on managing and maintaining sales records where as they expect the SMBs to buy a marketing automation software to be used for marketing related activities, this is where our system will come into picture.

The existing system does not include the Campaign Analysis module. So the extent of a successful campaign of the organization cannot be analyzed.

MS Dynamics CRM is a proprietary software and is very costly, thus making it unfavourable for SMB's to buy it. SugarCRM and Vtiger are open source softwares, which makes it easier for the developers in various organisations to customize the product as per their needs and also distribute developed versions of the software. But they come with certain limitations too. Such as lack of smsnotifier, no support for free versions, workflows not that robust, and the most important- lack the analysis of campaign part which gives an insight to to organization which types of campaigns are gaining more customers and which products are most liked and used by customers. Vtiger also lacks user management part where we restrict users to their particular domain by assigning security groups. Whereas Speaking of SugarCRM, it lacks many features which the developer expects that the users will incorporate in it from the modules available on developer's site. Newbies to CRM cannot perform this task on their own.

And here comes the biggest one, None of the system till date has used big-data analysis while marketing which means the campaign launched are not customer specific and cannot yield better results.

VI. PROPOSED SYSTEM

We have proposed a marketing management system interfaced with Big-data analysis that helps in managing the company's marketing and contact management. Big data analysis will help organizations to collect more accurate and detailed performance

information on everything from product inventories to customer sentiment, and With the help of this campaign analysis an enterprise can enable its marketing departments to identify and target their best customers, manage marketing campaigns with clear goals and objectives, and generate quality leads for the sales team. This Contact and Marketing Management System gives marketing managers a unique database, enabling them to propose marketing operations to help win new customers and develop customer loyalty. Campaign analysis will enhance customer satisfaction, return on relationships, competitive advantage, number of consumers, retention rate, revenue per customer, impact of order fulfillment, returns and call center activity on actual sales performance. The analysis will allow you to plan marketing campaigns, automate reporting and monitor efficiency with segmentation and analysis of profitability, winning therefore expose variability and boost performance. Campaign analysis provides complete solution for promoting company's product and interacting with customers, approaching them, campaigning etc. Companies can use this system for data collection and analysis to make better management decisions for low frequency forecasting and high frequency "now casting" to adjust their business decisions in real time.

This system is a customer-oriented system which involves tracking of customer's lifecycle right from the point the company approaches the potential customer till the time it gets converted into a lead.

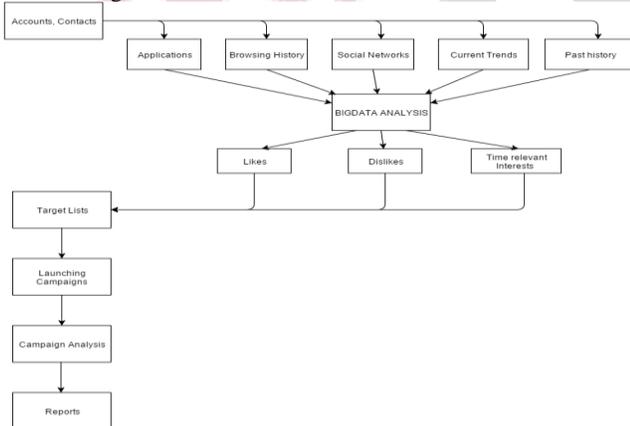


Figure 1. Workflow Of The System

Strategies, measurement of results obtained and campaign management. Big data analysis allows narrower customer segmentation, resulting in more precisely tailored products and services. Big data is used to improve upon the development of future products and services by only producing tailored products. Organization can focus only on those products of customer's interest, thereby achieving the trust of customer, which results in extension of regular

customers. This marketing management system with big data analysis will involve email marketing, creating target lists, SMS notifications, managing contacts and also tracking the customer responses. It also comprises typical marketing activities like building the customer base and also helps in extending the present customer database. It enables organizations to clearly set rules and responsibilities in terms of who is to handle what kind of work and when. This results in improved productivity and better response to customer.

VII. IMPLEMENTATION

The developed web application will be used to manage the marketing activities of an organization. This will include the activities right from creating target lists for various campaigns to launching those campaigns and tracking the responses. Based upon a target's response, if they show some kind of interest by checking out the product or going through the mentioned link, he/she will be classified as a Lead.

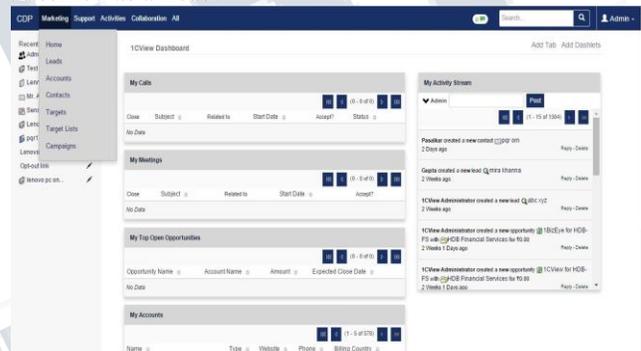


Figure 1. Dashboard

Fig. 2 Shows the Dashboard of the System displaying the marketing menu and its sub-modules. The Dashboard is fully customizable according to the need of a particular person. It will display all the recent activities and will enable the user to quickly get the notification and browse the particular module.

The Marketing Menu includes- Requirements. Big-data Analysis will trigger time relevant marketing campaigns based on the personal likes and interests of customer.

The technologies used in this system include MySQL, PHP, HTML, and CSS. The System will also be used to track down the success of a particular campaign by tracking the responses and displaying an automated report. This helps the company to monitor, which campaigns are more successful which will be used to improve the strategies of marketing.

❖ Accounts

- ❖ Contacts
- ❖ Targets
- ❖ Target Lists
- ❖ Campaigns
- ❖ Leads

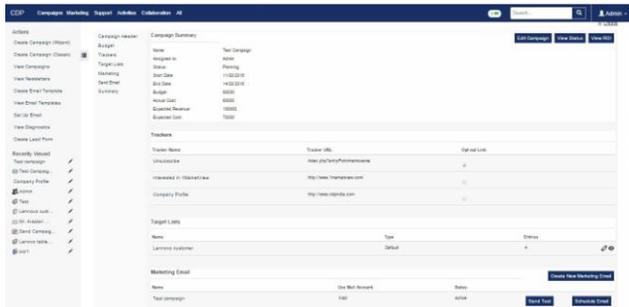


Figure 2. Marketing Campaign

Fig. 3 depicts a marketing campaign, the details for a campaign include normal details, Budget of the campaign, Targets and Target-Lists for that campaign, Trackers which will be used to track click-thru links, Email templates, and finally scheduling that Campaign.



Figure 3. Return on Investment of a Campaign

Fig. 4 Shows the Return of Investment of a particular campaign which is based on the revenue, investment, budget and expected revenue of the Campaign. An automated report will be generated based on the amount gained from the opportunities which were created from leads and who were initially the targets of a particular campaign. Hence a target will be tracked until that target is converted to lead then to opportunity and then whether that opportunity is won closed or lost closed.

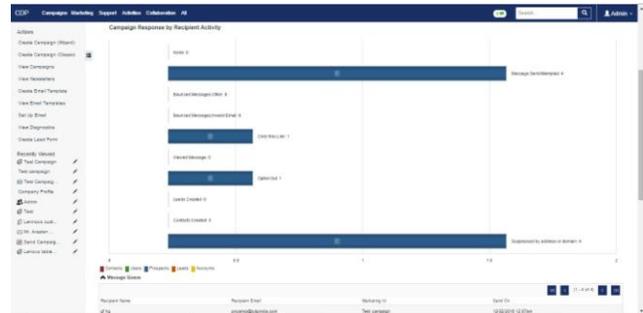


Figure 4. Campaign Response Chart

Fig. 5 displays an automated generated chart which depicts the overall response of a particular campaign. The status of campaign contains a detailed report of all the values displayed in the chart. The chart contains the tracked result of following parameters-

VIII. ANALYSIS OF RESULTS

The click through rate (CTR) can be calculated after some time from the campaign being launched. This gives us the analytic result which depicts how many customers were interested in the product and visited the link. The leads generated from the campaign also gives us the figures on how many targets were turned into leads and opportunities. Using Big-data to target customer specific products and interest based marketing campaigns generates huge amount of CTR and conversion rate.

As you can see from the fig. 6 where the system earlier without big-data based marketing campaign yield very less CTR where as the system where targets are targeted based on the results of big-data analysis showed greater interest and CTR.

Our system, where the customers are targeted based on their interests will give more than 30% of conversion rate. And this will be more than any of the existing systems.

- ❖ Messages sent
- ❖ Bounced messages
- ❖ Number of Click-thru
- ❖ Viewed messages
- ❖ Opted-out Targets
- ❖ Leads Created

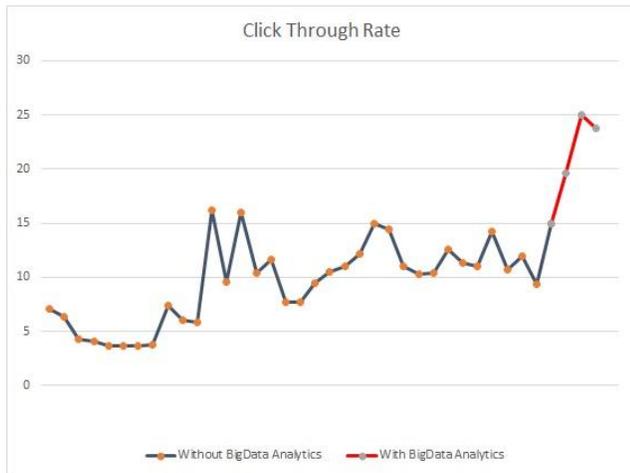


Figure 6 Click through Rate

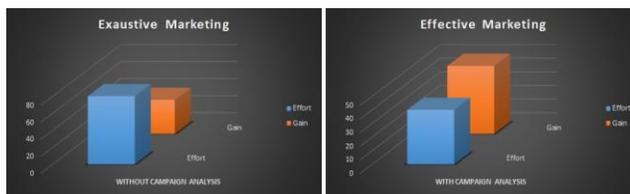


Figure 7 Marketing With and Without Campaign Analysis

Marketing where there is no campaign analysis results in lesser output and also has no provision for keeping a track of all the results and responses obtained once the marketing is done. Whereas with the inclusion of campaign analysis, a company or an organisation can have better results as they can have a complete track of all the results and responses from the approached consumers. It gives a statistical knowledge of the consumer's feedback. There is comparatively much less effort when campaign analysis is done, on the other hand without it the effort is high and the gain is less.

IX. CONCLUSION

Big data has the potential to change the way companies manage customer relationships and target specific customers based on their interests. It is capable of identifying sales opportunities and analysing customers' responses to products, by combining internal data with comments made on social networks. Using big data and Campaign analytics to find associations, recognize patterns and identify trends that allow a company to shape customer experiences for increased engagement and will bring the perspective of the customer into business decisions, while helping marketing

people to target the best possible customer base for a specific product generating profits for an organisation.

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