# **Association for Information Systems**

# AIS Electronic Library (AISeL)

ICEB 2001 Proceedings

International Conference on Electronic Business (ICEB)

Winter 12-19-2001

# Strategic Marketing Environment based on Integrated CRM to Foster Competition

Carlos Alberto Gonçalves

Ricardo Teixeira Veiga

Mário Sérgio Cardoso

Follow this and additional works at: https://aisel.aisnet.org/iceb2001

This material is brought to you by the International Conference on Electronic Business (ICEB) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICEB 2001 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

# STRATEGIC MARKETING ENVIRONMENT BASED ON INTEGRATED CRM TO FOSTERING COMPETITION

Track: Service Quality and Customer Relationship Management

#### **Authors:**

Carlos Alberto Gonçalves
Professor of CEPEAD - UFMG
Federal University of Minas Gerais – Brazil
Address:
Rua Rio Grande do Sul, 1212 apto 1002 - Santo Agostinho
Belo Horizonte – MG - Brazil
30.170-111
carlos@face.ufmg.br

Ricardo Teixeira Veiga Professor of CEPEAD - UFMG Federal University of Minas Gerais – Brazil rveiga@face.ufmg.br

Mário Sérgio Cardoso Federal University of Santa Catarina – Brazil Rua Ludgero Dolabela, 249 apto 202 – Gutierrez Belo Horizonte – MG – Brazil 30.430-130 mcardoso@uai.com.br

# Strategic Marketing Environment based on Integrated CRM to Foster Competition

#### **ABSTRACT**

After the great wave of ERP (Enterprise Resource Planning) systems implementations, the organizations focus has been turning to CRM (Customer Relationship Management) applications. CRM systems are centered on one to one interactions with customers, they analyse each client trying to identify his or her own characteristics from internal and external data. At the same time, every client interaction is registered, to create a relationship historical data. Intelligent tools like data mining and OLAP using complex algorithms, rules based systems, fuzzy logic and multivariate statistics data analysis will retrieve the best of clients, partners, employees, suppliers and other strategic data to provide the organization with accurate actions for marketing campaigns, better products, excellence of services and decision making, based on the organization ecosystem. This study reviews concepts of CRM, its architecture and integration with Governance Systems, and Competence Administration, in the current perspective of integrated

corporate management systems connected to the internet. In kernel we propose a "intelligence core joystick" where the strategic core supports and decides about resources allocation, negociates and establishes politics and actions to minimize the conflicting forces to get a balance line satisfaction between participants or partners.

Our model also contemplates data warehouse, which centralizes separately all the corporate significant data to provide managers with high quality data for the decision making. According to the corporation, this data warehouse can feed others data marts to serve specific departamental areas such as Marketing and Human Management Competences.

In addition, to link the participants, organization and processes, there is a intelligent communication infrastructure to simplify and speed actions, to spread organizational culture and relevant information throughout the organization in a symbiotic way .

#### INTRODUCTION

The administration inside and outside organizations has been changing considerably. It is becoming more agile and flexible with the Information Technology help. In this new millennium, the web and e-commerce are key industries drivers in a new environment, where few companies are or will be immune to the effects of these trends. This new channel for exchanging information and doing business allows companies to reach new boundaries easily, and is changing the way the world does business.

High administration of established companies in all areas are struggling to comprehend and deal with this new tendency that is changing patterns everywhere, when the internet media begins to be considered and becomes available. The use of technology is fundamental to transform business and processes such as purchasing, customer service, delivery, fulfillment, etc. It is the right time, and it is very important to design a comprehensive high-performance e-business model that restructure key business processes and enterprise applications creating a new framework where the information flows harmoniously around the organization to connect clients, employees, partners, resellers and suppliers.

Modern business design of large organizations are constructed from well integrated and intertwined enterprise applications, which can include for instance: Enterprise Resource Management, Customer Relationship Management, Partner Relationship Management, Supply Chain Management, Selling Chain Management, EIS - Executive Information Systems, Legacy Systems, e-Procurement and Human Resources Management. The integration of these applications is imperative for the company to succeed in the competitive market of the digital economy.

#### THE OBJECTIVES AND CONCEPTUAL MODEL

Our practical proposal in this article encompasses four main objectives, like that: 1) To relate the general adapted models of Deschamps and Kalakota in some abstractions frames; 2) Amplify each one, the models of Deschamps and Kalakota, improving boths with important dimensions; 3) Improving the model of Patricia and; 4) Analyses some cases of success to getting a goodness of fit. The adherence of the two models in abstraction level frames are showed on figure 1 that represent an integrated and general model.

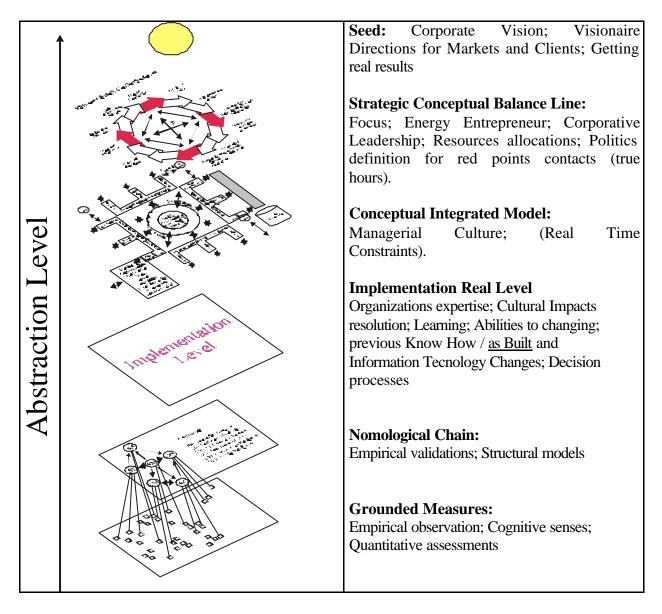


Figure 1 - Integrate abstractions models – conceptual motherboard

The seed of this model is the entrepreneur or a group visionary that put lights over the other systemic components of enterprise. In sequence, it projects shapes in a second frame adapted from Deschamps e Hayak (1997) called virtuous circle. The Strategic Conceptual Balance Line is a model that is adapted from the virtuous circle of Deschamps e Hayak (1997), which considers three basic elements of satisfaction. We have changed this model adding the satisfaction of / with Suppliers and Partners, then, we confronted all the elements to themselves, where appear the unvirtuous forces (conflictive forces) and then

named the model as "The Virtuous Circle X Conflictive forces". When you analyze it, you can notice the same logical coherence and cause and effect relation, and a more comprehensive and flexible approach. Its objective remains basically the same, to relate the high performance of an enterprise to the balance of different levels of stakeholders, employees, clients, and suppliers/partners' satisfaction, taking into account the conflictive forces involved (see figure 2).

### Virtuoso Circle X Conflictive forces

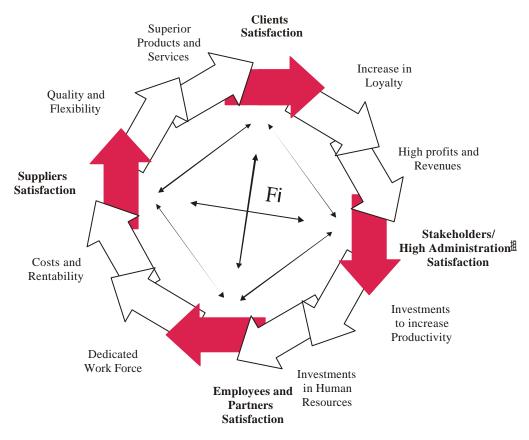


Figure 2. Virtuous Circle x Conflictive forces. Adapted from Deschamps e Hayak (1997).

The Conceptual Integrated Model is a general e-business architecture model which is a fusion of ideas and models proposed and/or adopted by authors and companies such as Kalakota and Robinson(1999), Peppers and Rogers(2000a, 2000b), Berson, Smith and Thearling(2000), IBM, Patricia Seybold Group, and Metagroup (see figure 3). We have changed it considerably, beginning with the creation of the cognitive strategic joystick, an important element which is strongly supported by Business Intelligence and high integration. It is the core of a powerfull and flexible integrated systems connected to their participants. It allows companies to change quickly according to the demands and changes of the 21th century market. These integrated systems include:

- 1. The Back-end applications, that are represented by the ERP systems (or similars) and the Supply Chain Management. These applications are directly responsible for all the back-end integration that can include inventory, purchasing, outsourcing, production planning, manufacturing, distribution, etc. They respond also for quality, flexibility and costs of services and production as well as to all the entreprise logistics. In the "abstraction level" they are directed related to the "Suppliers Satisfaction" in figure 2.
- 2. The Front-end applications, that are represented by CRM applications and the Selling Chain Management. They are responsible to all the experience with customer, resellers and retailers,

- which includes the Sales Force Automation, Marketing Automation, Products and Services support, Call-center and Web solutions. The Relationship Marketing here manages the formal communication (one-to-one communication) and front-end actions through the several channels. Business Intelligence and data mining tools help to maximize clients interactions. In the "abstraction level" these kinds of processes are directed related to the "Clients Satisfaction" in figure 2.
- 3. The Governance System It includes systems related to high administration interests, such as, EIS, auditing, finance and managerial systems. The fundamental idea is to provide stakeholders with best information to strategic decision making, for instance: new investiments; analysis of riscs and results; and the performance/satisfaction of participants. In the "abstraction level" they tend to be more related to the "Stakeholders Satisfaction" in figure 2.
- 4. The Competence Administration The applications related are Human Resouces Management Systems, e-procurement, purchasing and knowledge management systems. It analyses the goals and qualifications of employees and partners, finds a way to reward them for their good services and creativity, seeks new forms to enhance the enterprise culture (e-learnig, multimedia, web-seminars), and studies

new forms to improve the environment of work. In the "abstraction level" they are direct related to the "Employees/Partners Satisfaction" in figure 2.

The architecture proposed has also a comprehensive Data Warehouse infrastructure and softwares solutions to provide organizational areas, high administration, and relationship marketing with high quality information for more accurate strategic decision making and marketing campaign, based on the Business Intelligence and the marketing one-to-one paradigm (see picture 5).

# E-business Architecture

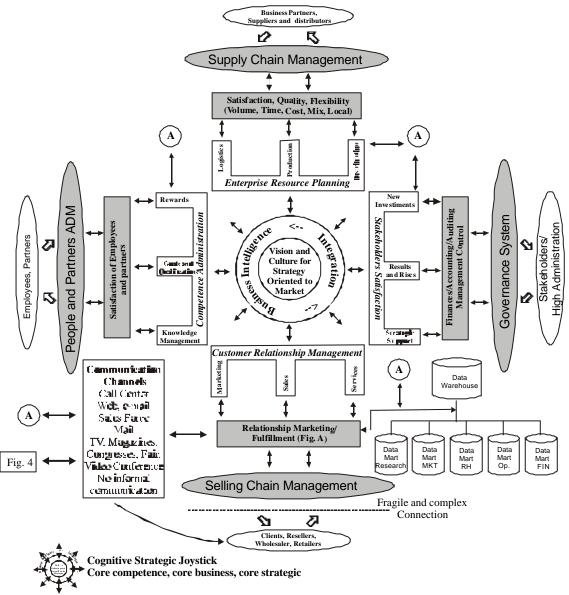


Figure 3. The New CRM / e-business architecture. Adapted from Kalakota and Robinson (1999), Berson, Smith, Thearling (2000), Metagroup, Patricia Seybold Group

A real-time communication infrastructure proposed is closed connected to the e-business architecture and was designed to link and unite empployees, partner, suppliers, resellers, clients and the organization itself, to leverage processes, facilitate business, predict clients actions, enhance and fast campaigns, improve products and services, and to spread strategic culture and knowledge over the corporation and beyond, through the communication chanells available.

# Real time Marketing - Communication one to one and Business Intelligence

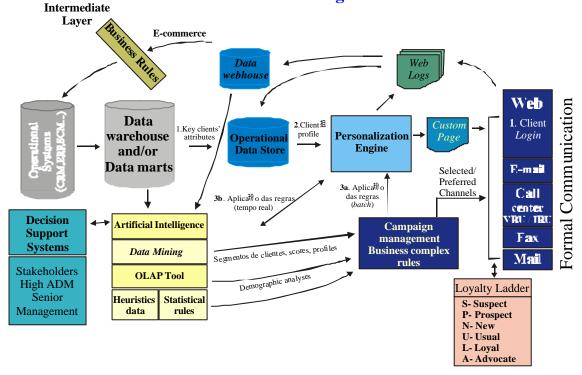


Figure 4 – Architecture for formal communication – many tools to support Business Intelligence demand. Adapted from Berson, Smith, Thearling (2000) and Patricia Seybold Group Web site, Inc. - 1999 http://www.psgroup.com.br

#### THE GOODNESS OF FIT MODEL

In order to verify the goodness of fit of this integrated model we identified some large enterprises in Brazil that has the best practices in integrated CRM. The initial hipothesis was that these enterprises are apologists that the practices of integrated CRM has good results in Relationship Marketing, promoting a great growing in marketing share. This initial resource is considered exploratory and a descritive analysis, we used opened questions interview applied to some people that compose the intelligence core of the enterprise that respond for the political implementation of CRM. The FIAT motors showed adherence to our model except in the following points:

- The great distance between the Information Technology advances and the cultural organization adaptability. Despite of great theoretical proposal there are great delays between the technological design and cultural changing response (like dinossaurs);
- 2. Difficult to attend completely clients' one to one relations necessities due to complex operations and prodution flexibility;
- Administrative conflict, due to the stakeholders' profit necessities, when confronted to the needs of new maket investiments, and to costs for attending well the clients and your emotional necessities.

### Conclusions

They observed that our model has adherence with the organization ideology and cognitive style of core intelligence, but there are much resistance when it reaches operational actions because the great inertia of personnel to assimilate technological changes and new procedures.

Therefore, the three great villains of integration that opose to our model are:

- 1. The high abundance of technological tools that offers miraculous panaceas;
- 2. The fact that the enterprise is not an experimental laboratory (difficulties to measure the effectiveness of softwares before buying it);
- 3. Great internal resistance for changing.

This case showed us that their strategic implementation model is top down in accordance to our model (figure 1). So, their senior management seeks technological solutions in agreement to the market strategics to attend their expectations according to their business model, not the contrary.

The CRM can be integrated in large corporations, but it depends on the core intelligence willingness. The maturation of this systems seems to be greater in large organization, in this particular case, longer than desired.

The desire to maintain lasting competitive advantage and to conquer new markets leads organizations to invest in significative changes based on processes that makes the clients climb the loyalty ladder (see figure 4).

The Information Technology, without much spendings, is considered to be the great allied in the composition of the clients, employees, suppliers and stakeholders relationship. The integrated model is considered as an important strategic conceptual guide to lead senior management to plan their job having in mind a macro vision of the corporate enterprise processes.

As a suggestion of a conclusive causal research resulted from our exploratory study based on the corrent theory, we are proceeding a comprehensive survey based on the nomological chain presented in the Figure 5. This will be applied in several enterprises with integrated CRM pratices, to assess the integration of the 5 S (characterized by: Satisfaction of Suppliers, Satisfaction of Employees, Satisfaction of Stakeholders, Satisfaction of Clients, Satisfaction of Management) and the 1C (Communication Management).

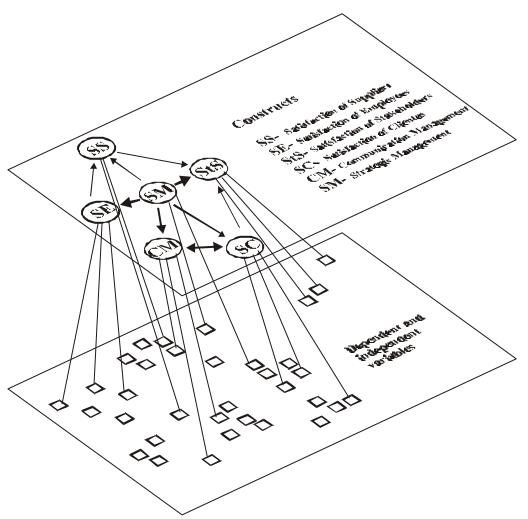


Figure 5 – Structural Validation of Nomological Chain for Integrated CRM

## **Bibliography**

- [1] BERSON, A. Building Data Mining Applications for CRM. McGraw-Hill, 2000. 510p.
- [2] BROWN, S. A. **Customer Relationship Management**: A Strategic Imperative in the World of e-Business. Toronto: John Wiley & Sons Canada Limited, 2000. 345p.
- [3] CARDOSO, Mario Sergio, GONÇALVES FILHO, Cid. **CRM em Ambiente e-business:** Como se relacionar com clientes, aplicando novos recursos da Web. São Paulo: Atlas, 2001.156p.
- [4] DESCHAMPS, J. P., NAYAK, P. R. **Produtos Irresistí veis**; tradução: James F. Sunderland Cook; revisão técnica Moyses Gedanke. São Paulo: Makron Books, 1996.
- [5] GREENBERG, Paul. **CRM at the Speed of Light**: Capturing and Keeping Customers in Internet Real Time. Berkeley: Osborne/McGraw-Hill, 2001. 360p.
- [6] HAYLOCK, C. F., MUSCARELLA, L **Net Success:** 24 leaders in *Web* Commerce show you how to put the Internet to work for your Business. Holbrook: Adams Media Corporation, 1999. 320 p.
- [7] KALAKOTA, R. ROBINSON, M. E-business: Roadmap for Success. Addison Wesley Longman, Inc., 1999. 378 p.

- [8] PEPPERS, D. ROGERS, M. The One to One Manager: Real-World Lessons in *Customer Relationship Management*.
  New York: Doubleday, 1999. 268 p.
  [9] PEPPERS, D. ROGERS, M. CRM Series *Marketing* 1 to 1: Um Guia Executivo para Entender e Implantar Estratégias
- [9] PEPPERS, D. ROGERS, M. **CRM Series** *Marketing* 1 to 1: Um Guia Executivo para Entender e Implantar Estratégias de Customer Relationship Management. São Paulo: Peppers and Rogers Group do Brasil, 2000. 77p.
- [10] SEYBOLD, P. Customers.com Handbook. http://www.psgroup.com