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### **A Diagnostic Methodology for Evaluating Customer Relationship Management Solutions**

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## **Abstract**

As knowledge management (KM) practices become increasingly recognised as having a significant impact on business performance, organisations are now eagerly leveraging from the competitive advantage offered by KM tools to enhance customer relationships. In recent years, the use of customer relationship management (CRM) solutions as a KM tool has fast become prevalent in sectors such as the telecommunications, finance and banking industries. However, as to how CRM solutions in an organisation can be systematically diagnosed has yet to be addressed.

This article highlights the key aspects of KM issues relating to effective CRM solutions. By proposing an assessment framework based on the Siebel Systems Value Diagnostic and conceptualising a ranking protocol, a diagnostic methodology is developed to evaluate six functional areas of a CRM solution based on four levels of adoption. The study shows that the evaluation results can help organisations appreciate the “effectiveness of a CRM solution” in terms of business processes and best practices for managing relationships amongst customers, employees and partners as part of organisation-wide KM efforts. In conclusion, the success of any CRM solution requires organisations to first understand its state of adoption; then identify the most suitable CRM tool that would deliver the best value to customers.

**Keywords:** Knowledge Management (KM) Tools; Customer Relationship Management (CRM); CRM Solutions; CRM Tools; CRM Adoption; CRM Implementation; Diagnostic Methodology; Assessment Framework; and Ranking Protocol.

## **Background**

With knowledge management (KM) being widely acknowledged to be of significant impact to business performance, it has resulted in a proliferation of KM tools for the corporate sector. Examples include the use of expertise access tools, e-learning applications, web portals, discussion and chat technologies, electronic message boards, synchronous interaction tools, search and data mining tools and the like. Although the benefits of KM correlate positively to bottom-line savings, like all investments, there is also considerable risk associated with KM investments as they do not necessarily lead to expected benefits due to failures of adoption (Lindgren and Henfridsson, 2002; Storey and Barnett, 2000; Fahey and Prusak, 1998). Thus, to ensure that KM tools would eventually bring about intended benefits to organisations, IT decision-makers such as Chief Information Officers (CIOs) or Chief Knowledge Officers (CKOs) must be astutely aware of the potential pitfalls and vulnerabilities accompanying the deployment of KM tools. In particular, how a customer relationship management (CRM) solution may be evaluated and systematically diagnosed as an effective KM tool has yet to be addressed. One reason cited for the importance of evaluating CRM solutions is the exorbitant expenses of CRM implementation; and CRM solutions have been widely reported to be the fastest-growing category of enterprise applications for KM tools, with world-wide revenues projected to grow by 50% annually to reach sales in excess of US\$67 billion by the end of 2005 (Toh, 2002).

## ***Emergence of CRM Solutions as a KM Tool***

### **The Shift to Knowledge Management (KM)**

From the late seventies to the early eighties, the development, acquisition and application of data management tools seem to be the *raison d'être* for competitive businesses. Subsequently, from the mid-eighties to the nineties, the managerial focus of successful businesses shifted to information management. With this shift comes the emphasis of information technology (IT) that has, in two decades, revolutionised the way businesses are conducted. In the last few years, one key aspect of most corporate strategies is the explicit utilisation of knowledge assets to improve business performance. Presently, the use of knowledge and its management or termed generally as “knowledge management (KM)”, which is defined below, has emerged as a highly prioritised area of managerial concern (Goh, 2004a; Maryam and Leidner, 2001; Barth, 2000; Amidon, 1997; Davenport, 1996).

Knowledge management (KM) is the systematic leveraging of data, information, skills, expertise, and various forms of assets and capital to improve organisational innovation, business responsiveness, productivity and competence. It embodies the critical issues of organisational processes, through the use of appropriate technologies, to harness different types of knowledge assets.

Increasingly, data management and information management, which are traditional areas of managerial concern, are now becoming secondary and in some business sectors, even obsolete. This prevailing shift to knowledge management, together with the advent of CRM solutions emerging as a KM tool, is now inevitable if businesses wish to succeed in the competitive global marketplace.

### **Developing CRM Capabilities**

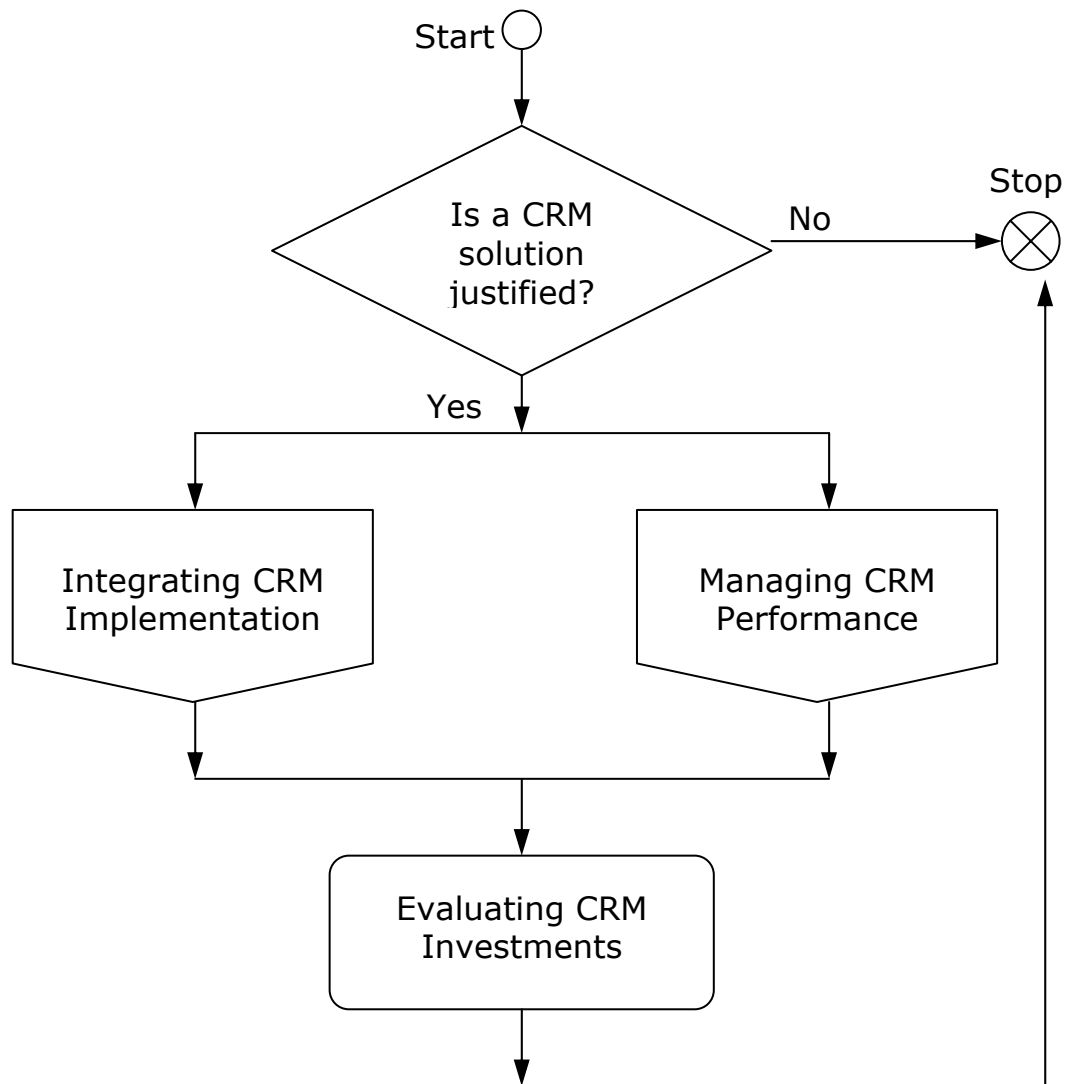
The centrality of KM in today's corporate strategies bears testimony that adopting the best KM practices would lead to high-quality and cost-effective business solutions. Many organisations recognise that acquiring and mastering KM as a core competence can provide a new source of competitive advantage. Business managers are now progressively employing KM tools in corporate functions; and it seems that failure to do so would impede business performance and thus undermine corporate competitiveness. At the same time, with more discerning, sophisticated and demanding customers, organisations are keen to make explicit use of KM tools to manage customer relationships (Goh, 2004b; Gold, Malhotra and Segars, 2001). New ventures are now revolving around customer-centric business models whereby old buzzwords like “consumer satisfaction” or “delighting customers” are no longer relevant and considered to be outdated. Instead, the more successful ventures focus on ensuring “customer success” by combining expertise and skills in knowledge codification, creation and utilisation to form productive relationships with customers (Clarke and Rollo, 2001; Blumentritt and Johnston, 1999). As organisations are convinced with the tangible economic benefits of customer relationship management (CRM), the relevance of CRM solutions has become widely appreciated, with more organisations hurrying to join in the race to acquire, develop and master CRM capabilities.

## ***Challenges of CRM Solutions***

## Heightening Interest for CRM Adoption

In recent years, successful business models mandate firms to continuously deliver customer success and thus achieve customer loyalty through superior service and excellent sales support. Intense competition has also propelled managers to be constantly in search of novel ways of building, cultivating and enhancing relationships with customers. One classic example is the explicit computerisation of a dynamic, up-to-date and comprehensive knowledge base of customers' needs, wants and requirements. However, until recently, most industry sectors, even with strong IT capabilities, had yet to emerge as major CRM users. In fact, many large global firms are still a far distance away from adopting CRM solutions in a big way. Currently, the leading CRM users tend to be companies from the telecommunications sector, banking and financial sector, and increasingly, the retail sector. Nevertheless, the many success stories of major CRM users in these sectors, which had undertaken organisation-wide CRM implementation, have prompted organisations to consider adopting CRM solutions. For instance, companies are implementing CRM repositories as a strategic tool to monitor customer interactions and analyse buying behaviour (O'Brien 2002; Dutta and Segev, 1999).

In addition, IT companies, under constant pressure to introduce new software solutions, are also pushing CRM adoption for all business sectors. This heightening interest for CRM solutions resulted from rising optimism that technological KM tools could offer an "intelligent means" of storing, retrieving and disseminating knowledge that adds value to customers, drives higher returns and hence improves business performance. But for CRM adoption to be truly effective, key issues relating to knowledge management (KM) practices should be looked into. In this article, four KM aspects of CRM have been identified that require specific attention whereby organisational efforts are more likely to reap better rewards (e.g. cost savings or productivity enhancement for sales personnel) in the long run. The four aspects are: (1) Justifying a CRM solution; (2) Integrating CRM implementation; (3) Managing CRM performance; and (4) Evaluating CRM investments, as depicted in Figure 1, which can be collectively represented as a flowchart for diagnosing a CRM solution. Yet, it must be noted that the value of any CRM solution is a complex one as its actual impact can be very subtle and widely distributed throughout an organisation's value chain, and yet, far-reaching with spill-over effects on external processes.

**Figure 1:** Flowchart for Effective CRM Adoption

### Justifying a CRM Solution

While CRM adoption could improve business performance, it is also vital to single out instances in which it is particularly critical. Three instances have been identified. One, when a firm's nature of business requires it to instil strong customer loyalty. This occurs usually in firms which already has a strong base of existing customers that it would like to retain (via customer lock-in, for example) because it is less costly to increase sales from existing customers compared to acquiring new ones (Birkin and Harris, 2003). Indeed, it was reported that the cost of acquiring a new customer, in some business sectors, may be almost twenty times that of retaining an existing customer (Lykins, 2002). Two, there is constant pressure to minimise churn rate (e.g. the cost of winning customers) and to reduce staff cost (e.g. the need to automate manual process). In such an instance, the source of potential savings arising from a CRM solution comes from the acquisition of customers itself. A CRM solution then presents a powerful mechanism for creating orderly information, increasing process efficiency and enhancing customer value. However, to adopt a CRM solution effectively requires everyone throughout the organisation to embrace a customer-centric view of business where knowledge about customers' needs is paramount. Three, there is a strong need to offer a greater variety or wider choice of service

packages and products to customers. The focus of CRM should then enable an organisation to segment customers and treat each segment of customers differently with suitably packaged products and services. In such a case, a CRM solution provides a cost-effective and efficient method of customer segmentation in comparison to building one from scratch.

### **Managing CRM Performance**

Despite the opportunities offered by CRM, which offers a multitude of web-based capabilities and solutions, its impact on business performance is usually not fully realised. While organisations are spending substantial amounts of money and resources on CRM tools, its adoption often lead to high customisation costs. For example, studies conducted on the adoption of CRM systems reported that only around 30 percent of firms are successful in implementation (Comb, 2004). In a survey of European executives, it was found that CRM systems are unpopular and widely condemned for not delivering business benefits. Of the executives surveyed, less than a third felt that their CRM systems had lived up to expectations, while nearly 10 per cent had yet to get their CRM systems up and running 18 months after installation. Beside, industry analysts have also expressed disappointment with the returns that CRM was delivering (Comb, 2004). The main difficulties surrounding low CRM performance often involve barriers that cluster around issues relating to cost, deployment time, maintenance and the value of information. Even with strong support from information and communications technology (ICT) infrastructure, organisations often find it difficult to extract maximum value from CRM investments. This is because “less effective” CRM solutions that merely installed new IT systems will not automatically translate into economic benefits unless adoption issues are addressed. Moreover, a CRM solution does not guarantee higher business performance since users need to know how to utilise it to deliver maximum value to customers.

### **Integrating CRM Implementation**

Although decision-makers of IT procurement are increasingly considering the adoption of CRM to capture customer information, a lack of effective integration can lead to sub-optimal performance. Thus, CRM software solutions need to be integrated with back-office or legacy applications already in place within an organisation. Exploiting the full benefits of a CRM tool requires the integration of CRM repositories, capabilities and resources available in an organisation. However, it is not surprising that, in many instances, businesses operate through multiple interaction channels, without proper integration, that undermine consistency in customer service. For instance, companies may interact with customers in a myriad of different ways including mail campaigns, web sites, brick-and-mortar stores, call centers, mobile sales force staff and other means of marketing and advertising efforts. Effective CRM solutions should, as far as possible, link up each of these points via integration.

If integration is executed properly, it provides not only richer value to customers by interacting with other data sources using CRM software, but also draws upon the organisation's existing systems of business functions or line-of-business (LOB) applications (e.g. finance systems, inventory systems, billing systems) to improve service delivery. Essentially, integration enables all records about customers that an organisation could access, to help sort out patterns of customer behaviour and thereby produce better insights into customer solutions with unified and holistic perspectives of customers' needs, preferences and habits. It also pinpoints areas



where better services are required to strengthen customer intimacy and raise customer service levels. For example, some organisations are integrating CRM software to provide full-fledged solution that encompasses supply chain management (SCM) and data warehousing systems (DWS) to house critical business information about customers for developing sales, marketing and delivery strategies. Ultimately, the purpose of integrating CRM implementation is to create superior corporate knowledge assets, regardless of whether they are derived from front-office or back-office sources, to become an integral part of a singular customer database which empowers employees to build stronger customer relationships; and as a result, possesses the ability to pre-empt, predict and anticipate customer needs. Hence, with CRM integration, organisations can leverage from the strategic benefits made possible by existing IT processes, application tools and physical systems to maximise business performance.

### Evaluating CRM Investments

CRM implementation is an expensive undertaking. Given the high investments, the initial costs of CRM software must be offset against its long-term benefits. Researchers have found that with the high turnover of customers varying between 8 and 40 percent for most businesses, CRM solutions must enable firms to build long-term customer relationships and leverage from customer loyalty to generate more revenue (Seah, 2004). To maximise the success rate of CRM implementation, it is crucial to set goals whereby the requirements are clearly defined. Hence a CRM solution should be cost effective and not have an overly aggressive timeline of implementation schedule. Managers must also understand the value a CRM solution provides and focus on those areas that most benefit their customers. Today's CRM market is an industry where the technology has far outpaced the sophistication of the user community to properly utilise the tools, particularly in terms of enterprise deployment. In addition, because CRM market offers a wide range of expensive software applications, there is no way one could be guaranteed of success ahead of CRM investments. Thus, it is beneficial to evaluate an organisation's "CRM preparedness" or "state of CRM adoption".

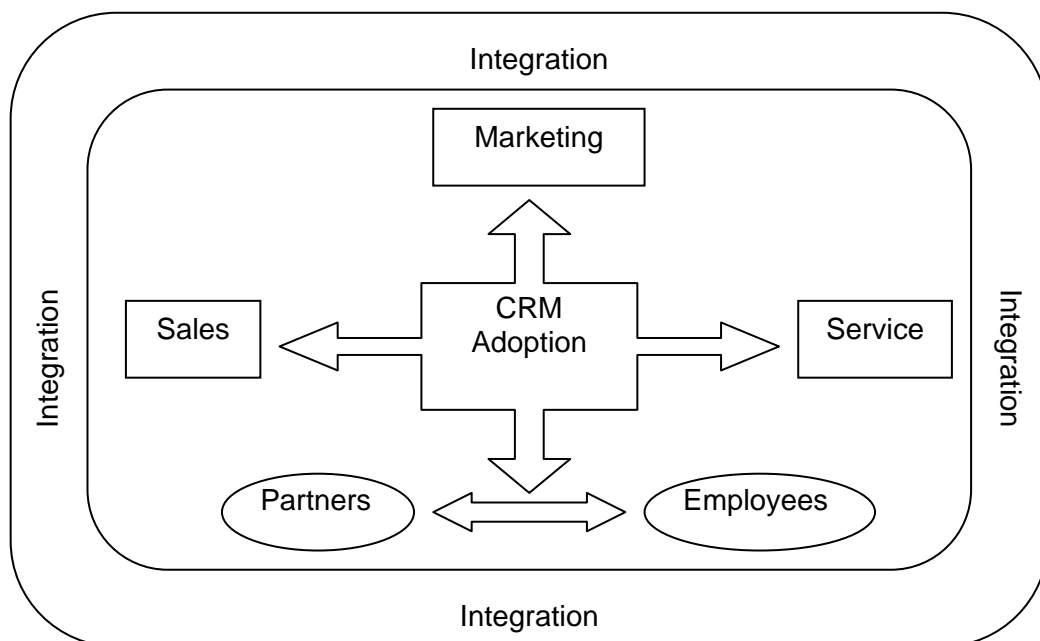
Currently, CRM implementation operates a whole host of best KM practices that focus almost exclusively on deployment methodologies. Yet, a number of methodologies are also available for evaluating CRM adoption. One example is the UpShot® guide for CRM – which assures that seven less appealing characteristics of a CRM solution are not neglected. Another example is the Siebel System Value Diagnostic that allows an assessor to rank an organisation's level of CRM adoption. Other examples include eBestMatch™ or Systems of Alignment™ – which essentially help organisations to save time and money, achieve better and more reliable decisions when selecting enterprise software. In evaluating CRM investments, one must realise that the payback for CRM solutions is more than just "crunching numbers". Nevertheless, IT managers need numbers to analyse the return on investment of CRM projects and it is contingent on the analysis of these numbers that organisations can justify the expenses, short-term pains and long-term benefits of CRM investments. More importantly, organisations must understand exactly what customers' need are, and in turn create a profitable business process around these needs through CRM. For example, financial institutions keep track of customers' life stages to market appropriate products (e.g. mortgages or investment plans) to a specific group of customers at the right time.

## Diagnostic Methodology For Evaluating CRM

### Assessment Framework and Ranking Protocol

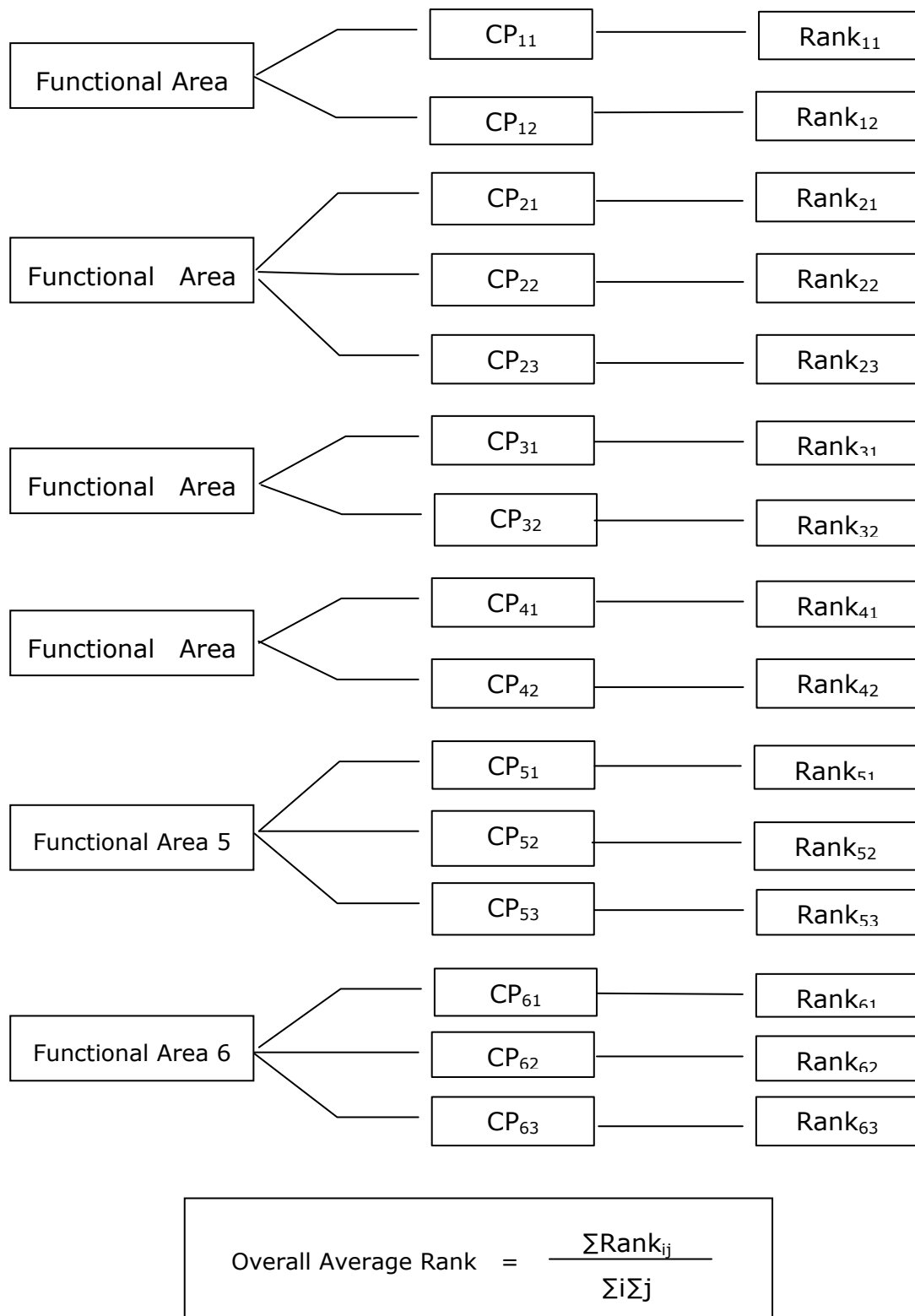
Depending on organisational and industry requirements, CRM solutions may be chosen from highly flexible deployment options that cater to a wide range of budgets and business needs. For example, an organisation may add on built-in capabilities (e.g. data warehouse) to improve the overall performance of CRM. To systematically evaluate the effectiveness of a CRM solution within an organisation, a diagnostic methodology is developed based on two analytical schemes: (1) an assessment framework and (2) a ranking protocol. Using the Siebel Systems Value Diagnostic that consists of six functional areas, an assessment framework is proposed. As depicted in Figure 2, the assessment framework illustrates how the functional areas are organised and inter-related in an organisation for managing customer relationships. The six functional areas consist of sales, service, marketing, employees, partners and integration. The ranking protocol, as shown in Figure 3, provides the methodological approach for evaluating a CRM solution in each functional area by assessing critical points of concern. Should more assessment measures (e.g. quantifying integrated best KM practices in fostering better relationships amongst customers, employees, partners and suppliers) need to be incorporated in the ranking protocol, the diagnostic methodology can be re-designed to include other critical points.

**Figure 2:** Assessment Framework for CRM Adoption





**Figure 3:** Ranking Protocol for CRM Evaluation



## Four-Level Adoption

Using the ranking protocol of the diagnostic methodology, the “overall average rank” of CRM adoption can be determined. Four levels of adoption, as listed in Figure 4, are quantitatively distinguishable by the extent of competitive advantage resulting from usage of CRM tools. The four levels of adoption are: (1) substantial improvement opportunities, (2) early-stage adopter, (3) emerging leader and (4) best practitioner, in ascending order of adoption (Level 1 is the lowest adoption and Level 4 is the highest adoption). Either two or three critical points of concern for each functional area are ranked on a scale of 1 to 4 to estimate the level of adoption in business processes or best practices or both.

**Figure 4:** Levels of CRM Adoption

	<b>Level of Adoption</b>	<b>Description</b>
Level 1	Substantial Improvement Opportunities	Developing and implementing comprehensive customer, partner and employee relationship management strategies to increase competitiveness and generate significant financial returns
Level 2	Early-Stage Adopter	Building on early successes to create competitive advantage
Level 3	Emerging Leader	Focused achievement of best practices to intensify industry leadership
Level 4	Best Practitioner	Maintaining leading-edge business processes and best practices and ensuring consistent and efficient execution to extend competitive advantage over time

## Critical Points of Concern

Undoubtedly, the essence of a CRM solution places the customer at the centre of all business activities within an organisation. Hence, no CRM solution, regardless of how technologically sophisticated it is, can be successful without taking into consideration the critical points of concern for each functional area to enhance customer relationships. The underlying reason behind the inclusion of these critical points is basically to “listen to the customer’s voice” rather than just merely deploying CRM tools to “plug process gaps” – which can lead to exorbitant implementation and support costs. By emphasising these critical points, an organisation could better harness the strategic benefits of information systems and IT infrastructure already in place and stretch previous IT investment dollars further. With reference to the ranking protocol for evaluating a CRM solution, the critical points of concern for each functional area are summarised as follows:

### Sales

- Optimising sales team resource allocation and managing territories
- Ensuring that sales teams fully understand customers’ businesses, strategic and financial priorities and industries

### Service

- Managing and minimising call centre agent turnover
- Aligning preventive maintenance plans and efforts with actual customer needs
- Cross-selling and up-selling effectively during service delivery

### Marketing

- Measuring the return on marketing investments
- Identifying the optimal media channels to support individual campaigns

### **Employees**

- Keeping employees informed of changed internal and external regulations, guidelines and compliance requirements
- Delivering timely, high-impact training to employees, partners and customers

### **Partners**

- Joint planning of product, selling, service and marketing efforts with partners
- Coordinating and managing effective marketing events with partners
- Coordinating joint service delivery with partners

### **Integration**

- Achieving fast time-to-market for critical business process enhancements
- Supporting multiple integration technologies required by various applications
- Propagating data changes throughout integrated applications quickly and accurately

## **A Diagnostic Sample**

To conduct an evaluation of CRM adoption, one should select specific business processes and customer contact requirements for explicit consideration – which requires documenting and mapping end-to-end processes involving customers so that the assessment on all functional areas would be reliable and valid. To provide a typical example for reference, a diagnostic sample of the company, Network Associates, as assessed by Mr Anthony Smith, is illustrated in Figure 5. From the evaluation results, it demonstrated that the company is an emerging CRM leader, with the potential of being a best practitioner of CRM, particularly for the company's employees.

**Figure 5: A Diagnostic Sample**

<b>ORGANISATION:</b> <u>Network Associates Pty Ltd</u>		<b>ASSESSOR:</b> <u>Anthony J. Smith</u>		<b>DATE:</b> <u>4 January 2005</u>		<b>Average Rank</b>
<b>Functional Area</b>	<b>Critical Points of Concern</b>	<b>Ranking</b>				
		1	2	3	4	
Sales	Optimise sales team resource allocation and managing territories		X			
	Ensure sales teams fully understand customers' concerns				X	3
Service	Manage and minimise call centre agent turnover				X	
	Align preventive maintenance plans with actual customer needs		X			
	Cross-sell and up-sell effectively during service delivery			X		3
Marketing	Measure the return on marketing investments		X			
	Identify optimal media channels to support campaigns				X	3
Employees	Keep employees informed of regulations and guidelines				X	
	Deliver timely, high-impact training for employees			X		3.5
Partners	Joint planning of selling, service and marketing with partners	X				
	Co-ordinate and manage marketing events with partners				X	
	Co-ordinate joint service delivery with partners			X		2.7
Integration	Achieve fast time-to-market for business process enhancements		X			
	Support integration technologies required by applications				X	
	Propagate data changes throughout integrated applications			X		3
<b>Number of scores for each rank</b>		1	4	4	6	
<b>Overall Average Rank</b>		3.00				
<b>Adoption Description</b>		Emerging Leader				

## Evaluation Results

The diagnostic methodology offers a better appreciation of an organisation's "state of CRM adoption". With the evaluation results, managers may then focus on utilising the knowledge created by a CRM solution to redesign current processes or to address customer's specific needs or to fine-tune the nature of customer relationships. Take for example, realigning an organisation's service resources around Most Valuable Customers (MVCs) to create new revenue streams. Another example is streamlining customer services to refrain from automating existing processes that are inefficient or unproductive and thus avoid over-investing. In addition, the evaluation results also enable organisations to identify specific customer-centric features of functional areas to invest appropriate CRM tools and hence maximise the return on that investment. Since a vital part of CRM includes selecting the technological platform, an integral part of a CRM solution also involves picking the "right technology". Yet, if a CRM solution is approached from the perspective of technology alone, it may be destined to fail. So, before adopting a new CRM technology, it is prudent to require a "proof of concept", which must be consistent with an organisation's customer-centric goals. It must also be remembered that, like any enterprise software, the purpose of any CRM solution is three-fold: ensure specific KM objectives are met, enable suitable KM technologies to be adopted and facilitate relevant KM processes to be carried out,

with a dedicated attention to address customer-centric issues – and as a result, lead to less down time, higher close rate and shorter sales cycles.

As the diagnostic methodology carries an element of subjectivity in terms of assessment, leading factors may be incorporated for each critical point to further improve the reliability of evaluation results. However, this would require a sufficiently sizeable database of organisations be built first, whose evaluation results and the level of effectiveness in CRM adoption must be known and available for research use. Nevertheless, one should acknowledge that CRM adoption is dynamic in nature and could progress over time as CRM capabilities are strengthened. For this reason, one must recognise that CRM should not be viewed as a one-off static solution. Rather, it is an on-going commitment to continuously improve business processes for better customer relationships – a goal that is unattainable without supporting CRM tools, solution upgrades and new roll-outs. Thus, the ultimate challenge is to continually seek new CRM solutions that integrate effectively with existing IT infrastructure, systems and CRM tools, and yet be able to deliver maximum value to customers.

## **Conclusion**

In summary, this article has developed a diagnostic methodology for evaluating an organisation's CRM solution based on six functional areas: sales, service, marketing, employees, partners and integration. Using the proposed assessment framework and ranking protocol, an organisation's business processes and best practices for managing relationships amongst customers, employees and partners may be modelled, analysed and evaluated. The diagnostic methodology provides a strategic management tool for an organisation to better implement its CRM solutions as part of organisation-wide efforts towards, say, a cross-functional enterprise resource planning system, to further enhance its overall effectiveness in knowledge management (KM) practice. The evaluation process also offers an organisation the opportunity to learn about its strengths and weaknesses and to understand how it could advance in the journey to CRM excellence.

In conclusion, with the CRM industry maturing, the benefits of CRM solutions should no longer be reserved for large global enterprises with deep pockets for IT tools and software applications. Given that higher level of CRM adoption could lead to higher return on investments, all sectors of business are trying their utmost to leverage from CRM as a new source of competitive advantage. Yet, to manage customer relationships effectively, relying blindly on KM tools alone is inadequate. Thus, installing CRM software is not an end-all and be-all solution to building a customer-centric organisation. In all certainty, it is not a "magic bullet" for poor customer relationships. The best bet for success is to first understand the issues relating to the challenges of CRM adoption and then find the most suitable CRM solution that can provide maximum value to address these issues.

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