Paper 120

CRM 101: Maximizing Return on Investment with the SAS® Solution for CRM
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ABSTRACT

During the last decade, the deployment of Information Technology (IT) has been rapidly evolving from a necessary evil to a legitimate business strategy. In the early to mid 1990's Business Process Reengineering (BPR) was the hot business tool that allowed IT deployment to generate a positive return on investment (ROI) and obtain business objectives. The late 1990's have brought us another hot strategic business tool, Customer Relationship Management (CRM), which generates rapid ROI and long term profit growth. The business emphasis is on understanding your customer and building loyalty. The IT emphasis is on capturing all customer related data and turning it into decision ready information. Database marketing has evolved from mass to direct/target marketing over the last 3 decades, now emphasizing loyalty and individuality.

This paper takes you through an evolution of strategic business tools, marketing as a discipline and information technology as they pertain to CRM. After a discussion of what is CRM, why it is so hot, and the benefits, this paper then discusses SAS Institute's approach and methods used to identify and obtain the valuable benefits of a CRM culture. Finally we will discuss the necessary business environment, synergistic roles, and deployment of key technology tools necessary to maximize CRM ROI.

INTRODUCTION

Focusing on the customer to attain business objectives has been a key focus area in recent years. Several successful and popular business tools have been inovatively designed to assist companies in working towards those customer focused business objectives. These tools materialized through the development and integration of underlying, enabling technologies such as collection and storage of information in data warehouses, sophisticated analytic methods as well as extremely fast computer processors. One of the most recent and popular business concepts is Customer Relationship Management (CRM). CRM combines marketing, technology, and corporate synergy to generate quick, positive return of investment (ROI) and increase in profitability. All customer related information and customer contact points are brought together by this tool.

Marketing by nature is an externally focused business discipline. The progression from mass, to direct, to target, to one-to-one, refocused marketing toward the individual customer. Similar to the business tool evolution, marketing is moving from product focus to customer focus.

Enterprise business tools and customer focused marketing are now possible due to recently evolved technologies. Decision support tools (data warehousing, data mining, OLAP, MDDB, etc.) have pushed the CRM concept over the edge into reality. However, CRM, like the other major business initiatives, is only

as successful as the validity of the data and the accuracy of the resulting decisions.

The CRM focus is on maximizing customer and marketing contributions, decreasing external wastes, and increasing customer retention and satisfaction. The SAS® Solution for CRM addresses each of these focal points by delivering a process for identifying, targeting, and responding to the needs of your most profitable customers while reducing the time and effort spent on unprofitable customers. This process includes accessing and organizing customer data from any source – operational or external – and revealing hidden information within that data to gain greater knowledge of customer needs, behavior, and profitability.

The following discussion of business tool, marketing, and information technology evolution is designed to build the foundation for understanding the what, why, and how of customer relationship management. In addition, this information will aid in the ROI discussion. This paper then describes the SAS® Solution for Customer Relationship Management CRM and how the highly sought after benefits can be realized using this solution.

Background

Strategic Business Tool Progression

Executives realize information technology is necessary to maximize profits. However, most of the major strategic business initiatives were not widely aligned across business processes, until recently. During the 1980's and 1990's, billions of dollars have been spent to implement integrated manufacturing systems (Supply Chain and ERP systems), integrated financial systems, and distributed data systems (C/S). The business purpose was to increase profitability and competitive advantage by focusing on operational, product-oriented activities. Numerous corporations achieved these objectives only to realize that the benefits leveled off after meeting the initial ROI. Furthermore, some business processes were not involved. Not even ERP or Supply Chain considered all customer inputs and outputs for improved relationships. Management of an individual customer's needs was a by-product at best.

Business Process Re-engineering (BPR) was promised to be the preeminent business performance improvement technique for the 90's. The focus of BPR projects was to eliminate non-value activities by redesigning ALL business processes. Since the effort was more customer focused than the other business initiatives, the ROI was more continuous. The significant problems with this approach were the negative elimination connotations and broad scope of

new BPR IT projects. BPR did not address analysis and management of customer behavior.

The newest strategic business tool is CRM. The really good news is the positive, customer centric approach CRM initiatives take and the maximizing of past IT expenditures. CRM is currently the best business tool for continuous benefits, culture change, and externally focused re-thinking of your company . CRM is also the best tool for bridging the gap between your business infrastructure and system infrastructure, obtaining ROI, and realigning your business.

Marketing Progression

The marketing business discipline is often considered the art of preparing someone to be sold. Since a company cannot survive without selling its products or services, we realize most of our concentration should be toward customers.

The application of computer technology to customer files in the 1960's kicked mass marketing into high gear with zip code segmentation, merging/purging of files, computer generated letters, and direct marketing techniques. Statisticians got involved in the 1970's and starting applying analytical applications like lifetime value, list testing, and further segmentation. The 1980's improved database marketing with targeted campaigns driven by population analytics and relational databases.   Relationship marketing (now called one-to-one) became the theme for the 1990's. The premise is that long term customer relationships can be formed and profits increased by understanding individual needs, interpreting their relationship to a company's products and services, and delivering to the customers individualized information and products.

This evolution shows the discipline of marketing moving from pushing as much product as possible (with mass marketing) to today's customer focus. Marketing transactional systems are struggling to make a corresponding transition. An alignment between marketing practices and systems is necessary to maximize profits and obtain rapid ROI.

Information Technology Progression

All of the recent technology evolutions have contributed to the realization of CRM. Material Requirements Planning (MRP) has gone to Enterprise Requirements Planning (ERP). Large host systems have moved to client/server and local area networks. Central data centers have given way to distributed computing and wide are networks. Large data bases have evolved to data warehousing, and from there to enterprise data warehouses and data marts. Programmatic, individualized statistical analysis has matured to data mining. Information dissemination by mail and fax are being augmented by speedier internet/extranet communication vehicles. The four primary key technology areas for CRM are data warehousing, data mining (statistical/business analysis), sophisticated exploitation, and operational transaction systems. The creation and enhancement of these along with the Internet and data processing throughput has made CRM economically and technically possible today.

CRM

What Is It?

CRM is a multifaceted marketing concept and strategic business tool that promises your corporation a positive ROI and increased profitability based on shifting from product-centric marketing to customer-centric marketing. This shift requires the deployment of key technology tools. Data must be gathered continuously at all customer contact points and decisions pushed back to those same contact points. CRM addresses the entire process of managing customer relationships and building more profitable customers.

According to the Gartner Group: CRM is a business strategy aimed at understanding and anticipating the needs of an enterprise's current and potential customers. From a technological perspective, CRM involves capturing customer data from across the enterprise, consolidating all internally and externally acquired customer-related data in a central database, analyzing the consolidated data, distributing the results of that analysis to various customer touch points and using this information when dealing with customers via any touch point. These touch points may include such examples as a mobile sales force, inbound and outbound call centers, Web sites, point-of-sale, and direct marketing via mail and E-mail.

Why So Hot?

The tremendous value that customer loyalty brings to a company is why CRM is the hottest strategic business tool. Most companies recognize the strategic importance of customer relationships but are not satisfied with their ability to implement loyalty programs and cultures. It's about costs of doing business and the desire to not share the customer profits you already own. Analyst quotes for retaining a customer versus acquiring new customers range from 5 times to 8 times more expensive. Another analyst claims 50% of your company's satisfied customers and 25% of your company's VERY satisfied customers will do business with your competitors. Why would your best customers turn to your competitors? What can you do about that?

Deregulation and globalization has allowed new competitors into your markets. The core competencies of product differentiation and price differentiation are usually not enough to sustain profits. Customers are empowered through new technologies and demand information and freedom of choice. Customer churn is at an all time high in several industries. These are all additional factors determining the popularity of CRM.

Other reasons for the recent boom is described in the above discussions about the evolution of strategic business tools, marketing, and information technologies. Also, because ROI is quantifiable and obtainable the entire enterprise is affected and should respond.

Major Benefits

CRM can enable your corporation to understand, anticipate and respond to your customer behavior to acquire new customers, exploit their lifetime value, retain existing customers and build market share.

Companies successfully implementing a CRM solution and culture have been reaping the following benefits:

⌉ True ROI project based justification

⌉ Increased customer retention and satisfaction

⌉ Maximized customer relationships and profitability

⌉ Optimized sales and marketing effectiveness

⌉ Improved, more cost-efficient communications

⌉ Competitive advantage and larger market share

The SAS CRM Solution is designed to help you realize each of these benefits.

The SAS CRM Solution

What Is IT?

The definition of CRM and its corresponding solution is different from corporation to corporation based on business needs and objectives. There cannot be an off-the-shelf, total CRM solution. SAS Institute's CRM solution is tailorable by grouping SAS products, services, market channels, components, and methodologies to provide customers with a total, individualized CRM business solution. The SAS Solution for CRM is a business and technical solution designed to assist your corporation in leveraging CRM concepts and technologies toward meeting corporate objectives, accomplishing competitive advantages, and maximizing profits. SAS Institute Inc.'s creed is to be a solution provider dedicated to long term improvements for our customers and long term relationships with our customers.

Fortune 500 companies have been using SAS® software for over 20 years to perform statistical analysis on customer data. SAS Institute's acclaimed data mining, data warehousing and Web technologies are the backbone of the CRM process. These products enable SAS Institute to offer the only end-to-end CRM business solution supporting the entire process of managing customer relationships. You are able to collect data at all customer contact points, turn that data into knowledge for understanding customer behavior and meeting customer needs, and, consequently, build more profitable customer relationships.

Approach

The SAS solution brings an organized structure to CRM by defining six major CRM initiatives:

1. Customer Management/Profitability/Retention
   Description – Knowing and managing the type of customer, demographics, preferences/buying patterns, profiling, etc..
2. Campaign Management /Marketing Automation
   Description – Efficient, effective, and economical target marketing. Knowing who, what, how, when
3. Call Center Management
   Description – Knowing problems, probabilities, response &

resolution rates, satisfaction
4. Customer Service
   Description – Providing the best possible support to the customer and increasing retention
5. Sales Automation
   Description – Tools to increase sales productivity, better customer service, and improve the profitability of products and services. (cross-selling, up-selling)
6. External Customer Systems (Extranet)
   Description – Systems offered to customers facilitating access to pertinent information about orders, inventory, and performance.

The SAS Solution for CRM organizes the creation and management of customer intelligence and decision support by these major initiatives. The solution's products, services, market channels, and components are categorized into each of the CRM initiatives to provide rapid solution implementation and performance consistency.

These initiatives involve all major processes of your company. Therefore, C-level executives must support your CRM effort. The SAS® CRM Strategic Blueprint (described below) represents the support of the executive steering committee and acts as their governing device.

To accomplish the understanding and building of customer relationships and profitability, specific analytics must performed. Each of the major CRM initiatives use one or more of the following analytical applications:

- Customer retention (keeping existing customers)
- Customer acquisition (finding new customers)
- Cross selling (selling customers more products based on what they have already bought)
- Upgrading (selling customers a higher level of service or product, such as a gold credit card versus a regular credit card)
- Fraud detection (determining if a particular transaction is out of the normal range of a person's activity and flagging that transaction for verification)
- Market-basket analysis (determining what combinations of products are purchased at a given time)
- Customer satisfaction/loyalty
- Touch point performance and effectiveness

SAS Software has provided corporations with the tools to perform these analyses for over 20 years. Now with the SAS Solution for CRM, the task has become integrated and much easier to implement.

Solution Framework - Enabling Technologies

The SAS Solution for CRM delivers a combined business and technical solution that realize ROI and business objectives. This CRM solution leverages four primary areas for which SAS has key technologies to support each of these areas. They include:

1. **The SAS Data Warehousing Solution** to help build and manage an enterprise view of customers. You can

access, manage, and organize all relevant customer data from operational systems, legacy systems, value-added data providers, and market research sources—both internal and external. This SAS Solution consists of software and services.

2. **The SAS Data Mining Solution** for defining a set of comprehensive and consistent customer profiles to better understand customer needs, behavior, and profitability; and for constructing predictive models of customer behavior to fuel target marketing and campaign management activities. This SAS Solution consists of software and services.

3. **Integrated OLAP, query, and reporting capabilities** for following up the activity and measuring the return on investment in order to facilitate decision-making. This SAS Solution consists of software and services.

4. **Web-enabled reporting tools** for sharing the information between the different business units in order to spread information about customers, increase operator's customer knowledge and make them anticipate customer's demands. This SAS Solution consists of software and services.

The SAS Solution for CRM framework provides numerous award-winning tools in these technological areas and a flexible approach to tailoring a solution to your corporate needs and objectives. A list of products, services, and components that make up the tailorable solution follows, with a brief description of selected products and services.

Products:

Data Warehousing –
SAS/Warehouse Administrator™, SAS/MDDB™, SAS/ACCESS®, SAS/CONNECT®
The SAS/Warehouse Administrator is an award winning component designed for the IT professional responsible for creating and managing data warehouse processes. It is a customizable solution that offers a single point of control making it easier to respond to the ever-changing needs of the business community

Data Mining –
Enterprise Miner™, SAS/STAT®
Enterprise Miner, SAS Institute's enhanced data mining software, offers an integrated environment for businesses that need to conduct comprehensive analyses of customer data. Enterprise Miner provides business technologists and quantitative experts with an easily maintained method for helping their organizations achieve a competitive advantage.

Enterprise Reporting –
SAS/MDDB™, SAS/EIS®, Enterprise Reporter™, SAS/INSIGHT®
SAS/EIS provides decision makers with instant access to relevant and up-to-date information. Interactive, user-friendly interfaces combine with drill-down, hot-spotting, and traffic lighting support the identification and tracking of business trends, critical success factors and key performance indicators.

Internet, Intranet, and E-Commerce –
SAS/INTRNET™, Enterprise Reporter™, SAS/EIS®
SAS/IntrNet web technology software allows customers to surface SAS reports, graphics and other batch type computing by performing report distribution, application distribution, and thin client interface.

Services:

CRM Business Consulting
SAS Institute Inc. consultants assist your company in basic infrastructure and cultural qualifying factors. Examples may include:
- More in depth understanding of the effectiveness of existing market driven and/or customer specific information systems.
- Further analysis of business infrastructure (process alignment,

business rules, team composition, functional ownership, etc.)
- Explanations and workshops of CRM concepts, strategic advantages, technologies to deploy, and industry practices.

CRM Strategic Blueprint
SAS Institute Inc. consultants work closely with key executives and process owners to assimilate the enterprise CRM vision. A high level document is created containing the corporation's CRM vision, business objectives, CRM initiatives, and major milestones that comprise the road map to a new holistic customer focused business culture.

CRM Assessment
A CRM Assessment is a system and business infrastructure evaluation resulting in a written CRM project proposal detailing initiative plans, recommended solutions, and estimated project costs/schedules.

CRM Implementation Services
- DM/Analytics Consulting
- Exploitation Consulting
- Data Warehouse Consulting and Implementation
- Business Model Consulting and Implementation
  Customer segmentation
  - Data acquisition
  - Predictive modeling
  - Fraud detection
  - Churn analysis
  - Cross selling
  - Prospecting

Components Framework:
One of the necessary ingredients to a rapid ROI is pre-built components that can be tailored to meet your company's needs. The SAS Solution for CRM consists of four component types for delivering rapid and powerful solutions: data models, mining algorithms, operational integration, and applets. Below are examples, which exist or are under construction:

Data Models
The most common variables needed for specific applications are defined and a model written.
- Industry Enterprise Data Model
- Direct Marketing Data Mart Model
- Sales Management Data Mart Model
- Call Center Management Data Mart Model

Mining and Reporting Templates
Statistical algorithms are used for specific CRM analyses. There are also typical reports needed.
- Life Time Value Algorithm/Template
- Churn Algorithms/Template
- Retention Algorithms/Template
- Cross Sell Algorithms/Template
- Propensity to Purchase Algorithms/Template
- Customer Profiling and Segmentation Template
- Customer Profile Reporting Template
- Customer LTV Reporting Template
- Customer Response Analysis Reporting Template

Integration Servers
The SAS Solution for CRM integrates to the common CRM operational application systems.
- Marketing Automation Server (VALEX, PRIME, CERES)
- Call Center Automation Server
- Sales Automation Server
- Customer Service Automation Server

Mini Applications
Specific, competitive advantage driven applications written in SAS programming tools.
- Intelligent Customer Profiler Applet
- Pricing Administrator Applet

Benefits - Return on Investment

The SAS Solution for CRM combines industry and CRM initiative knowledge with the structured framework to help your corporation meet the standard benefits listed in the above CRM **Major Benefit** discussion.

The SAS Practice for CRM will additionally benefit your company by obtaining capabilities that result in numerous business advantages including:
- Increased synergy between the business and technology sides of an enterprise
- Development of techno-savvy business managers
- Positive ROI from past IT deployment and present CRM related projects
- Integration of the great IT business tools: LAN/WAN; client/server; transaction systems; internet/extranet/intranet; data warehousing; data mining

Your corporation has probably spent millions on system infrastructure over the past 10 years much of that spent without a direct ROI. Your CRM effort can gain tremendous ROI from those past IT deployment projects by implementing the CRM concepts and some of the new technologies.

The SAS Solution for CRM provides the following additional advantages and benefits for each of the six major initiatives:

- Incorporate newfound knowledge into existing customer-related operational systems
- Analyze the results of previous actions and predict which customer segments are more likely to respond to which type of campaign or product offering
- Utilize multidimensional data analysis and data mining techniques to understand what drives your profitability—by identifying your most profitable current customers and predicting future customer profitability
- Manage and store all customer-related data, from every point of customer contact, in a single data warehouse
- Surface this information to every customer contact point through Web-enabled dynamic reporting systems and executive information systems
- Provide business managers with timely reports on any aspect of customer relations, allowing them to refine resource allocation to maximize profits. For example, marketing managers can manage campaign efficiency (profitability, impact, and percentage of respondents to a given offer) as well as sales and sales activities (average sales cycle length, cost of sales, sales profitability).
- Bring together the most complete repository of information about customers and competitors—including market research data from both internal and external sources—within a single, customer-centric data warehouse

- Exploit results from surveys or market research data to understand market trends and competitive marketing activities
- Develop new products or reposition or abandon existing ones to satisfy customer demands and gain competitive advantage in the marketplace.

CONCLUSION

Corporations have spent the majority of their monetary and human resources on decreasing operational costs and increasing product profitability. Information technology has been deployed toward these goals, while viewed by management as being a necessary cost of doing business. MRP, ERP, Client/Server, BPR and other business/information tools have been exploited. However, the competitive advantage inherent in managing a business from a customer perspective is lacking

CRM is the business/information technology tool of choice today to increase profits by keeping and growing customers. The function of a company is supposed to be the satisfaction of customers by building, growing, and managing their needs. The SAS CRM Solution involves all information necessary about a customer to make appropriate build, grow, and manage decisions. This is the age of information melting from all inputs and outputs, both internal (corporate culture) and external (customer culture). This is also the age of empowerment for employees and customers and the time to change your company's focus.

ROI is achieved through a coordinated, integrated leveraging of CRM concepts, changing your market focus, and the enabling technologies.

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