

e-CRM and CMS systems: potential for more dynamic businesses

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Abstract

Any change in customer's behaviour affects the customer's value. In addition, profitability and economic viability also change. Most companies still do not know entirely their customer base characteristics. They find difficult to define criteria that segment their customer base to find high-value customers. They need to focus on target selections to carry on with marketing campaigns which involve high investments. Given the potential of e-CRM and CMS as powerful tools to guide customer-oriented understanding and analysis, greater attention is required. Several companies, operating within the same business and having access to the same information and technology, differ in e-CRM performance. Without sufficient evidence, managers are prone to making investment decisions that are neither efficient nor effective. So it is imperative to base the decision of e-CRM and CMS adoption, on not only their analytical power, but also on economic viability criteria for sustainable business dynamics.

Keywords: e-CRM, CMS, e-commerce, multi-channel retailing, customer base, business dynamics, process integration, web-based strategies, IT-enabled services, relationship marketing, customization, virtual enterprise, ERP, data warehouse, information systems

Introduction

The environment of modern enterprising is ever changing. Typical examples of such changing factors are: shorter life cycles, management focus, relationship marketing, online features. In the 19th century the life cycle of a product or business idea was often 50 years or more. With competition the life cycle shortened to 20 years in the 1950's (until the beginning of the 1980's). Now they are often 3-5 years and even 3-6 months as for a mobile phone (Philipson, 2008). The lowering of variable costs was the result of continuous management efforts to stay competitive. New costs have come to focus as relationship marketing has led to cooperation between economic agents, which often replaces competition (Gummeson, 2002). This is related with the need of finding smarter solutions to fundamentally change the pace of development.

Modern drivers of change have led to new patterns or features for sustaining business competitiveness: virtual enterprises, design management, intellectual assets, interactive and mobile platforms. These responses require IT-based processes and imply the increase of information content. Any commercial enterprise that wants to optimise its success in the information society must have a basic awareness and a strategy for dealing with this new environment. A virtual enterprise is the generalisation of the ongoing differentiation of complex

value chains and the market as an encompassing principle in organising all economic activity. The relative stability of the early industrial value chain has contributed for the relations between companies to evolve at a slow pace. With the shortening of life cycle and time to market these relations have to evolve with a pace that approaches a need for real time creation of such relations (Philipson, 2008). The internet brings critical new functionalities to virtual enterprises by real time business dynamics and relations. A virtual enterprise is not necessarily a contrasting model to big business which can use it as a mode of activity.

One significant aspect of virtual enterprising is giving small companies the possibility to access economies of scale. It also contributes for small businesses to access complex intellectual assets. As many IT start-ups in the late 1990s have collapsed, online retailers have realized that the rules of traditional marketing may also apply to the online business. They create their online stores as places to sell products as well as to provide service and enhance long-term customer relationships (Wang and Head, 2007). This contemporary approach is based on the premise that building consumer satisfaction and long-term relationship lead to repeat visit and purchase. These are chain effects of IT-enabled services affecting online business performance (Ayanso et al., 2008). Many online firms are then investing in the implementation of IT-enabled tools to enhance their online service and website interactivity.

This article emphasises the business potential of e-CRM (electronic Customer Relationship Management) and CMS (Content Management) systems as an integrated approach to identifying, acquiring and retaining customers. It acknowledges that a commitment to e-CRM with dynamic content requires from managers to analyse customer data and use a combination of financial and customer based metrics for e-CRM effectiveness. CRM helps business use technology and human resources to gain insight into the behaviour of customers and their relative value. This constitutes the heart of today's businesses success, so a correct implementation of e-CRM platforms can have a positive impact on the efficiency of their whole activity. By enabling companies to manage and coordinate customer interactivity across multiple channels, departments, lines of business, e-CRM helps them maximize the value of every customer interaction and drive high corporate performance.

Background

ElectronicCRM (e-CRM) is customer relationship management over the internet and extranet platforms. Most CRM systems have one or more web-based applications for selling to or supporting the customer, so the terms e-CRM and CRM are used interchangeably. If this is combined with a CMS which enables building web sites and powerful online applications with a very high level of content organization, many competitive aspects including efficiency and flexibility are achieved. For example *Joomla*, a very popular content managing tool and open source (freely available), has been used for government applications, corporate extranets, organizational web sites, community-based portals, e-commerce and online reservations. A content management system keeps track of every piece of content on a web site, much like a local public library keeps track of books and stores them. Content can be simple text, documents, photos, music, video or other types of data. A major advantage of using a CMS is that it requires almost no technical skill or knowledge to manage, since it manages all the content. The core *Joomla* framework enables developers to quickly and easily build:

- inventory control systems;
- data reporting tools;
- application bridges;
- custom product catalogs;
- integrated e-commerce systems;
- complex business directories;
- reservation systems;
- communication tools.

Recent studies have examined the direct impacts of multiple channel strategies on relationship marketing (Wallace et al., 2004). Among several tools that firms apply on their websites are e-CRM and CMS. CRM has been defined in different ways, but there are two main approaches to define it: management and information technology. For the management focus, which is emphasised in this work, CRM stands for customer relationship management as an integrated approach to identifying, acquiring and retaining customers. By enabling organizations to manage and coordinate customer interactivity across multiple channels, departments, lines of business, CRM helps organizations maximize the value of every customer interaction and drive high corporate performance. CRM is a strategy used to learn more about customers' needs and behaviors in order to develop stronger relationships with them. CRM helps businesses use technology and human resources to gain insight into the behaviour of customers and the value of those customers, which constitutes the heart of today's business success (Roh, 2005). Thus e-CRM plays an important role in the process of managing the activity of e-commerce websites.

Correct implementation of information technology in e-commerce websites design can have a positive effect on not only data processing, but also on the efficiency of their whole activity (Ellatif, 2007). e-CRM features range from advanced applications, such as database-driven product customization tools, to simple ones as a line of contact information on a webpage. e-CRM can effectively provide better service, make call centers more efficient, cross sell products more effectively, help sales staff negotiate faster, simplify marketing and sales processes, increase customer revenues, discover and retain customers. And CMS systems can contribute to enhance the potential of personalization that these online features can entail. Their focus is on content management, which combines technology and business processes to effectively manage and deliver large amounts of diverse information to different media (Forsyth, 2004). This kind of systems determine the structure of a website, its appearance and the site navigation provided to users. This involves a holistic approach to building websites in order to match their businesses to what business partners and customers want by providing the dynamic creation, distribution and publishing of information on the website. Features like online forums, live chats, social networking are explored in order to enhance the shopping experience of customers and strengthen long-term relationships with them (Piccoli et al., 2004). CMS can build a motivating force for consumers to purchase and return to the website in the future.

Internet interactive applications and web technologies have changed the way of doing processes in all business, especially in the e-commerce websites industry. Due to its information intensive nature, e-commerce websites design can benefit greatly from the internet. This platform offers firms new opportunities to enhance customers' satisfaction and gain competitive advantage by providing their needs through internet-based services. As e-CRM integrates all customer-related processes through the internet, it helps leverage integrated information on customers and improve

customer acquisition, development and retention by managing deep long-lasting relationships. Firms can understand customer behaviour and anticipate customer preferences more easily than before through better online tracking and analysing. For instance, analytical CRM is viewed as a continuous process with the intention of identifying and understanding customer demographics pattern of purchasing in order to create new business opportunities.

Issues and Controversies

It is not clear how exactly e-CRM and CMS systems improve customer satisfaction and business performance. Recent studies have provided some empirical evidence that describes direct and indirect effects of these systems on customers' satisfaction and sales performance (Ayanso et al., 2008; Ellatif, 2007). These works examine the linkages between online features and consumer decision to purchase and repeat visit to a website. The existing literature in online retailing classify the essential online features in two main categories: customer service management and content management. Customer satisfaction is the mediating force in the relationship between those two categories of IT-enabled services and online sales performance. A large set of literature focus on strategies to help online businesses improve the quality and creativity of their products and services in order to increase customer loyalty. In modern web-based retailing these strategies are implemented around IT-enabled services related with: information content management, search mechanisms, service quality and website interactivity (Chu et al., 2007). Customer service management and content management are among the key issues emphasised in the research on e-service quality. According to Collier and Bienstock (2006) credibility, usability and content are the main indicators used to measure service quality on a website. The content dimension is related to the site's management of accurate product information and personalization. The credibility dimension is related to the quality of customer service. These authors also refer the award for the world best websites which has identified content and customer service functions as key dimensions of online business dynamics.

Technology can play an important role in enhancing customer shopping experience. With the increasing competition in the online retail market, e-commerce has shifted its focus beyond the technological factors of business to the approach that better understands customer's behaviour and experience (Moe and Fader, 2004). One of the goals of implementing IT-enabled services is to add value for customers, derived from online features such as product information, visualization and search tools. Most of the features now designed to improve online businesses are related to content management systems such as: interactive catalogs, customization, multimedia and personalization tools. However, several mentioned authors acknowledge that there is few empirical evidence of how these online features really impact on consumer decisions and drive sales performance. Jun et al. (2004) argue that most important factors that make customers return to a retail website are its dynamic and accessible content in a well structured layout which form a central building block of a content management system. Also online customer management systems are crucial to the success of online retailers. The responsiveness of online customer services is among the most important attributes valued by consumers (Griffith and Krampf, 1998). The Ayanso et al. (2008) study, based on real data from a large number of top performing web retailers, gives empirical evidence that the effort to improve customer service and content management systems is positively related to both customer loyalty and online sales performance. An important step in building more dynamic businesses is to employ innovative

strategies based on the use of modern information and communication technologies. Especially the presence of IT-enabled customer service and content management functions creates a dynamic business environment, as reflected in customers' decision to spend more and frequently visit websites that deploy these two functions (Ayanso et al., 2008). The specific functionalities mentioned so far may not represent an exhaustive list of online features implemented by all web retailers. There are other aspects designed to improve customer service management and content management systems.

For example, the Ratio One with WebtraffIQ is a tool for web analysis/metrics that specially captures benefits of combining e-CRM with CMS functions. It verified that by putting these two skill sets together, a fuller service emerges. They then offer a tremendous opportunity to develop products and services in line with changing customer needs. With the increased use of integrated web systems and information systems, it is apparent that more sectors require robust online features that are flexible enough to operate with them easily and creatively. Then many organizations will adopt similar process integration as more useful data becomes available on time. It is crucial to know and respond to how clients navigate and interact with internet, intranet, extranet and related technologies in order to deliver even more cost effective services at an even higher standard. The worth of information system's investment lies in knowledge rather than in technologies or systems. Those combined functionalities help people find, use and manipulate this knowledge more effectively in order to improve productivity. The next table shows some impacts and benefits of applying or combining e-CRM and CMS systems from real cases:

Table 1 – Cases with positive impact in combining e-CRM and CMS

Source: own

Cases / Systems	Benefits of combining e-CRM and CMS
WebtraffIQ	web analytics and measurement email tracking real-time visitor tracking higher portfolio of services
EasyConsole	integrated service and view across all touch points (email, fax, sms, phone, web) flexible, open and customisable structures granular client-specific transaction request
Enterprises: AFC (real estate); Algarsonic (Telecommunications); Freie Universität Berlin (learning and webpresence); Gesundheit Nord (clinics); Hannover Re (reinsurance); Yamaha Holding Europe (music); among others	uniformity and standardization of information and process integration of activities in the same platform higher efficiency and agility in resource management and higher business dynamics, services and products better articulation of strategies (internally and with partners) total tracking of products, stocks and documents from their origin until their supply to stores or clients total automation of business analysis and business reporting

Based on the comparison of real cases and experiences, a very important aspect to consider is the time spent in parametrizing the system and training employees. This should take 6 to 9 months, however if it takes more it is necessary to evaluate the investment using some economic indicators like ROI (return on investment) together with tools of web metrics/analytics like WebtraffIQ. There is a general obstacle related with some resistance to change, as some employees prefer the previous system as they were used to it, even with all its inefficiencies. Other obstacles refer to some dependence on the firm that supply the system, implement and support it (such as SAP, ORACLE, etc.). One tendency that tries to overcome this limitation is the increasing development and application of tools like agile methods and UML (unified modelling language). Their aim consists on embedding code in the architectural objects that create and relate the system's functions with the business entities through data and procedure fluids. This gives the manager and his collaborators a simple and easy tool to understand and develop the system without depending only on specialized firms. The main advantage is its dynamic structure based on several easy diagrams (behaviour, communication, interaction diagrams) in order to help simulations that generate automatically the code that perform the routines designed in those diagrams.

Solutions and Recommendations

Successful organizations have to manage a lot of data. This exists in many forms and must be accessible to more people in an organization. Most of this data is also very time-sensitive and security-sensitive. Today, decision-making processes in companies are characterised by the fact that an increasing amount of information must be acquired, analysed and interpreted in lesser time. According to surveys by the Gartner Group, the information quantity in a company increases annually by approximately 20 percent. Company-wide content management is necessary to channel this flood of information and process it in a goal-oriented manner. Company data can include website content, billing data, calendars, project folders and files, computer file servers for storing important documents and forms, and email programs for storing messages and contact lists. With the sheer volume of this data increasing exponentially, the need for every person in an organisation to have some level of access to the data also increases. Juggling all of this electronic data and paper can lead to lost information, missed communication, many small notes and pieces of paper, and a lack of good customer service and employee accountability. It also requires more meetings to get employees refocused on the tasks at hand. Frequent meetings are sometimes impractical for companies that have several offices in different locations. However, meetings without tracking and accountability are also less productive.

If they don't constantly invest in improving their process of managing their data, they would quickly become paralysed. Building custom software systems to accomplish this can become so large and complex that the software and hardware requires an 'army' of engineers and consultants to manage it. The cost of this type of solutions is staggering. Small to medium businesses also need a way to organise and manage their important data, but on a smaller scale and without the expense of hiring costly consultants or paying for maintenance contracts. Unfortunately, the approach of building and managing a custom software solution is financially out of reach for small to medium-sized companies, and is also not practical. Therefore companies are moving to web-based software as it can eliminate the need to purchase and manage computer servers, firewalls, routers, and software servers just to run the application. A broadband (high-speed)

connection to the Internet is recommended for sustaining a design in a very modular way, which allows for tremendous flexibility in building intranets that meet the needs of a particular industry. Modules can be mixed and matched to meet a particular need as they keep the intranet free from clutter because firms configure just the features they wish in their intranets. The applications built in a modular way can be combined to form an application suite which is best used as a company intranet. Unlike most websites that are publicly accessible, an intranet is a website that is for use within a company, and is secured with password-protected group and user level access, SSL encryption or IP filtering. This allows control over which computers or which users have access to the system. Intranets can be configured to be accessible from anywhere in the world using a web browser, cell phone, or a PDA (personal digital assistant). In order to explore the business potential and competitive advantage of e-CRM and CMS systems, firms are integrating these functionalities into their intranets. The increasing demand on modern management systems like ERP, CRM, SCM and CMS go far beyond simple information management. Nowadays, the integration of applications and processes in a personalized environment is state of the art. Mobile ubiquitous platforms, based on e-CRM features, are the emergent way of doing innovative sustainable business. The next table shows the main strategic and technological differences between CRM and e-CRM:

Table 2 – Main differences between CRM and e-CRM
 Source: Adapted (Chandra and Strickland, 2004; Vrechopoulos, 2007)

Aspect	CRM	E-CRM
	Strategic Differences	
Objective	Development and maintenance of mutually beneficial long-term relationships with customers	Uses digital processes, data and applications to integrate customer information at every touch-point in the context of multichannel retailing
Initial contact	Customer contact initiated through traditional means: retail store, telephone or fax	Contact initiated through the internet, e-mail, wireless, mobile or PDA access
Perspective	It is more a system strategy: emphasis on operational and technological aspects of CRM	It is more a business strategy: integrates a firm's entire supply chain to enhance customer value; aligned with customer strategies and marketing plan
Focus	Designed around products and processes (internal). Web-enabled applications are designed around one department or business unit	Designed around customer's needs (external). Enterprise wide portals are designed and not limited to one department or business unit
	Technological Differences	
Interface	Works with back-end applications through ERP systems	Designed for front-end applications which interface with back-end through ERP systems and data warehouses
Functionality	Web-enabled applications require a client computer to download	No such requirement; the browser is the customer's portal to e-CRM

Customization	various applications Different audiences require different types of information. But personalized views are made through programming	Highly individualized views based on preferences are possible. Each audience individually customizes the views
Implementation	Is longer; management is costly as the system is situated at various locations and several servers	Less time and cost involved; system can be managed in one location and on one server

Future Trends

Revolution in Business Dynamics

Having solved their back-end problems through ERP systems and data warehouses, many companies are now focusing on solving their front-end problems with e-CRM. Based on Table 1 one can recognise e-CRM as a new generation of CRM systems (Chandra and Strickland, 2004) with advances that definitely improve business dynamics and competitiveness:

- a single integrated service and view of each customer across all touch-points (e-mail, fax, sms, phone, web, etc.);
- effectively 'know your customers' to effectively satisfy and respond to their current and future needs;
- make effective business decisions/intelligent recommendations to further enhance the customer-centric decisions;
- efficiently gauge the ideal timing for new service introduction, drive increased customer satisfaction in the service centre and generate incremental revenue with intelligent service cross-sell and up-sell at the point of service;
- inspire greater brand, service and corporate awareness;
- low cost of ownership through a flexible, open architecture and productive implementation tools.

An e-CRM which in turn integrates a CMS can combine the features of the company intranet with sales force automated mobility, project management, relationship marketing, document management, messaging, news, calendars, all in one easy to use interface. Enterprise content management software with an innovative, intuitively operable user interface offers an enormous potential to demanding content management projects through the integration of data, applications and processes in web-based information portals. But only direct access to all important resources achieved in this way makes it possible to fully use the potential of a content management solution. Flexible and extensive personalization and access control functions enable the implementation of customized dynamic portals. CMS should integrate with existing IT

infrastructures as users continue to use office applications they are comfortable with to create and edit all types of content. The consistent use of open standards and the support of open-source web technologies make content management solutions more scalable having a long-term perspective as they protect the investment in future. The CMS open interface ensures a more effective communication with applications vital for the company such as ERP and CRM systems. e-CRM is the application of e-business digital activities that require open interface-based processes, data and applications. This is an increasing requirement as it integrates customer information collected at every customer touch-point in the context of multi-channel retailing (internet, web, mobile, call centres, sales force, PoS at the physical store, digital interactive TV). e-CRM with CMS are designed to align business strategy with information system and marketing strategies. A solution based on e-CRM with CMS can have a great potential for enterprises in modern dynamic businesses: instead of 'pushing' products it can support long-term customer relationships, as it allows firms to leverage their resources by applying them disproportionately to the most profitable customers.

Focus on profitable customers is not new, what is new is that information/communication technologies allow firms to identify high-value customers and respond with customized offers in real-time. Focus on acquiring new customers, which is more expensive, gives place to retaining and building business with fewer loyal high-value customers through:

- reduced promotion costs;
- higher response rates to promotional efforts;
- effectiveness of sales teams that know customers better;
- loyal customers that cost less to service;
- increasing up and cross selling.

According to Vrechopoulos (2007), e-CRM could be the 5th 'P' of marketing mix (besides price, place, product, promotion) because of its emphasis on long-term relationships and one-to-one interactions through communication channels. The main results that justify its importance are:

- Increase order size through more effectively targeted cross-sell promotions;
- Expand wallet share by increasing the variety of products and categories customers buy;
- Better tracking and tracing of products;
- Move overstocks by knowing which customers will buy them at least price to avoid deep discounting;
- Enable multi-channel coordination of field sales, inside sales, e-commerce and direct mail through relevant product recommendations for each customer interaction.

Today, business activity is very high volume with increasingly rapid and global distribution channels. Companies launch a wider variety of often more complex products what results in shorter product life cycles. These trends are increasing the potential impact on economic stability as well as the threat to product brand value. As globalisation continues, entrepreneurs are deploying new, higher functionality business systems that can provide a 'single system of record'. However, without more highly automated tracking and tracing integrated to this single system of record, it will lack the accuracy and robustness to pass the corporate risk-mitigating due to diligence of businesses today. The system should have the ability to monitor the functioning of all online platforms and it should include tested interfaces to other systems such as control, production management, ERP and data warehouse management. It should be able to download product and label information without manual intervention, from a business system to the factory system. And it should be capable of automatically generating product and shipping reports. In addition, it must support high data collection and real-time operations. The system software require facilities to support client-specific data customization and regulation. Finally, the system should have fully automated enterprise-wide product change management through CMS systems.

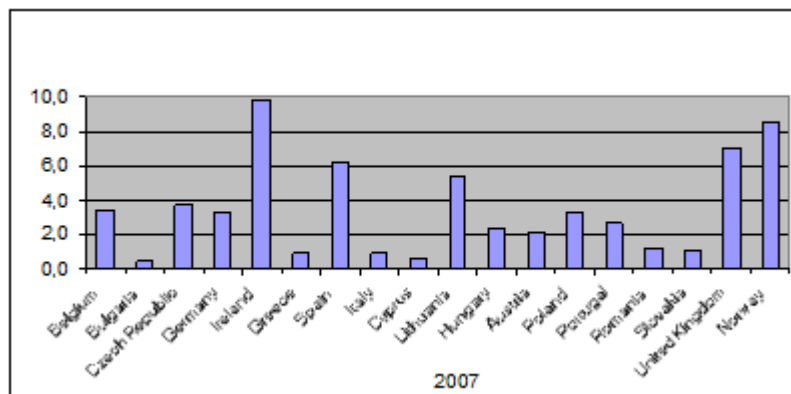
Factors to consider in e-CRM adoption

There are some aspects to consider that slow e-CRM adoption and explain the existing heterogeneity among countries. One is related with several features of e-commerce websites quality (trust, response time, security, usability, payment protection, etc.). Even if the adoption of electronic communication tools is relatively fast throughout Europe, the practices of consumption still evolve slowly. When European citizens were asked why they don't order goods or services via internet, between 25% (Denmark) and 90% (Portugal) of the individuals surveyed answered that they preferred to go shop in person and to see the product. This is the most frequently given reason, regardless of the country observed. Between 10% (Latvia) and 70% (Finland) worry about security problems on Internet and are reluctant to disclose their credit card number online. Noticeable differences also occur when it comes to the supply of personal details over the internet: whereas in Portugal, this reason is mentioned by 52% of those internet users that never bought anything over the web, it appears only to be the case for only 5.4% in Denmark (Eurostat, 2007). These three elements are the main concerns in the individual countries. Conversely, internet 'non-buyers' rate worries about not receiving the ordered goods at home or concerns on returning goods at a much lower level.

The use of a website by enterprises is a step forward in e-business, as it involves a more active role than just using an internet connection. The overall percentage of enterprises in the EU with a website is 61%, but notably higher for larger enterprises with 90% for large and 79% for medium-sized enterprises. The same analysis of adoption levels for the existence of a website shows that all European countries appear to be in the fast progressing phase of the technology diffusion. Even leader countries Sweden and Denmark seem to be still in this zone of the S-shaped adoption curve. It appears that some progress can be expected in the adoption of websites, especially for smaller enterprises. But internet and websites are not enough for e-business. Enterprises need to use more of the technological potential in order to reap all the benefits. When it comes to using the internet and other external computer connections for doing business, the most prominent activity is e-commerce. The percentage of enterprises which placed orders via computer networks was particularly high in the UK, where half of the enterprises did so.

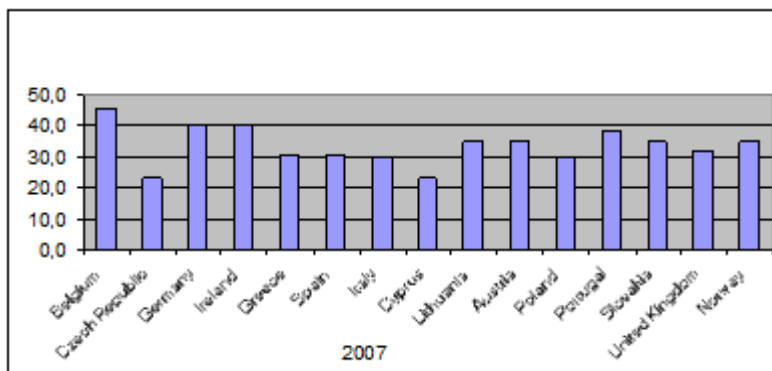
Germany, Ireland and Sweden followed, all with 41%. Overall, 24% of enterprises in the EU were making purchases online. When looking at online sales, there is a marked difference. Only 12% of enterprises engaged in that activity. Adoption of online sales can be more complex than purchases, as it can entail a new business model for the enterprise. This aspect reflects on other differences between countries, such as the percentage of enterprises' turnover from e-commerce:

Figure 1 - Percentage of enterprises' total turnover from e-commerce
Source: Eurostat, 2007



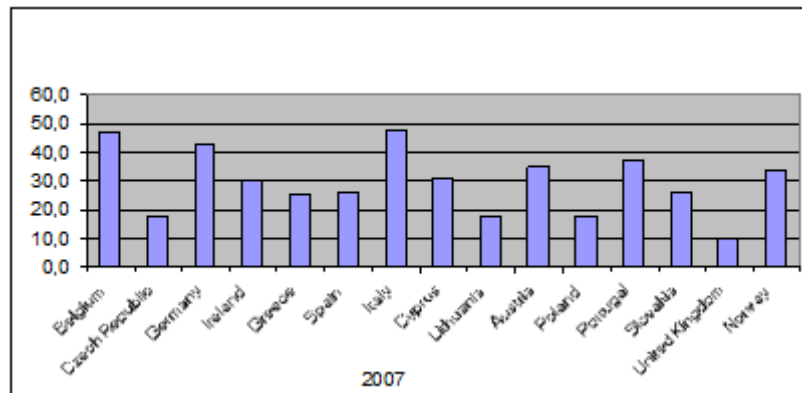
The benefits of the use of information and communication technologies by enterprises in running their business go beyond making purchases or sales online. The use of computer networks internally in the enterprise is believed to yield potential gains in productivity. The adoption of internal computer networks is a first step towards the computer integration of business processes. Analysis of the adoption curve for Local Area Networks (LANs) indicates that all EU countries are in the fast growing zone of the curve. This reflects the fact that adoption levels are still low among small enterprises (60%), as for medium-sized and large enterprises the percentages already reach 85% and 95% respectively. An intranet is a specific application of the internal computer network which serves as a communication tool within the enterprise. Around one third of enterprises in the EU use an intranet, ranging from 13% in Hungary to 46% in Belgium. This is half of those which have an internal computer network. The sectoral pattern for the adoption of LANs and intranets are not very different. The use of these technologies is particularly frequent among enterprises engaged in service activities. In the business services sector, the rate is 77% of enterprises for LANs and 45% for intranets.

Figure 2 - Percentage of enterprises with an intranet
Source: Eurostat, 2007



One of the most important applications of computer networks is to integrate business processes. Such process integration potentially streamlines and boosts the efficiency of the enterprise. There are several ways in which business processes can be integrated. One of them is the automatic linking of different processes, information systems or business functions of the enterprise. In order to measure internal integration of business processes (business processes within the enterprise, as opposed to external integration, where several enterprises are involved), the Eurostat community survey measures automatic linking between computer systems to manage orders (placed or received) and three other internal systems: re-ordering of replacement supplies; invoicing and payment; and management of production, logistics or service operations. Around one third of enterprises in the EU automatically link their computer system to manage orders with at least one of those three systems. However, there are marked differences between enterprises of different sizes: 68% of large enterprises in the EU integrate internally, while less than half of small firms are doing so.

Figure 3 – Percentage of enterprises with internal integration of business processes
Source: Eurostat, 2007



Approach to Measuring e-CRM Effectiveness

Other important factor to consider is related with what Coltman and Dolnicar (2007) have analysed about the heterogeneity of e-CRM performance at the individual firm level. For instance they verified that it differs between organizations that operate within the same line of business and have access to the same information and technologies. Given the potential of e-CRM as a powerful tool to guide customer-oriented thinking and analysis, greater empirical attention is required. Without sufficient evidence, managers are prone to making investment decisions that are neither efficient nor effective. One of the problems with measuring e-CRM is that the concept often means different things to different people. And other is that these investments have items that are quite different from other assets, resources and capabilities investments. As CRM systems provide techniques to customize relationships, the operational goal of treating customers differently is achieved as they know their different levels of relationship development. This enables the firm to pitch marketing programs at target customer markets. However, in many cases related IT investments have proven to be a source of intense frustration to managers. Many organizations simply do not have the capabilities to implement sophisticated marketing programs

(Coltman and Dolnicar, 2007). Their information systems, customer databases and the software to manipulate customer data is not designed to support widely accessible customer data. Even the culture and power structure can also create barriers to the organizational change required to support e-CRM strategy. The aspects pointed here highlight an important role for managerial discretion, which is practically relevant to the e-CRM payoff.

According to Vrechopoulos (2007) the features and tools that firms can increasingly manipulate are those attributes controlled by the retailer (customer service through call centres, personalized marketing campaigns, individualized selling proposals, loyalty scheme programs, time to answer incoming mails, integration with ERP systems, promotional programs, etc.). And the dependent variables are those attributes that refer to consumer behaviour (sales, revisit rate, share of wallet, number of new customers referred from partner sites, campaign response, rate of customer recovery, prospect conversion rate, customer up and cross-sell rate, average order value, satisfaction, loyalty, trust, perceived service quality, time spent within the store, current customer retention cost, number of low-value customers move to high value, etc.).

To understand how the role of managerial discretion plays out in determining e-CRM performance, Coltman and Dolnicar (2007) measured managerial beliefs against a set of attitudinal questions related to various external conditions and internal constraints. For example, if e-CRM implementation would:

- receive support by managers in other departments;
- face major technological and organizational constraints;
- provide joint profit opportunity for the firm and customers;
- provide individual customization;
- reduce the power of buyers;
- provide a strategic advantage over e-business start-ups.

Topology-representing networks were used to group the cases (answers) into a predefined number of clusters while simultaneously arranging those clusters to topologically represent the similarities between the resulting attitudinal segments. This analysis was chosen because it outperforms alternative partitioning algorithms in an extensive comparison using artificial data sets. The results obtained by Coltman and Dolnicar (2007) in their study confirm the importance of implementation constraints and organizational assets to financial and operational performance. They also highlight differences in the type of relationship exchange that appear to explain why managers in a certain segment have strong reservations about the strategic potential in e-CRM. This indicates that managerial judgement is an important competence that is under emphasized in the literature. If an organization does not have the skills and mind-set to execute an e-CRM strategy, then it is better to choose another option.

This analysis is consistent with recent works like the one by Nohria et al. (2003) about the role of strategy against implementation. These authors have tested that it matters less which strategy is picked by a firm as long as implementation is successfully achievable. Indeed, environments like e-CRM where the linkages and between actions and outcomes are often uncertain, the research framework must be increasingly explicit. Especially marketing researchers have access to a set of measurement techniques (discrete choice modelling, structural equations for measuring consumer behaviour, etc.) that can be used to model and understand better the role of managerial judgement and organizational culture. This will shed new light on a source of relevant data about the potential of e-CRM for more dynamic businesses and how firms can effectively succeed on exploiting e-CRM for new business models and opportunities.

Conclusion

Today's competition is tough and global, and that especially holds true for internet offerings. It is therefore vital to continuously reach out to prospects, convert them into customers, and finally to ensure their loyalty in the long run. Meeting and mastering these challenges is essential to maintaining a long-term competitive edge. Content management systems (CMS) and electronic customer relationship management systems (e-CRM) put enterprises in a position to develop simple but comprehensive solutions to ensure customer loyalty that help realize synergies between their IT systems for greater efficiency and effectiveness. This high-tech approach is neither high-maintenance nor high-priced. A hosted e-CRM service eliminates much of the start-up, maintenance and upgrade fees of its on-premise counterparts. Rather it offers a cheaper, faster and easier means of tracking consumers.

In a rapidly changing global business marketplace, it is realized that there are subtle and complex changes in relationship marketing directly impacting the brand equity, owing mainly to an unprecedented glut in communications and information channel like the internet. Add to this the typical consumer's desire to move across media while expecting seamless, consistent services. It is a deep challenge to attract, serve and retain the consumers profitably today. Essentially, e-CRM helps in enabling a customer oriented organization to deliver an extended infrastructure to customers and partners in new ways: to proactively learn customer needs, design new added values, gain new economies in scale/time/costs, reach new customers, and deploy innovative retention strategies. Like many of its predecessors, e-CRM is a term that is tied to a great deal of hype and confusing messages. This article attempts to provide a framework for understanding it, especially that a commitment to true CRM implies the ability to analyse customer data and to use a combination of financial and customer based metrics for decision-making. Back office applications such as ERP require the same types of tools. The developments that streamline online shopping provide a rich source of information just waiting to be mined for business advantage. With every click, consumers provide information about themselves. Internet sites, web browsers and databases help in determining the most worthwhile business practices by giving important details such as product needs, spending patterns and shopping habits.

For example, in 2006 US retail websites enjoyed \$102.1 billion in sales from consumers, reflecting a 24% increase over 2005's figures. Web-based technologies offer a wealth of sales opportunities. Without e-CRM and CMS firms are just selling themselves short. In this pace

consumer is not the passive target of a sales pitch designed to provoke a desired response. Today's internet shopping experience represents a flipping of conventional roles. Customers act rather than react, voluntarily initiating the transactions. Although a firm's products or services are at the fingertips of potential customers actively searching for them, so are those of every other online company. To survive in this fiercely competitive scene, firms must understand, embrace and exploit this virtual reality. Intranets and the internet have taken on strategic importance for many enterprises. That goes hand-in-hand with mounting demands related to quality, currency and efficiency and an increasing volume of electronic content that can only be handled using content management systems or solutions that do an optimal job of modelling individual requirements and goals. CMS with online editing system support customers throughout the process of selecting, customizing and developing additional components, rolling the system out and providing ongoing support. Thus these systems are the foundation of intranet or internet presence portals with personalized content for increased acceptance and success. The contribution of e-CRM and CMS can only be realized by understanding the driving factors behind them. In today's competitive world, maintaining direct and interactive communication with customers is crucial. Better customer services provide opportunities for increasing revenue from existing sources as well as new. By creating innovative ways to make new relationships and persuading old ones to buy online, a company can greatly improve its revenue base. A possible after-effect of this action is the chance to bypass any intermediary points of contact. Companies are always on the lookout for ways to cut internal information processing costs. Companies can pass on low value tasks like creating and updating of databases to their customers through use of an efficient e-business technology system.

Technology has not diminished the importance of maintaining a personal relationship with every customer. In fact, cyberspace offers buyers so much freedom of choice that a meaningful buyer-seller bond is what sets successful businesses apart from their rivals. Meaningfulness differs among customers but by recording, analyzing and retrieving important data, e-CRM and CMS offer communication and information on the right topic, in the right amount and at the right time to fit the customer's specific needs. Gaining and retaining customers is imperative for all businesses. Unlike traditional methods, with e-CRM and CMS the ways to gain and retain customers take another shape: these include online promotion campaigns, online customer database and customer profiling, sending interactive customer feedbacks and tracking visitor behavior on websites. A company can succeed if it has a better understanding of its consumers, their needs and the value they generate. Organizations may also include several e-business methods for identifying and interacting with customers. These might include the creation of communities of interest, offers of special conditions, personalization of customer communication, use of customer feedback and personalized customer support. With e-CRM companies can now offer more products and services by cross-selling and up-selling. By analyzing customer preferences, companies can create customized service bundles. This can be exemplified by considering travel websites: apart from selling travel services, they can also sell various side products like travel books, insurance, hotel rooms, hire cars and much more. This certainly can not happen through traditional CRM where the main task is to sell tickets. Better pricing and post-sales service support are other benefits arising from implementing e-CRM. The internet's dynamic nature has the potential to capture customer concerns and frustrations in real-time, ultimately helping companies to respond effectively.

Overall business goals must be kept in mind when choosing an e-CRM application. The application's compatibility with people and processes that support those goals is of utmost importance. Choosing an e-CRM application is not a simple task, but there are several yardsticks with which to measure the productiveness of an application: within a company, tracking information on individual customers and making it accessible through various levels is crucial to building customer loyalty. Automating customer interaction can help companies to handle customer requests and complaints effectively and efficiently. Any CRM system should be able to systemize these processes to ensure consistently high service levels, quick response times, full accountability and prompt problem resolution. A successful CRM application provides analysis of customer data to help with the optimal allocation of personnel and other resources to encourage a customer-centric corporate culture. Applying e-CRM, a company can better analyze new opportunities for revenue growth and cost cutting, determine where its best customers come from, how to keep them and how to find more.

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