

# Challenges and current trends of crm in pc industry: a case study at dell asia pa...

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Challenges and Current Trends of CRM in PC Industry: A Case Study at DELL Asia Pacific, Bukit Minyak ABSTRACT In the new millennium, customer service oriented performance has emerged as key success factors in maintaining the organizational competitiveness. This has led Customer Relationship Management (CRM) to take the driver seat role in creating a more loyal and profitable customer base at competitive cost. CRM has evolved from advances in information technology and constant pressing needs from customers to create value in the products and services.

In current business environment, CRM is a strategic business tool that seamlessly integrates all the functional departments across the organization to work towards maximizing customer value through strategic partnership. CRM has played a key role in the PC industry by taking PC manufacturers closer to customers in terms of understanding their needs, buying behaviors and value creation in the supply chain. Armed with CRM strategies and, IT enabled customer and sales database, PC manufacturers have reoriented their business around the customer.

DELL, as one of the world largest PC manufacturers, have strengthen its market share by positioning itself to provide customers with superior value, high-quality, relevant technology, and customized products and services, coupled with its IT integrated CRM solutions. At DELL, e-CRM oriented business solutions are initiated to automate and centralize customer database to embrace long-term partnership and PC market dominance.

This project paper will analyze the current CRM trends and future challenges in PC industry based on the case study conducted at DELL Asia Pacific, Bukit

Minyak. Furthermore, the paper will also address the selected DELL site, on its strategic effort in utilizing CRM methodologies supported by IT solutions to stay ahead of competitions. Categories and Subject Descriptors

[Transaction Processing and Enterprise Resources Planning System]:

Traditional Transaction Processing Application General Terms

Management, Measurement, Documentation, Performance, Economics, Experimentation, Human Factors, Theory Keywords Customer Relationship Management (CRM), PC industry, Information Technology (IT), Web-based customer interaction (WCI) 1. INTRODUCTION Breakthroughs in Information Technology (IT) have changed the fundamental rule of the way business is being conducted in modern organizations. IT business icons like e-Commerce, K-Economy, etc have made things more complicated, where focus of the business has evolved and oriented around customer.

Basically, customers are in the position to continuously demand and dictate what exactly they want at competitive cost - value-added products and services. Organizations are competing among each other to be the market leader, and emerging innovative IT solutions are helping organizations to achieve its competitive advantage. One of the key areas of business competencies is the ability of organizations to sustain the highest level of customer oriented service performance. The new business model is changing the producers' mindset from product-centered to customer-centered business.

This has led Customer Relationship Management (CRM) to take the center stage position to create a loyal and profitable customer base at competitive cost. 1. What is Customer Relationship Management (CRM)? CRM is a strategy used by organizations to comprehensively learn about customers' needs and behaviors in order to establish constructive relationship with them; after all it is the core of business success. Basically, CRM is a notion regarding how an organization can keep their most profitable customers with increased values of interaction to consequently maximize the profits.

This is achieved through the understanding of the drivers of current and future customer profitability to appropriately allocate the resources across all areas that affect customer relationships i. e. , communication, customer service, product/ service development, etc. Customer relationship management revolves around three key technology areas: the Internet, the customer call center and a data warehouse of customer-related information. Customer information is captured through company call center, the Internet, and other communications channels.

It is this customer information, which established a " 360-degree" picture of the customer that anyone throughout the organization can access when working with them. Through the Internet, both company employees and the customers themselves are able to access business transacted data from daily production systems, which are then enhanced with customer-centric information such as sales and service call activity, key customer contacts, and specific products purchased.

From these technologies, there are also offshoots into emerging technology areas such as wireless technology, for facilitated remote access by customers and company field representatives; workforce management software, for streamlined back-office operations that are organized around the CRM business model; and Web-based customer interaction (WCI). Even though, there are many technological components to CRM, the useful way to view CRM is as a total business processes that will help bring together pieces of information about customers, sales, and marketing effectiveness and responsiveness, and market trends.

Therefore, by integrating people, process and technologies, the relationship with both external and internal customers are maximized. 1. 2CRMGoalsand Objectives Through the implementation of CRM, organizations would be able to identify their most profitable customers and leverage those relationships to the point of optimal profit. Furthermore, successful CRM programs will ensure active participation from all employees in the organization.

CRM will utilize all possible ways to identify what exactly customer is looking for, market the organization's strength, and ability to fulfill the customers' needs, retained the customers through value added services. The main idea of CRM initiatives is that it helps businesses use technology and human resources to gain insight into the behavior of customer and the value of those customers. These are the fundamentals for customerloyaltyprogram.

There are several goals and objectives of CRM in a business framework (Kalakota & Robinson, 2000): • Use existing relationships to grow revenue -

enhance profitability by identifying, attracting the best customers. • Use integrated information for excellent service - by using customer information to best serve customers' needs. • Introduce more repeatable sales processes and procedures - companies must improve consistency in account management and selling. • Create new value and instill loyalty - the ability to respond to needs and accommodates requests. Implement a more proactive solution strategy - use proactive consumer relations that resolve problems on the first call.

### 1. 3CRM Architectural Framework

In the CRM architecture, a company must first recognize the customer-centric approaches in the business processes. The demand of integrating the customer life cycles, interaction and servicing processes in an application of CRM architecture is obvious. Thus, it is clear that the CRM is built to be customer-centric and in nature organizing CRM processes around the customer, rather than respectively to marketing, sales or any other internal function.

Figure 1 illustrates the summary of CRM architecture. CRM architecture examined how products are built, how they're deployed and customized, and integrated with external applications. A CRM product is selected primarily on its functionality; however its architecture should be a significant influence on the decision to buy or vice versa.

### 4. Integration with Business Application Tools

CRM is definitely not a stand-alone program, it must be designed in away that it can be integrated into the company's total business processes as shown in Figure 2.

CRM must be able to work effectively with other business processes to value add the total operations. Basically, CRM tools will gather, analyze and store

critical information captured at customer touch points. Together with ERP/ data warehouse, CRM database will provide the relevant information for business decision-making processes that relates to sales and marketing strategies, business development of new or existing customer and company's strategic direction.

1. 5Role of e-CRM and Its Strategies -CRM refers to achieving CRM through using Internet technologies, primarily the web and e-mail - allied to database marketing to gear up for the new 24-hour global economy. e-CRM will focus on how to use the web site, databases and e-mails to manage customer relationships by providing online content and services. In order to achieve and support the organizational effort on e-CRM, companies must focus on few key strategies, as followings:

- Real time: e-CRM operates in almost instantaneous real time and it can be integrated seamlessly together, without the loss of efficiency. Closed loop: e-CRM operates within a closed loop system, resulting in huge gains in efficiency.
- Multi-channel: e-CRM is based on the architecture and available across all channels, where changes to activities through one channel are automatically and immediately updated across all channels.

2. Literature Review CRM is a highly fragmented environment and has come to mean different things to different people (Mckie, 2000). The same understanding of CRM, also have been agreed and shared by Winer (2001) and Goodhue (2002).

One view of CRM is the utilization of customer related information or knowledge to deliver relevant products or services to customers (Levine, 2000). Another school of thought, CRM is inclusive of the whole organization

including its internal and external environment and ' key processes of the firm's customers' (Day, 2000). While such definitions are widespread, they tend to offer a narrow insight into the basic characteristics of CRM. As CRM evolves, comprehensive definitions are emerging, with an emphasis on multi dimensional business objectives.

Goldenberg (2000) believed that CRM is not merely technology applications for marketing, sales and service, but rather, when successfully implemented, a cross-functional, customer-driven, technology-integrated business process management strategy that maximizes relationships and encompasses the entire organization. According to Light (2001), CRM evolved from business processes such as relationship marketing and the increased emphasis on improved customer retention through the effective management of customer relationships.

Relationship marketing emphasizes that customer retention affects company's profitability, in that it is more efficient to maintain an existing relationship with a customer than create a new one (Payne et al. , 1999; Reichheld, 1996). Christopher et al. (1991) also agreed that CRM has its roots in relationship marketing which is aimed at improving long run profitability by shifting from transaction-based marketing, with its emphasis on winning new customers, to customer retention through effective management of customer relationships.

Sandoe et al. (2001) argued that advances in database technologies such as data warehousing and data mining, are crucial to the functionality and



effectiveness of CRM systems. In later stage, relationship marketing emerged and had led others such as Newell (2000) to explore strategic methods for maintaining and improving customer loyalty. Furthermore, Peppard (2000) suggested that technological advances in global networks, convergence and improved interactivity, are key to explaining the growth of e-business and CRM.

The increasing use of digital technologies by customers, particularly the Internet, is changing what is possible and what is expected in terms of customer management (Tamminga and O'Halloran, 2000). The appropriate use, for instance, of automation technologies, such as interactive voice response systems and Web-based frequently asked question pages, could be popular with customers and highly cost effective (Petrisans, 2000).

Also for customers, CRM offers customization, simplicity, and convenience for completing transactions, regardless of the channel used for interaction (Gulati and Garino, 2000). CRM initiatives have resulted in increased competitiveness for many organizations as witnessed by higher revenues and lower operational cost. Managing customer relationships effectively and efficiently boosts customer satisfaction and retention rates (Reichheld, 1996a, b; Jackson, 1994; Levine, 1993). CRM applications help organizations assess customer loyalty and profitability on measures such as repeat purchases, moneyspent, and longevity. In particular, customers benefit from the belief that they are saving time and money as well as receiving better information and special treatment (Kassanoff, 2000). Despite the diverging definitions, reality is that CRM is a complex combination of business and

technological factors, and thus strategies should be formulated strategically and accordingly. 3. PC Industry The introduction of the first PC in the mid 1970s led to an industry that emerged as one of the largest and most dynamic sector.

PC industry eventually became a multi-billion dollar worth of business that have gone through various growth phase. Today, the world's PC industry is booming due to emerging demand for IT growth, which is parallel to explosive growth of world's population. PC became the driving force for the whole computer industry. PC industry dynamics changed by the late-1990s when PCs became the means to get to the Internet. In the next decade a cellular-based packet communications network and broadband will further grow the Internet.

Over the next 10 years the PC industry will prosper and thrive with two additional driving forces —consumer electronics devices built with computing platforms (information appliances) and mobile devices such as PDA and mobile phones. The PC industry is very competitive and has a good record of adapting to emerging technologies and market trends. This is likely to happen again and the PC industry will embrace information appliances and mobile devices. 3. 1PC Market Trends Trends in Table 1 showed that, the worldwide shipment for PC never stops growing from 1975 to 2005.

In fact the industry volume had seen an increasing trend ever since the year 1990. However, the growth percentage began to slow down starting in late 1990s. This is the evidence that the PC industry is at the end of the growth

stage, and soon will enter into the maturity stage. Apart from the effect due to the product life cycle maturity, other aspect of business such as globalization, economical and financial crisis, and presence of China market posed treat to the global PC industry. Table 1: Worldwide PC Market Growth (Source: eTForecasts, 2003) | | | | | Gender | Male: 31 (65%) | Female: 17 (35%) | | Occupation | Technical: 36 (75%) | Business: 12 (25%) | | Age Group | 21 to 45 years old | | Income | < RM 2, 000: Nil | | RM 2, 000 - 5, 000: 29 (60%) | | RM 5, 000 - 8, 000: 16 (33%) | | > RM8, 000: 3 (7%) | | PC Accessibility | 100% | | Internet Accessibility | 100% | From this survey, one important finding was all working group of people especially those who are from industrial organization, regardless of their income or position they hold, all of them some how able to access to PC either at home or workplace, as well as to Internet. This mainly because of current environment, which require PC and related electronics gadget to be a necessity items in day-to-day lifestyle.

Furthermore the cost to purchase these devices is very much affordable, and for those who don't own it, they are still able to access the Internet or Web-based services either at office during working hours or at Cybercafe at leisure hours. In this study, majority of the respondents is male and those who are working in technical areas, in fact both the gender and occupation background have some sort of relationship between them. Most of the male respondents are from technical background i. e. , technical or operations based managers, engineers or technicians. In contrast, most of the female

respondents is working in the business related environment i. e. , sales or marketing, purchasing and finance executives.

This indirectly relates to the way the understudy respond to the survey, basically, technical oriented person viewed this survey from product feature, functionality and technical superiority point of view. However, business people is more inclined to pricing, customization and human touch aspect i. e. , customer services. In this study also, majority of the respondents' income falls in the range of RM 2, 000 to RM 5, 000, which indicating most of them are belongs to supervisory, executive and engineer category, with smaller group holding managerial and senior executive positions. Table 4, revealed the results based on the first section of the survey, which gave an overview of PC market trends and conditions among the understudy.

The survey results shows that, educated and computer literate consumers are keeping abreast of current PC market trends in terms of product knowledge, service availability and PC manufacturers who is the trend setter. Today's business society is more sensitive to changes surrounding them, they wouldn't like to be left out in IT progress, and therefore they keep upgrading or changing the PC and its accessories within couple of years. Survey findings shows that, the understudy changed their PCs typically after 5 years and only 37% are changing within 3 to 5 years. This is due to majority of them are using the company's PC or rather its costly for engineers or executives with reasonable income.

Since the accessibility to Internet is possible, literally everywhere, today's consumers are well informed and keep up with the changes in the PC market. There are consumers, who is still prefer to purchase PCs from computer shop, since they feel unsafe to do on-line transactions, however this trend will change in future as more consumers will be secured from spyware. Furthermore retailers will continue to loss their market share, mainly because of unavailability of after-sales support, and orders through mail became legacy. As for call-centers, business is expected to boom in future, since they have started to use some innovative IT solutions. Based on the findings of survey, it's very obvious that desktop PCs are still the favorite product ype among the respondents, and those who are working in organization mainly use it. On top of that desktop PCs' competitive price made it affordable by moderate-income group. As for mobile PCs i. e. , notebook and palmtop is common among managers and senior executives, and this product segment have bright future, since it is best suited for fast moving business environment.

| Table 4: Part 1- PC Purchase Experience | |  
 Survey Criteria | Results | | Frequency of changing PC hardware and accessories. < 3 years: Nil | | | 3 to 5 years: 13 (27%) | | | > 5 years: 35 (73%) | |  
 | | Purchasing Channel | Computer shop: 15 (31%) | | | Retailer: Nil | | | Internet: 29 (61%) | | | Toll Free Phone/ Call Centers: 4 (8%) | | | Mail Orders: Nil | |  
 | | Product Type | Desk Top: 27 (56%) | | | Notebook: 14 (29%) | | | Palmtop: 6 (13%) | | | Others: 1 (2%) | | Brand | Acer: 5 (10%) | | | HP-Compaq: 6 (13%) | | | DELL: 18 (38%) | | IBM: 11 (23%) | | | Toshiba: 1 (2%) | | | Fujitsu: 2 (4%) | | | Clone: 5 (10%) | | Purchasing preference | Brand: 15% | | | Price: 31% | | | Service: 29% | | | Quality/ Reliability: 14% | | | Appearance:

1% | | | Functionality: 4% | | | Customization: 6% | As consumers become more knowledgeable, they tend to be very intelligent in making decision, and selecting the right product, with excellent services from the competitive PC manufacturers. The PC market is volatile in the sense that superior product or service is expected at very competitive price, and only that manufacturer with efficient operations is able to survive.

In today's market, DELL emerged as the market leader, and this clearly reflected in the survey result, which revealed that 38% of the respondent had chosen DELL. The next contenders are IBM and HP-Compaq, however the pricing is still not as competitive as DELL. Whereas Toshiba and Fujitsu products such as notebooks are as considered as high-end products, and therefore it is serving only targeted market segments, i. e. , managers and senior executives with higher income. About 5% of the respondent preferred to purchase clone PCs, which is very low priced, and those consumer groups with lower income still can afford. In future, clone PC market will continue to deteriorate, as there will a price war. In this section also, assessment was made to study the respondents' urchasing behavior, and what are the factors influencing the preferences that leads to the decision making of the purchasing process. Based on this study, there are two very important criteria that influence the respondents, price and customer service factors. Basically, pricing was the main concern, due to majority of the group is moderate earners, and therefore they are looking for the best buy and next they expect are excellent services for worth of money. These factors is followed by branding and, product quality and reliability factors, which lately

consumers are more sensitive of the brand, which is due to their vast exposure about the market trends, and the main contributing factor is the Internet and Web-based technology.

Modern consumers have high expectations on PC performance in terms of quality and reliability. Other non-critical factors that influence the purchasing decision is high customization, product with more functionality and attractive and appealing appearances. Based on section two of the survey, only those respondents, who use DELL PC were assessed from various perspectives, such as consumers' total experience with DELL, what are the customer touch points, DELL's marketing and business strategies and, area that DELL can do better and how DELL can position itself as counteract from its competitors' strategic move. Basically, findings from this section of survey were summarized into the SWOT analysis as shown in Table 5.

A quick glance of SWOT analysis shows that internally DELL has tremendously improved and able to turnaround its weaknesses to further strengthen its position in the market. This was very obvious scenario couple of years ago, where DELL was competing with IBM, was then the PC market leader. However, DELL has aggressively worked on new strategies based on their identified weaknesses internally and market opportunities externally, and that made them capture the market leadership position. Without any hesitation, DELL continued on its strategic planning, with focus on key IT solutions, such as Web-based customer information portal, enhanced e-survey to capture voice of customers and other e-CRM strategies to monitor very closely on customer service performance metrics. Table 5: SWOT

Analysis of DELL Product in PC Market | | Strength | Weakness | | 1 | Build-to-Order approach | 1 | No intermediary retailing channel | | 2 | Value added customer service | | | 3 | Direct interface with end customers | | | 4 | Customer service specialist | | | 5 | Customer oriented business model | | | 6 | Good after sales support | | | 7 | On-Line purchasing | | | 8 | Product differentiation | | | 9 | Clear market segmentation | | | 10 | Comprehensive product information | | | 11 | Web based customer service portal | | | Opportunity | Threat | | 1 | Product leasing program | 1 | Short product life cycle | | 2 | Attractive payment scheme | 2 | Competitive pricing | | 3 | New potential market - Government agencies & higher learning | 3 | No brand loyalty | | | institutions. | 4 | Clone PCs | | 4 | Completing the PC peripherals and accessories product range. | | Apart from that, SWOT analysis also revealed the market opportunities, which DELL should be focusing for future growth. The new opportunities are product leasing program and, emerging of new potential market segment, which is local government agencies and higher education centers. Most importantly, these are the untapped markets that DELL should concentrate its future efforts to maximize the return. Regarding the external threat, DELL came up with many effective counter strategies that the threats are no longer pose any risk. 5. 2 PC Market - DELL Competition Competition in the PC market remained fierce during the last few years as notebook adoption continued and consumers reacted to falling prices.

Worldwide PC shipments were in line with forecasts, growing 15. 2% year-on-year to 44. 6 million units, according to IDC's Worldwide Quarterly PC



Tracker, Commercial demand showed some signs of recovery and consumers remained active during the holiday season. Strong growth in Europe and sustained notebook demand were key sources of growth, although limited supply of flat panel displays constrained shipments for some vendors. On an annual basis, shipment growth moved into double digits for the first time since 2000, boosting shipments to a record 152.6 million on growth of 11.4%. DELL's underlying strengths are its abilities to penetrate into new markets with all the advantages under its belt.

From the latest statistics, DELL's server market is able to gain market share and grew by 31 percent during the last few quarters. This is contradicting to other PC vendors as they experienced declining server sales and market share and it shows that, DELL is able to strategize and implement very aggressive business and marketing plans to obtain success. 5. 3DELL e-CRM Strategies Being a giant PC maker and customer-oriented, DELL depends on sophisticated IT applications in carrying out their business processes ranging from line assembly across administration to customer relationship management. DELL has also invested substantially in building its IT infrastructure in order to create an advance and effective work place.

Nonetheless, DELL also prepares its staffs to be IT oriented in performing their jobs, and this enables DELL to stay ahead of their competitors. As observed, DELL's e-CRM strategies are closely in line with the model of CRM architecture frameworks, which was illustrated in Figure 2. The e-CRM strategy of DELL has begun with customer acquisition, value enhancement and customer relationship retention. In other words, DELL has fully utilized

the IT edge in carrying out CRM operations and also use as their business analytical tools. DELL has prepared a very comprehensive web site and call centers to interact with its customers. Further enhancement of the web site and call centers, enable DELL to stand out as far as e-CRM is concerned.

The Strategies In customer acquisition, DELL emphasize in direct interfacing with customers. In that sense, DELL eliminates the intermediaries in their distribution channel. All information of products can be obtained on-line and is assisted by well-trained e-CRM specialists. There are several creative features on the web that need to be highlighted. Among them are: 1. On-line configuration: Suitable for those who intend to purchase a customized system. 2. Automated order process: Once order is confirmed, the specification of goods will be informed to assembly floor to start the production and it is achieved via a fully automated process. 3.

Payment on-line: The payment scheme prepared by DELL is user friendly. 4. Order status check: While waiting for PC system to be delivered, customer can check the good delivery status on-line. 5. Comprehensive technical support: DELL is well known for its technical support on-line and also call-center. DELL committed to reply their customers queries within 4 hours. 6. Information rich web site: Customers can easily access to detail information via on-line, such as E-value. DELL always emphasizes on the customer-centric approach, enhancing the customer value, thus creating sales opportunities. More importantly, DELL has managed to use strategically the innovative IT solutions in this process as following: 1.

Value-add to customer: Customers are always delighted by the kind of service provided by DELL. 2. Customer database: To ensure customer have full accessibility of information they require, and should be maintained up-to-date. 3. Knowledge database: Product knowledge and experience is shared between customers and DELL employees for mutual benefits. More importantly DELL adds value to customer by creating opportunity of upgrading and cross selling of its product: 1. Continuous update of information: Educate customer awareness on DELL product update. 2. Voice of Customer: Using e-Survey to capture customer inputs and feedbacks regarding product and service performance. 3.

Free software upgrades: DELL customers are entitled for selected operating and applications software through its website such as Windows XP and McAfee. 4. Customer Care: Providing additional product safety and security features in terms of quick on-line tips to combat spyware and adware. DELL continued to invest in keeping its infrastructure as one of the best IT platform. For instance, DELL staffs are able to access to internet or intranet through wireless broadband connection within the plant. This allows them to respond immediately to any issues pertaining to customer feedback and complaint. 6. 0Conclusions and Recommendations The customer expectations have risen in recent years and the firms have come up with a number of innovative ideas of serving customers.

This has provided the customer with the flexibility and convenience.

Similarly, various groups of customers would require different level of services and support. For first time buyer, they may require installation and

training services while big corporations with internal computer specialist may expect more comprehensive CRM program coupled with other value added services. However, the important motto would be the exercise and implementations to keep the customers satisfied, and that would be the ultimate goal for each and every organization. DELL certainly has given their best to expand their customer horizon, and they are definitely on the right track towards creating profitable customer base.

With that, we can expect more and more innovative business ideas from DELL in future, which will continue to delight the ever-demanding customers. We also would like to recommend that, DELL should explore further in areas concerning market opportunities, as mentioned in the SWOT analysis table. Carefully analyzing and turning each opportunity into their advantage would prepare DELL to scale at greater heights. DELL also needs to fine-tune continuously its e-CRM strategies to further strengthen their customer centric approach. REFERENCES [1]Agrawal, V. & Mittal, M. (2002). Customer Relationship Management: The e11 Way. White paper of Delhi Business Review, Vol. 3, No. 1, January -June 2002. [2]Boon, O. , Corbitt, B. & Parker, C. (2002).

Conceptualising the Requirements of CRM from an Organizational Perspective: a Review of the Literature. AWRE 2002. [3]Bull, C. (2003). Strategic issues in customer relationship management (CRM) implementation. Business Process management Journal, Vol. 9 No. 5, 2003, pp 592-602. [4]Chen, IJ. & Popovich, K. (2003). Understanding customer relationship management: People, Process and technology Business Process

Management. Journal, Vol. 9, No 5, 2003, pp672-688. [5]Christopher M. , Payne, A. and Ballantyne, D. (1991). Relationship Marketing. Butterworth-Heinemann, Oxford. [6]Day, G. (2000). Managing Market Relationships. Journal of the Academy Marketing Sciences, Vol. 28, No. 1. [7]Goodhue, D. , Wixon, B. nd Watson, H. (2002). Realising business benefits through CRM: hitting the right target in the right way. MIS Quarterly, Vol. 1, Issue 2, pp74-94. [8]Jenkinson, A. (1996). Valuing Your Customers: From quality information to quality relationships through database marketing. McGraw-Hill, London [9]Kalakota, R. and Robinson, M. (2000). e-Business Roadmap for Success. Addison-Wesley, United States. [10]Kassanoff, B. (2000). Build loyalty into your e-business. Proceedings of DCI Customer Relationship Management Conference. Boston, MA, 27-29 June [11]Light, B. (2001). A review of the issues associated with customer relationship management systems.

Proceedings of the 9th European Conference on Information Systems, pp1232-1241 [12]Newell, F. (2000). Loyalty. com: Customer Relationship Management in the New Era of Internet Marketing. McGraw-Hill, New York, NY [13]Payne, A. , Christopher M. and Clark, M. (1999). Relationship Marketing for Competitive Advantage. Butterworth-Heinemann, Oxford. [14]Payne, A. A Strategic Framework for Customer Relationship Management. A BT CRM White Paper [15]Peppard, J. (2000). Customer relationship management (CRM) in financial services. European management Journal, Vol. 18, No. 3, pp 312-327 [16]Petrisans, A. (2000). Customer Relationship Management and the Challenge of the Internet. Cap Gemini

Ernst and Young-IDC, Toronto. 17]Tamminga, P. & O'halloran, P. (2000). Finding the real value in CRM: leveraging IT solutions through the customer driven approach. Cutter IT Journal Vol. 13, No. 10, pp4-11 [18]Turban, E. et al. (2004). Information technology for management: transforming organizations in the digital economy. 4th Edition. John Wiley & Sons, Inc, USA [19]Winer, R. (2001). A Framework for Customer Relationship Management. California Management Review, Vol. 34, No. 4. [20]Xu, Y. et al. (2002). Adopting customer relationship management technology. Industrial Management & Data Systems 102/8 2002, pp 442-452. Appendix 1 PC Industry Research Questionnaire Respondent Particular | | Age: \_\_ Gender: \_\_ Male \_\_ Female | | | Occupation: \_\_ Technical \_\_ Business | | | Income Group: \_\_ Below RM2, 000/= \_\_ RM2, 000/= to RM5, 000/= | |(per month) \_\_ RM5, 000/= to RM8, 000/= \_\_ Above RM8, 000/= | | | Accessible to Internet: \_\_ Yes \_\_ No | Part I - PC Purchase Experience | 1 | Have you ever own a PC (either at home or work place? \_\_Yes | \_\_ No | | | | | 2 | How many time have you bought a PC for the last 5 years? | Please state: \_\_ | | | | | 3 | Through which channel the PC is purchased? | \_\_ Computer shop | | | | \_\_ Elect. Appliance Retailer | | | | \_\_ Internet | | | | \_\_ Toll free telephone | | | | \_\_ Mail order | | | | Others: | | | | | 4 | What type of PC do you purchase? | \_\_ Desktop | \_\_ Notebook | | | | \_\_ Palmtop | Other: \_\_\_\_ | | | | | 5. | What is the PC brand have you purchased? \_\_ Acer | \_\_ HP-Compaq | | | | \_\_ Dell | \_\_ Toshiba | | | | \_\_ IBM | \_\_ Fujitsu | | | | \_\_ Clone | | | | | 6. | What is sequence of criteria in purchasing a PC? \_\_ Brand | | |(from top to bottom1 to 7) | \_\_ Price | | | | \_\_ Service | | | | \_\_ Reliability/Quality | | | | \_\_ Appearance | | | | \_\_

Functionality | | | |  Customization | Part II: Experience with Dell (For those who has bought Dell PC only) | 1 | What are your experience using Dell products?  Good |  Fair | | | |  Bad | | | | | | 2 | Have you ever visited Dell's web site? |  Yes |  No | | | | | | 3 | Have you called to Dell's toll free call center? |  Yes |  No | | | | | | 4 | Have you read through Dell advertisement on printed material?  Yes |  No | | | | | | 5 | What channel do you find the most effective to get information from Dell |  Internet | | | |  Toll Free Call | | | |  Printed material | | | | | | 6 | Do you find Dell web site user friendly?  Yes |  No | | | | | | 7 | Do you satisfy with Dell's | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very satisfied | | | i. service quality | | | | | | | | ii. product quality | | | | | | | | iii. technical support | | | | | | | | iv. rice | | | | | | | | | | 2 | Does Dell continuously provide information/promotion of its product to you? |  Yes |  No | | | | | | 3 | Can Dell employee address you by name when you call them? |  Yes |  No | | | | | | 4 | Can Dell identify you purchase immediately when you require after sale technical support?  Yes |  No | | | | | | 5 | Does Dell employee friendly and helpful? |  Yes |  No | | | | | | 8 | Will you return to Dell for subsequent purchase? |  Yes |  No | | | | | | 9 | Do you agree Dell has successfully created good relationship with you?  Yes |  No | | | | | | 10 | Do you have any suggestion for Dell to further improve its Customer Service | | | | Please state: | | | | [pic] ----- Receivable/ Payable Profitability Analysis Production Planning Inventory Mgm't Shipping Personnel Planning Payroll Back Office Functions Front Office Functions Figure 1: CRM Architecture Framework Globally Dispersed Customers

Customer Support Cross-Functional Processes Breaking Down Department Walls Complete Integrated Solution Integrated CRM Applications Enhance Partial Functional Solutions Retain Marketing Mgm't Order Mgm't Sales Mgm't Sales Planning Pricing After Sales Service Sales Force Automation

Figure 2: Integration of CRM with Business Application Tools Customer Support Traditional Touch Points Retail Store Front Service Departments Cross-sell & Upgrade Proactive Service Direct Marketing Electronic Touch Points Website/ Internet E-mail Call Centre Voice Response System Direct Marketing Customer Life Cycle Customer Touch Points Acquire CRM Technology ERP/ Data Warehouse