

Smart Customer-Realtime Customer Relationship Management System – A Survey

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Abstract – Customer Relationship Management (CRM) is overall process of building and retaining profitable customers with an organization and directed towards improving business relationship with customers. It is a management philosophy and strategy which enables a company to optimize revenue and increases customer value and service quality by recognizing customer needs. It's a procedure of business that is able to facilitate or meet out requirements of users and each and every component to be measured deliberately and should look of as all the requirements are met. A CRM strategy aims to create a comprehensive customer centric strategy that contributes to durable relationships with customers and makes a profit for owners.

Keywords– CRM, E-CRM, SEM, DQ, Neural Network.

I. INTRODUCTION

The concept of Customer Relationship Management (CRM) in business domain gradually emerged in early 1990's [5]. The CRM prevailed gain prominence as confirming area of interest in business community. The CRM is a business tool widely used, unyielding strategy in the business process to become successful.

It's a tool used to manage and analyze customer's data and interactions with aim of improving relationship with customers. Here not only the organization, each and every one of the organization departments like Accounting, Marketing, Producing and so on. Everyone needs to focus on user and their requirements and should be curious in sharing data and communicating with users regularly, and should give complete detailed and valuable information to the individuals.

CRM [4] helps to record all customer data into single database and spread across various departments providing business user easily access and manage customer data. With unique database it builds to efficient analysis about customer behavior and pattern, which intern helps, makes business to make profitable. CRM is focusing directly towards acquiring new customers and retaining old customer's intern increasing sales growth.

1. History of CRM:

The evolution of CRM begins in late 80's. CRM named in 1990's [5]. Initially buying selling approach was followed Shown in below figure.

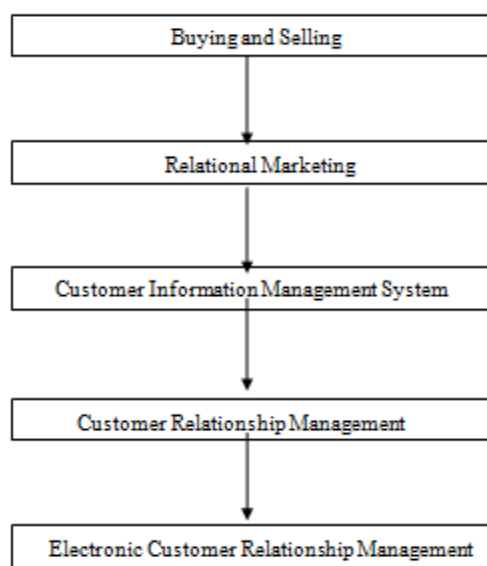


Fig.1. History of CRM.

2. Major Components of CRM:

The major building blocks of CRM are stated in the figure [3]

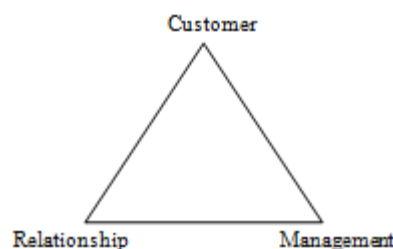


Fig.2.Components of CRM.

3. Customer:

Customer plays an important role for every organization's future growth and profit is dependent upon customers. With the developed tools and techniques, CRM helps to manage and analyze the customers.

4. Relationship:

CRM manage relationship between customer and enterprise. The relationship involves Bidirectional and continuous communication. The relationship involves Share, attract, convert, retain and grow.

5. Management:

CRM do not limit to marketing department. It involves analyze of data collected from customer through their interactions the information is transformed into knowledge and which helps to find for new marketing opportunities.

6. Purpose of CRM:

1. Make business user easily access and manage customer's data.
2. Managing customer relationship and providing better services.
3. Acquiring and retaining of customers.
4. Assessment of products hype in market and service worthiness.
5. Reducing the marketing cost.
6. Conducting marketing campaign to improve marketing capacity.

7. Elements of CRM:

An enterprise greatly depends upon customers and strategies used to know about customers behavior and patterns. The efficient analysis of customers data leads enterprise with new way of approach to develop their business process to meet customer requirements. It's possible to analyze the customer's data and converts them into useful form for business.

The elements of CRM [1] are stated in figure



Fig.3.Elements of CRM.

7.1 Customer care: CRM mainly consists of customers where the services provided to customers are been exercised in customer care. **Hr Management:** The resource employed with the human are categorized and managed under HR management.

7.2 Lead Management: The lead services provided by raising tickets, responding to the clients served under lead management.

7.3 Marketing: The rendering of the service to the customers are been emphasized in marketing. **Sales force:** For the purpose of selling the services, a trained wing called sales force will be a major element in CRM.

7.4 Work flow: The workflow mechanism is vital in employing the complete CRM cycle.

7.5 Analytics: The various services provided under CRM must be widely employed by all the users preferably.

7.6 Business Report: There must be a report consisting the complete view regarding services offered to customers variably.

II. METHODOLOGY

1. Web:

The web as an information hub to facilitate information and data transferring empowers individuals to take an active role in knowledge co- construction by contributing and debating content with others through a conversational and collaborative approach.

2. Structural Equation Modeling (SEM):

SEM [3] aims to analyze the interconnected relationships among a set of constructs simultaneously. The SEM method only can analyze the linear model and it may sometimes make the technology adaption models complications too simple.

3. Electronic Customer Relationship Management (E-CRM):

E-CRM[5] is a strategy for marketing, selling and integrating an online service that plays a role in identifying, obtaining and maintaining the customers who are considered as the largest capital of the company. It improves and enhances the relationship between a company and its customers by a means of creating and increasing the relationship with them through modern technology. E-CRM software establishes profiles and histories of each organizations contact with its customers. It is a combination of management software, hardware, applications and commitments.

4. Data quality (DQ):

It is the degree of data accuracy, accessibility, relevance, timeliness, and completeness. There should be much more data integrity must be maintained for a well developed CRM.

5. Soft Issues:

Soft issues such as human issues are related to change management, Knowledge sharing, team collaboration, and power that still remains as a obstacle for any information system implementation. The introduction of a CRM system requires a change in mindset on customer management across at an organizational level. Many organizations do not wish to commit to a CRM strategy on their own.

6. Neural Network:

The Neural network method can help to determine complicated linear and non-linear relationships and social CRM and its adoption factors. It also makes it possible to accomplish more accurate forecast compare to the usual regression methods.

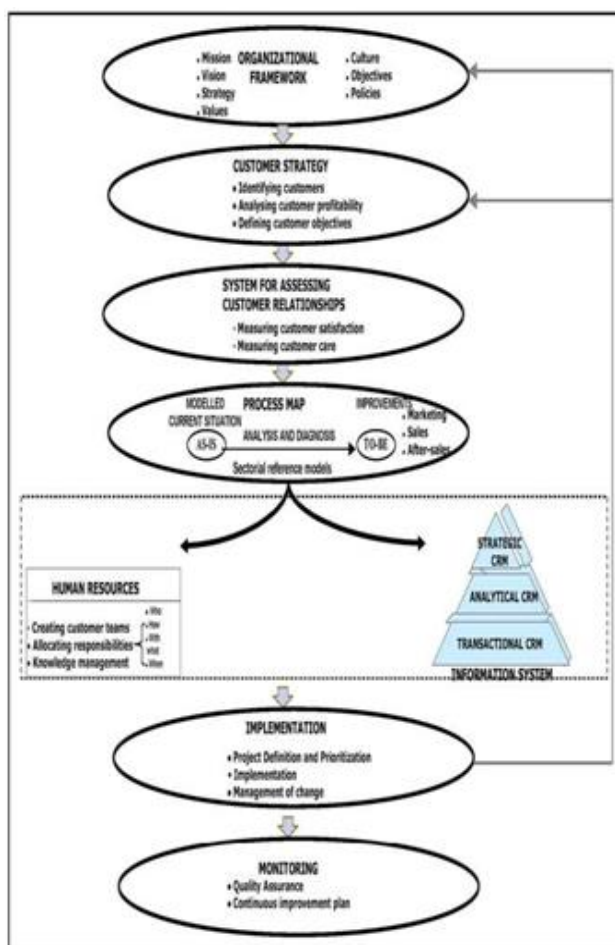


Fig.4. Detailed view of CRM.

In the above figure the organizational framework consists of mission, vision strategy, values, culture, objectives and

policies. Also identifies the strategy of the customer requirement and also system for accessing customer relationships, processing maps and implementation part which includes monitoring too in the Customer Relationship Management. For the process system there includes the Human resource and information system. Where Monitoring ensures the quality check and further implementation of the CRM.

5. Features of CRM:

There are 3 main features of CRM[1] they are: Structural features

User-based ease features CRM efficiency features.

Structural features: These provides

- Service deployment
- Service categories
- Business size
- Pricing tier
- Mobile compatibility.

5.1 Service deployment:

Deployment is achieved to buy a continuous license truthful as login structure. In this deployment subscribed software is placed on the servers of owner software.

5.2 Service categories:

Categories are classified into two main sides that include Enterprise and small mid size business (SMB).

Enterprise is a service presentation for large and very large business productions. In enterprise category we discover correct key explanations to transform CRM communications. Small mid size business is based on the size of the category.

5.3 Business size:

It is divided into three class that include Small sized, Medium sized, and large sized business plans.

5.4 Pricing Tier:

Is the Final cost of the service user that should be paid. This feature is divided into three main classes includes Expensive or high, Appropriate or average, and Affordable or low.

5.5 Mobile Compatibility:

It is the platform session to support service execution on mobile devices. This feature is organized into three main platforms that include Android, IOS, and Window phone. User-Based ease features: The three main user-based ease features are

- Ease of Use
- Ease of setup
- Quality of support

5.5.1 Ease of use- The user friendly condition between application and customer. Such as compatible user

interface, simple forms, navigations and routine interactions.

5.5.2 Ease of setup- Setup process with a package installation that user can install a software with on click trigger. In ease of setup, time spent of setup is very fast without lag in time.

5.5.3 Quality of support- It is where customer use some guaranteed services such as online trouble shooting, online responsible service, covering runtime faults and technical errors.

CRM efficiency features: These are separated into five important factors that include Efficiency, Data availability, Responsibility, Collaboration and Data security.

6. Efficiency- It should use the Existing resources in the business environment with minimum time and maximum energy consumption. This would be much efficient.

7. Data availability- The main factor in the data integrity of a software, whenever a failure is occurred, data should be available for user requirements.

8. Responsibility- It is an interactive connection between CRM service and customer which should be trust worthy and responsible.

9. Collaboration- It is a procedure by accepting contacts and sharing information in the business process. If collaboration between customers and business is high then trust and cooperation will be increased.

10. Data security- It is a main challenge to secure information for CRM users and providers by analyzing and maintaining data and information.

III. CONCLUSION

Overall goal of business to make customers satisfied with products and services offered. For every business success rely upon customers and there arise need to know about pulse of every customers. For that enterprise should know the knowledge about customers' patterns and behavior. With CRM helps to get in-depth knowledge of customer's pattern and their behavior which in turn applied in business to make more successful. Analytical techniques are applied in CRM customer data to discover knowledge and patterns. Further how customer's data privacy is held should be addressed. Further use of big data technologies in CRM can be addressed and use of different data mining techniques can be applied in customer data.

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