ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT (eCRM): OPPORTUNITIES AND CHALLENGES IN A DIGITAL WORLD

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Electronic customer relationship management (eCRM) is seen to arise from the consolidation of traditional CRM with the e-business applications marketplace and has created a flurry of activity among companies. eCRM is the proverbial double-edged sword, presenting both opportunities and challenges for companies considering its adoption and implementation. This paper explores the marketing opportunities eCRM creates for companies such as enhanced customer interactions and relationships as well as personalisation options, all of which are potential sources of competitive advantage. It also explores the challenges confronting companies implementing eCRM such as managing an on-line channel, data integration issues and information technology (IT) architecture challenges. Directions for future research are also suggested.

Introduction

Customer relationship management (CRM) is about identifying a company's best customers and maximising the value from them by satisfying and retaining them. As a business philosophy CRM is seen to be firmly rooted in the concept of relationship marketing, which is aimed at improving long-run profitability by shifting from transaction based marketing to customer retention through effective management of customer relationships (Christopher et al., 1991). Recently it has been acknowledged that company relationships with customers can be greatly improved by employing information technology (Karimi et al., 2001; Ryals and Payne, 2001) which can facilitate and enhance customer relationships in various ways but mainly enables companies to attain customisation, which is the essence of a customer-centric organisation (Stefanou et al., 2003).

In this context CRM has emerged as the ideal vehicle for implementing relationship marketing within companies, with some practitioners suggesting that CRM provides a platform for the operational manifestation of relationship marketing (Plakoyiannaki and Tzokas, 2002). For many organisations the most obvious way to implement CRM is through the use of software applications in the form of electronic customer relationship management (eCRM) technology.

This type of CRM software provides the functionality that enables a firm to make the customer the focal point of all organisational decisions (Nemati et al., 2003) and innovations in such technology and the Internet are just some of several factors that now make relationships through one-to-one initiatives a reality (Chen and Popovich, 2003). The Internet has allowed new patterns of intermediation to emerge, allowing firms to adopt CRM to focus on effective customer relationship management as well as harnessing the application of on-line technologies to facilitate customer supplier relationships (Wright et al., 2002).

The objective of this paper is to present a coherent view of eCRM technologies. It promotes the value of eCRM by exploring the opportunities created for companies and the net benefits they have realised in practice such as enhanced customer interactions and relationships, possibilities for personalisation and the creation of a competitive advantage in the marketplace. The discussion also acknowledges the formidable challenges which eCRM adoption and implementation pose for companies in the areas of customer relationships, managing on-line channels and data integration issues.

Exploring eCRM

eCRM describes the broad range of technologies used to support a company's CRM strategy. It can be seen to arise from the consolidation of traditional CRM with the e-business applications marketplace. Bradway and Purchia (2000) see eCRM as the intersection between two important indus-

try initiatives, the booming Internet market and the shifting focus to customer-centric strategies.

eCRM is sometimes referred to as web-enabled or web-based CRM and emerging from this view eCRM has been defined by Forrester Research (2001) as 'a web centric approach to synchronising customer relationships across communication channels, business functions and audiences'. Lee-Kelley et al. (2003, p. 241) highlight the relative lack of literature in this domain and suggest as a working definition that eCRM refers to 'the marketing activities, tools and techniques delivered via the Internet which includes email, world wide web, chat rooms, e-forums, etc., with a specific aim to locate, build and improve long term customer relationships to enhance their individual potential'.

Typically electronic and interactive media such as the Internet and email are seen as playing the most significant role in operationalising CRM as they support effective customised information between the organisation and customers. However, eCRM can also include other e-technologies and new e-channels including mobile telephony, customer call and contact centres and voice response systems. The use of these technologies and channels means that companies are managing customer interactions with either no human contact at all, or involving reduced levels of human intermediation on the supplier side (Anon, 2002).

The emergence of mobile commerce has led to the introduction of new products, new ways of selling products to customers and new learning curves for companies in terms of how to manage interactions with customers (Wright et al., 2002). For example, financial organisations across Europe are now beginning to take advantage of mobile marketing services and in particular mobile banking, based on wireless application protocol (WAP) technology, as a powerful new marketing tool to build long lasting and mutually rewarding relationships with new and existing customers (Rilvari, 2005). Most major banks are using mobile CRM in some form as a new channel for customer acquisition, as SMS text messaging is still in a growth mode in new market segments, and also to project a new image for the company. Mobile operators such as Vodafone and health care providers such as VHI have also used SMS text messaging to enhance customer relationships. Mobile channels, especially SMS, are seen as immediate, automated, reliable, personal and customised options providing an efficient way to reach customers directly (Sinisalo et al., 2005) and to manage customer relationships. In December 2003 the largest bank in Italy, Banca Intesa, announced it would introduce a comprehensive mobile banking service. Alongside SMS and WAP functions, multimedia messaging is also available for banking transactions for the first time in the world. The service is initially available to the bank's 500,000 on-line banking customers (Rilvari, 2005). Other sectors exploring mobile CRM include retailing. This implies that eCRM using mobile marketing may indeed offer an effective way to reach, and build relationships with, demanding customers in rapidly changing markets (Sinisalo et al., 2005).

Another e-technology offering companies opportunities for managing customer interactions is voice response systems. In 2004 eircom, Ireland's largest telecommunications company and former incumbent, introduced the user friendly eircom Voice Recognition (e-VR) '1901' system which uses the latest voice recognition technology, giving over one million eircom customers instant access to fault, billing, account and payment enquiries. The system handles over 100,000 calls per week. This has meant that many services are now available 24/7, which increases customers' choice of when they can conduct business with eircom. The specific goals of the project included driving costs out of the call centre, increasing customer service quality and also differentiating the eircom brand in a fiercely competitive marketplace.[1] This introduction demonstrates innovation in the management of business information and knowledge within eircom and has shown the positive impact that speech technology can have on business efficiency and customer service.

Since the on-line world and e-technologies have become such an integral part of day-to-day business and as they appeal to such a mass global universe of consumers, businesses are constantly searching for innovative yet cost-effective ways to reach remote customers, moving eCRM from a 'nice to have' methodology to a 'must have' meth-

1 Kainos, 'Kainos/eircom', www.kainos.com.

odology (Parekh, 2003). This paper now explores the opportunities and challenges facing companies engaging with eCRM technologies.

eCRM – Opportunities

eCRM is not here to change marketing but to enhance it by presenting opportunities to companies to improve their effectiveness and to deliver customer value (Scullin et al., 2004). It can reduce the costs involved in communicating to customers, optimise work flows as a result of integration with other enterprise systems, facilitate better market segmentation and enable enhanced customer interactions, relationship and personalisation opportunities (Adebanjo, 2003). The goal of eCRM systems is to improve customer service, retain valuable customers and to aid in providing analytical capabilities (Fjermestad and Romano, 2003) within an organisation.

CRM applications take full advantage of technology innovations with their ability to collect and analyse data on customer patterns, interpret customer behaviour, develop predictive models, respond with timely and effective customised communications and deliver product and service value to individual customers. Using technology to optimise interactions with customers' companies can create a 360-degree view of customers to learn from past interactions to optimise future ones (Chen and Popovich, 2003). It is also the infrastructure that enables the delineation of, and increases in, customer value and the correct means by which to motivate valuable customers to stay loyal (Fjermestad and Romano, 2003).

Industries that tend to be more eCRM ready are aware of distinct contact with customers, are very competitive and are constantly seeking differentiation (Ragins and Greco, 2003). eCRM can be used as an approach to relationship management with multiple stakeholders including customers, employees, channel partners and suppliers. Specific opportunities of eCRM highlighted here include enhanced customer interactions and relationships, managing customer touch points, personalisation options and leveraging eCRM capabilities as a potential source of competitive advantage.

Enhanced Customer Interactions and Relationships

Kalakota and Robinson (2001) suggest that eCRM involves three phases, all of which are designed to manage the customer life cycle and maximise customer lifetime value: acquiring new customers; enhancing the profitability of existing customers and retaining profitable customers for life. All of these phases are dependent on the quality of customer information and insight available to the organisation. By collecting information on-line the company has data that is already in a format to be pulled into its analytical processes without the steps of data entry necessary when collecting information through traditional channels. Streamlining of the data collection process enhances information quality and timeliness. The company can also capture more information through the on-line channel leading to better use of decision analytics to predict customer behavior, resulting in more targeted and customised relationship strategies. Through CRM the value of the relationship escalates for both parties: customers receive products and services more closely related to their needs and lifestyles and the organisation cultivates a base of high-value, low-risk customers.

Compaq is a good illustration of a company maximising efficiency through eCRM technology applications. Recognising it could learn from its rival Dell, Compaq responded to the challenge of eCRM by developing and employing electronic channels to fulfil customer orders through its reseller partners. Within the call centre agents now have a 'Centre Web' button on the screen which allows them to send a caller's information directly to a reseller's own website. Within six seconds a transfer of data has taken place with the reseller partner receiving a data set on the new lead. Partners can track the volume of leads they acquire and how well they are performing against customer requirements. The overall goal is to improve customer satisfaction (O'Rourke, 2003).

The core of the knowledge base in CRM systems consists of individual information items and dynamic knowledge bases which when properly designed and implemented can remove many of the administrative demands within organisations and present better information to customers at a lower cost (Ahn et al., 2003). Well defined segmentation will also lead to cost effective marketing efforts and increased profits. Coupled with other technology at the back end such as customer databases, warehousing and data mining, value adding and personalised products or services can

be offered which in turn create an edge over competing companies (Ab Hamid, 2005).

The approach to well defined segmentation facilitated by eCRM technology can be seen in the case of KPN Mobile N.V., a leading European mobile telecommunications network operator and provider of mobile voice and data services with over 15 million customers. As a result of high customer churn and low sales within the saturated mobile market, KPN turned its attention to its high-value customers and launched a CRM Implementation for Very Important Customers (CIVIC) programme. These customers were prioritised when calling the contact centre and routed immediately to a dedicated CIVIC team member. All details of the customer's history are shown on the agent's monitor including contact details, mobile call and service behaviour as well as ongoing campaigns and individual privileges to be offered. As a result of this initiative customer satisfaction ratings reached 90% and more and more contracts were being renewed. Success of the programme at KPN is measured using the following key performance indicators: reduction of customer churn, increased customer lifetime value and reduction of operational costs.[2]

Another company which has recently adopted eCRM technology is the engineering division of ESB International (ESBIEFM). The company recognised that it required a better understanding of customers and their expectations in order to focus the organisation's resources where they are most required. The business requirement for readily available real-time accurate information was identified as a priority. It was recognised and acknowledged that customer information and data acquired by customer-facing personnel and account managers should not reside with that person alone but should be a shared organizational asset available to relevant personnel within ESBIEFM and embedded within the company. ESBIEFM defined its eCRM needs as the development of a systematic approach to the management of its customers, aligned to objective metrics to monitor client satisfaction, delivering and exceeding specified levels of service provision and building and maintaining client relationships. The company selected an off-the-shelf software package to assist it in embedding aspects of best marketing practice as well as reducing development costs. The company chose a browser application as opposed to a stand-alone system so that it could be easily accessed by customer facing staff via laptops and other mobile devices worldwide (Kennedy et al., 2005).

Within ESBIEFM customer profiles have been developed and updated within the eCRM system and the company has been able to drill down into workflow processes in terms of managing projects from the first initial enquiry or contact through to developing the business proposal, winning the business, and through to signing the contract, follow-up and prospecting for repeat business. Approximately 500 customer profiles are currently on the system, which enables all customer issues to be tracked and monitored in order to determine and improve resolution timeframes with the aim of further improving customer service. Metrics emerging from the eCRM system focus on issues such as the success rates in winning business and measuring repeat business with customers. The system also allows tracking of issues with clients to ensure satisfaction. There are difficulties inherent in the process of defining metrics to be used given the diverse range of clients involved both domestically and internationally but these are under constant review (Kennedy et al., 2005).

It is obvious from these case examples that the Internet and other electronic channels now offer important new dimensions to customer interaction. With the advent of eCRM customer relationships have become more dynamic and interactive, allowing companies to use information to communicate better with customers. The Internet offers the possibility of implementing effective customer management operations through the use of IT applications. Now a company can track customer behaviour and use this data to maximise customer profitability and loyalty throughout the entire life cycle (Gurau et al., 2003).

Managing Customer Touch Points

Customers are moving between traditional and online channels with greater frequency when dealing with organisations. eCRM systems support multi-

2 Graham Technology, 'Powering Process. Powering Profitability', 'GT-X: An Eircom Case Study', www.gtnet.com.

channel touch points with the company and a key challenge is providing a consistent experience for the customer. Offering multiple interaction paths scores convenience points for customers but this benefit quickly evaporates if the customers are forced to repeat themselves because one part of the organisation is not synchronised with another.[2] Customers accustomed to real time information and responses must be catered for when they switch to an alternative channel. It shouldn't in principle make any difference whether a customer interacts with the company through the sales force, over the Web or indirectly through a reseller. For this reason effective multi-channel management has emerged as a hallmark of a successful CRM strategy (Crosby and Johnson, 2002) within organisations.

One of the greatest benefits of eCRM comes from using it to link every operation in a business that affects the customer experience. Technology allows companies to capture customer feedback at more of the 'touch points' between a company and its customers across channels and functions, for example meetings with sales people, customer service enquiries, Internet purchases and customer surveys to improve relationships and value for individual customers. However, as mentioned, providing such consistent and timely customer service becomes a complex process as customers increasingly make enquiries through these multiple channels and touch points. The increased number of communication channels heightened customer expectations of DHL, which addressed this issue through eCRM technology. The technology employed enables agents, partners, managers and other users to maintain a single view of all customer information, gain instant organisational knowledge and efficiently interact with customers across multiple communications channels. The ability to provide a single, enterprise-wide view of the customer has led to vast improvements in customer service and allowed the company to improve the bottom line at the same time.[3]

To achieve similar types of benefits companies need to be able to integrate all their customer databases to meet the needs of the customer who emails today and calls tomorrow. This will also allow companies to communicate with the customer more effectively and in the manner each individual customer prefers (Scullin et al., 2004), further enhancing the relationship.

Personalisation and e-Loyalty

With new eCRM technologies it becomes possible for a company to tailor the whole customer experience to the individual. Tailoring based on customer data, active personalisation, includes information content presented, the products offered and also advertising from other organisations. The existence of direct-to-customer channels is the key enabler for automated systems to be able to deliver highly relevant content because of the amount of data that can be collected (links clicked in emails, items viewed but not purchased on-line, etc.) (Anon, 2002). For example, every Amazon customer gets personal recommendations for books based on Amazon's personalisation technology. The personalised web pages of American Airlines have provided a source of competitive advantage in a fiercely competitive marketplace, as has the Hertz Rent a Car strategy with its unique service for preferred customers (Davids, 1999). Through such personalised websites customers are empowered to customise the site to suit their preferences and facilitate their navigation (Ab Hamid, 2005).

Internet-based CRM technology has allowed Nestlé to personalise its interactions with individual customers, cut the number of phone calls into its call centres and provide employees with one computer system to tap for information across numerous sales channels (Anon, 2001). Nestlé has also installed several web-based CRM systems to support customer loyalty and retention programmes such as Netspresso, an initiative rewarding frequent drinkers of the Nescafé brand. Lee-Kelley et al. (2003) investigated whether the use of on-line customer interaction information to deploy targeted personalised tools leads to loyalty on-line. The study found that eCRM could directly improve the loyalty levels of Internet customers. Salmen and Muir (2003) also demonstrate, through their study of Internet banking operations, that electronic customer care tools can be used to create customer e-loyalty in the banking field.

The knowledge management dimension of eCRM

2 Graham Technology, 'Powering Process. Powering Profitability', 'GT-X: An Eircom Case Study', www.gtnet.com.

3 DHL, http://www.dhl.com and http://www.ssaglobal.com/epiphany

implementation including data mining and personalisation has been shown in research to be a critical success factor for companies implementing eCRM (Chen & Chen, 2004). Weiss (1999) also suggests that such personalisation and on-line interactivity can be used to help build emotional connections with customers in ways that no other medium can. These relationships provide an opportunity for the company to realise economies of scope.

Leveraging eCRM as a Source of Competitive Advantage

When executed correctly eCRM implementations are designed as a digital loyalty cycle that continuously improves to create lasting competitive advantage. When a company uses eCRM technology and redefines its business processes in customer acquisition and retention, it strengthens its capabilities in key areas that determine a customer's purchase decision including pricing, product quality, marketing, sales and customer service to create a virtuous digital loyalty cycle (Anon, 2001).

For companies at the forefront of CRM development, opportunities exist to reinforce their competitive advantage through the extension of the customer-centric strategic orientation to incorporate innovative eCRM strategies and technologies. For example, eircom has adopted eCRM as a strategic imperative with net benefits for both the company and its customers. eircom's on-line sales and service channel, www.eircom.ie, was first developed as a high-level static marketing site in 1999 but since then has been upgraded to a fully integrated enterprise-scale portal application, incorporating a personalisation platform and content management system, which currently supports over 180,000 e-customers. The implementation of eCRM has dramatically reduced the cost of communicating with customers and has led to reduced administrative and operational costs. On-line transactions are fully integrated with eircom's core provisioning and other enterprise applications. eCRM has developed significant scalability benefits to the organisation in comparison to traditional call centre and sales force operations and the on-line channel is perfectly placed to positively meet any increased traffic.[2]

With eCRM customer-centric companies can use customer information to better manage pricing and marketing decisions in real time, and in the case of eircom e-customers are incentivised by reduced prices for a number of products and services on-line. All channels access eircom's core CRM application, making a 360-degree view of the customer possible. Key performance metrics include customer usage and an on-line satisfaction barometer. E-customer feedback is critically evaluated and used to constantly improve the e-customer offering. Strategic initiatives planned for the on-line channel include the integration of a sophisticated billing analysis tool and ongoing usability analysis. eircom is also turning its focus to re-engineering the corporate extranet experience to deliver the benefits of eCRM to its customer base.[2]

Challenges of eCRM

With eCRM customers drive the interaction deciding on the type and duration of contact permissible. The ability to create intimacy with the customer is limited and building trust can be difficult. When managing an on-line channel companies are faced with the fact that greater choice creates fickleness among customers and with the competition only one click away there are no second chances to recover mistakes in these remote channels (Fairhurst, 2001). Data integration and IT architecture challenges also exist for organisations adopting eCRM technologies.

Customer Interactions and Relationships

The use of an eCRM system enables traditional physical customer proximity to be substituted by digital proximity. The need for customer reassurance in the purchase decision can be exacerbated by new e-channels and needs to be addressed by the creation of, for example, on-line communities, on-line shop assistants, customer testimonials and general reassurance about buying strategies and purchase choices for customers (Anon, 2002). Salmen and Muir (2003) promote the value of creating further contact possibilities between customers, in this case banking customers, within the context of virtual communities in which customer experiences can be exchanged. The ability to create intimacy with the customer does not exist on-line and due to the remoteness of these channels building trust is more difficult, with the relationship element of eCRM harder to build

2 Graham Technology, 'Powering Process. Powering Profitability', 'GT-X: An Eircom Case Study', www.gtnet.com.

beyond a purely transactional one. In the absence of such trust it is harder to get customers to share the data which is essential to creating effective CRM strategies. Privacy policies and guarantees become an essential element in building trust and consequently effective eCRM initiatives for companies (Fairhurst, 2001).

Managing an On-Line Channel

Fairhurst (2001) sees eCRM as merely part of the bigger picture of enterprise–wide CRM, as CRM enabled by the use of new electronic and interactive media. The on-line channel is described by Parekh (2003) as merely one piece of the CRM puzzle but one which will become increasingly important for companies who must now learn to manage relationships with e-customers as these electronic channels mature and the e-customer base proliferates. eCRM is now a priority for the majority of companies as the impact of electronic initiatives on sales and service requirements continues in tandem with the increased levels of investments in Internet-related delivery made by companies (Parekh, 2003). eCRM can then be seen to provide a structure for the possible strategic evolution of a technology-mediated relationship marketing business framework. Kalakota and Robinson (2001) suggest that such a framework has three primary goals: using existing relationships to grow revenues; using integrated information for excellent service; and introducing consistent replicable channel processes and procedures. This orientation positions eCRM as an integration framework and a business strategy but not as a product in and of itself (Taylor and Hunter, 2002).

Companies cannot treat the Web as a single channel that stands in isolation from others. This new channel still needs traditional front and back office systems in place to make it function successfully. Companies setting up such new channels must make every possible effort to integrate them tightly with existing business processes and/or channels first. As interest has intensified in doing business on the Internet many companies have approached this as a separate project to their CRM strategy. Such an approach makes for an inconsistent and unsatisfactory customer experience which will not make any business successful (Bradshaw & Brash, 2001). The ability to match eCRM initiatives to an institution's own business model has emerged as a characteristic of successful companies in the eCRM arena (Bradway and Purchia, 2000). Bradshaw & Brash (2001) in their research of UK firms found that organisations addressed different customer facing processes (sales, marketing, services) and channels (call centre and Web) as separate projects, giving little chance of providing the customer with consistency. Companies were managing individual transactions and interactions when they should have been managing relationships.

Also the on-line channel must not be allowed to cannibalise other valuable customer contact points and should attract and retain only those customers best served through this contact point. In other scenarios traditional contact points may remain the most appropriate (Butler, 2000). For example, eircom views www.eircom.ie, its on-line sales and service channel, as a complementary rather than a competing customer channel to traditional contact points, which continue to service a large proportion of the customer base. Similar patterns can be seen within the provision of financial services and retailing in the marketplace, where a limited number of customer segments migrate to on-line delivery options. An associated challenge for companies is trying to assess eCRM performance. Traditional eCRM has proved difficult to assess in terms of company performance and return on investment (ROI); similarly companies need metrics to track the efficacy of their eCRM initiatives. Some research (Nemati et al., 2003) has incorporated specific benefits of eCRM such as ROI expectations, user satisfaction levels and the creation or absence of new sources of competitive advantage as survey research variables, but such research to date has been limited.

Challenges of Data Integration and IT Architecture

From a technology perspective an eCRM system represents a mass of seams that need to be tightly stitched together, in essence a mass of integration. No single software application is able to fill the gap, nor is it likely to be filled internally. To implement eCRM companies will need a variety of hardware/software applications and tools (Anon, 2002). This suggests significant resource and cost implications, which companies must incorporate into their overall strategic planning.

An eCRM system is also highly dependent on

neighbouring systems to be effective, for example: traditional 'front office' CRM which has to be consistent with an eCRM system at both data and process levels; back office systems which supply product availability and pricing information as well as previous customer transaction details; an existing data warehouse/mart consolidating customer related information; and finally Web content management and authoring tools (Anon, 2002). All of these linkages need to be effective and operational for eCRM to successfully impact company activities and will present a host of challenges as business processes may have to be modified. This reinforces the need for companies to have well-developed business processes and information and technology infrastructures on which to build and sustain eCRM competences (Fairhurst, 2001).

In the area of on-line retailing, Buy4Now, Ireland's on-line shopping centre, has successfully dealt with this data and systems integration challenge. Buy4Now has developed its own order fulfilment system (OFS4Now) which allows partner retailers to view orders on their websites. Retailers receive orders and then pick the items from the shop floor. As the orders are filled they are updated on the system so that the customer can view their order status. Updates to the OFS4Now system link to the warehouse system operated by Buy4Now Logistics and to the Buy4Now portal and call centre system, allowing customer queries to be efficiently and effectively dealt with, increasing the level of customer service offered and enhancing customer relationships (Kennedy and Coughlan, 2004).

Integrating data from multiple sources, both on-line and off-line channels, is a critical issue in facilitating successful and valuable eCRM analytics (Nemati et al., 2003) but will represent a challenge for even the most progressive of companies initially. Nemati et al. (2003) suggest that although on-line, off-line and external data integration has its complexities, the value added is significant. Their research suggests that companies integrating data from various customer touch points achieve significant benefits with higher user satisfaction and ROI rates than companies that do not deal with the data integration challenge. However, having access to and managing technology is only half the battle. Bradway and Purchia (2000) see the ability to effectively integrate eCRM with other CRM initiatives which require a great deal of technology integration, in addition to process integration, as a core capability that will distinguish best eCRM practice among companies. Such integration represents a formidable challenge for companies but if successfully managed can generate a source of competitive advantage in the marketplace.

A number of these issues are illustrated by the experiences of eircom, which has designed and implemented an eCRM solution integrating its sales, marketing and service delivery activities. Within eircom this eCRM business solution was implemented throughout seven contact centres nationwide. Sales and support staff now have access to customer data, provisioning and billing information and a comprehensive marketing database. The information is stored in a number of disparate servers throughout eircom. The solution was enhanced with the implementation of an integrated customer information database (ICID). This enables eircom to have a single view of its customers across several key systems. The database holds the details of the customers, the individuals and the accounts that make up that customer and all the relationships the individuals have with both the company and each other. ICID also provides the central facility to capture communications with customers from the many different channels within eircom, including the contact centres and the Web. It has transformed the way eircom interacts with its customers, bringing a customer-centric approach to the company. The benefits included consistent and higher quality customer care, faster time to market for new products and increased sales and productivity. A product query can now be fully answered in three minutes as opposed to ten under the old system. Reduced training time and costs is another benefit to the company, as staff can be trained on the new system in three days compared with the need for ongoing training with the old system.[1]

The result of this initiative was that eircom successfully achieved full integration: electronic diary and order management, recording of all customer history details and consistent call handling. This in turn resulted in shorter call duration, lower costs

1 Kainos, 'Kainos/eircom', www.kainos.com.

per contact and more efficient and automated processes where the system performs all the tasks. Leveraging the customer base with eCRM can facilitate cross-selling complementary products as well as 'selling up' to higher quality substitutes (Ragins and Greco, 2003). In the case of eircom, call centre operators are now empowered to up-sell products and services as well as discount plans to customers with a high propensity to churn. Key performance indicators to assess improvements included: average call processing time, revenue per decision making contact, speed of answering calls, service levels and electronic enablement levels.[2]

Also, the introduction of the eircom Voice Recognition (e-VR) '1901' system means that many tasks can be completed within the automated system, removing the need for agent intervention. However, other services continue to be handled by call centre agents, but through the addition of speech enabled data collection and the passing of this data directly to agents handling time is reduced, as is the cost per call.[1] Within ESBIEFM the main priority for future CRM developments is the integration of financial information with the eCRM system. It is planned to integrate fully with the organisation's accounting system to get real time financial information for people facing the customer (Kennedy et al., 2005).

Chen and Chen (2004) have explored the key success factors of eCRM strategies in practice and suggest that system integration dimensions consisting of sub-factors such as functional integration, data integration, system compatibility, experience comparability to offline CRM and integration with other CRM channels were critical factors for companies. However, organisations are continually challenged when integrating Web technologies into their existing systems. Challenges can include scalability issues, managing large click-stream databases and a general lack of organisational experience (Nemati et al., 2003).

Marketing and IT Alignment

The IT function is an essential enabler of business development within an organisation. However, mismatched perceptions and expectations between the Marketing and IT functions can often impact and delay eCRM strategies. Marketing users often focus on the front end of applications and assess the functionality of the eCRM system with limited understanding of data and Web integration issues, while the IT function tends to assess its technical quality. An additional concern is that eCRM projects driven by a functional head, such as Marketing or IT, rarely produce an enterprise view of customers and modelling applications to a single functional view can often lead to failure. Successful eCRM strategies necessitate improved levels of integration between functions to successfully harness the opportunities available. This is reinforced in research by O'Leary et al. (2004) which highlights the need for collaboration between Marketing and IT teams to facilitate successful integration. Chen and Chen (2004) highlight the need for a holistic view of business models, system architecture and integration of business and IT strategies. An organisation's success in eCRM will involve creatively using appropriate analytical techniques to exploit the data (Gurau et al., 2003) while simultaneously increasing the interaction and alignment between Marketing and IT to maximise relationship opportunities and to facilitate true personalisation and customisation. Such alignment or re-alignment of functions must be addressed if companies wish to pursue effective and successful e-service quality initiatives.

Conclusion

As e-technologies continue to develop into the future in tandem with the proliferation of an e-customer base, companies must attempt to harness the opportunities available to deliver sustainable competitive advantage in the digital world of eCRM. To inform such strategies there is an ongoing need to examine how companies are translating investments in eCRM technologies into sustainable competitive advantage in the marketplace. The role of eCRM in the development and management of multi-channel strategies is also an issue for further research. It can be difficult for companies to put in place the correct metrics to evaluate eCRM strategies, and further research on gauging the effectiveness of eCRM through performance measurements within organisations would be useful. Though the literature on self-service technologies is growing there is an ongoing need to examine the response of customers to a company's eCRM strategies.

1 Kainos, 'Kainos/eircom', www.kainos.com.
2 Graham Technology, 'Powering Process. Powering Profitability', 'GT-X: An Eircom Case Study', www.gtnet.com.

Given the complexity of the issues involved in data integration and the significant role it plays in achieving eCRM's goals (Nemati et al., 2003), it also appears an area ripe for further research. It is suggested that eCRM has the potential to alter business processes significantly and as a result interdisciplinary approaches examining the impact of technology innovations on marketing are needed. Though research is available on design concepts for CRM systems (Ahn et al., 2003) dealing with data processing, mining and analytical techniques (Padmanabhan and Tuzhilin, 2003; Nemati et al., 2003), the focus within marketing/business academe has been on the front end of eCRM applications with limited investigation of IT issues with a marketing-oriented focus. There is recognition in the academic literature of the marketing benefits and the IT challenges of eCRM, but these appear almost separately. At the moment a knowledge gap exists between the adoption and implementation of eCRM in practice and robust research-based insights and principles. This paucity of academic research needs to be addressed given the positioning of eCRM as the latest paradigm of relationship marketing in the e-world (Chen and Chen, 2004).

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