

CRM: Beyond "Word of Mouse"

by Amrit Tiwana

Obsession with technology often leads us to miss the obvious in our search for the inobvious. Customer relationship management (CRM) is no exception, with the data mining, Web warehousing, clickstream tracking, and channel integration solutions that are being feverishly deployed by e-businesses. The location and information asymmetries that kept old

economy customers loyal more by necessity than by choice lose their potency in e-business. Customers' tolerance for mediocrity, inconsistency, and poor service are replaced by an unforgiving demand for quality, service, and price competitiveness. Acquisition of customers on the Internet is a very expensive proposition (20%-40% higher than equivalent traditional businesses), and it requires the glue of loyalty to keep the business model from falling to pieces [5]. Amazon's 20-million-strong customer base (73% repeat buyers) serves as living proof that customers are price rational but not price obsessive.

This article investigates two key assets of e-businesses — knowledge and relationship capital — that together help build an inimitable, valuable, and sustainable competitive edge. I argue that CRM is essentially a specialized instance of knowledge management, and that the goal of managing customer knowledge is what helps drive every other facet of CRM. In the specific context of e-business, the knowledge-enabled customer relationship management (KCRM) framework is used to describe three facets other than CRM technology — the environment, strategic context, and

customer strategy — that help align it and deliver results.

IN SEARCH OF DIGITAL CAPITAL

Customer relationship management is nothing new, although its recent recognition in e-business is. CRM is grounded in the age-old concept of relationship marketing; that is, establishing a learning relationship — one that gets smarter with each interaction — with each customer, starting with the most valuable ones. The Web provides that elusive medium for building *nearly* perfect markets with the need for perfect information and perfect knowledge of what has occurred and *will* occur in the marketplace.

Don Tapscott and his colleagues describe the currency — networked knowledge and relationship assets — of e-businesses as *digital capital* [9]. Brand recognition commonly associated with Buy.com, Amazon, Outpost.com, Sparks.com, and eBay is a form of relationship asset that comes more from a huge base of repeat customers than from media blitzes and Super Bowl commercials. These true assets of an e-business are built of the complementary pillars of strong relationships and intimate knowledge of the customer, market, and environment. Relationship assets and knowledge are of little value unless they are applied. In other words, flows, not stocks, of these assets create value. When applied and integrated into business processes, these assets are transformed into structural capital. That is precisely where the fascinating economics of network externalities, increasing returns, and lock-ins come into the e-business picture.

Network Externalities

As the number of users of a product, service, or combination grows, it is said to exhibit

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network externalities (or network effects) if its value disproportionately increases for all other users. Fax, e-mail, handheld devices, and indeed Windows have all benefited from such effects. Poor strategic planning can forestall such positive network effects; a case in point is Apple in the 1980s through 1998. Being able to take advantage of this especially strong characteristic in e-business transactions necessitates knowledge of the product market and the target consumer base.

Customer Lock-in

In simple terms, “locking in” your customers means that the financial and nonfinancial costs of their switching to another business are high enough to dissuade them from switching. When such lock-in does not exist, any product or service becomes a commodity [7]. Long-distance services are a perfect example. Customer loyalty is partly determined by excellence in service and product offerings and partly by the degree of lock-in. The greater the lock-in, the more unlikely the customer is to switch. Yet, if a competitor provides a *migration path* (e.g., from Outlook Express to Eudora), the lock-in cannot be sustained.

Lock-ins based on knowledge rarely have any such migration paths. Garden.com uses precisely such locks by having customers manually enter details of their own garden into its system, which the company then uses to make gardening supply suggestions. Building customer loyalty begins with your business delivering three things valued by the customer: (1) knowledge, (2) anticipation of future requirements, and (3) superior communication. Consistently delivering on these three facets can help build a knowledge-based relationship with the customer, eventually leading to the possibility of creating a lock-in.

Much knowledge is created at the interfaces of an e-business. The interface between customers and an e-business — sometimes called the *marketface* — is one such interface. Savvy e-businesses are using knowledge-driven personalization to create digital stores that treat each customer as though he or she was their only one. LandsEnd.com, for example, attempts to create knowledge-based lock-ins by having customers build their own virtual models. Online systems for tracking knowledge of customer preferences can help your company recover the kind of customer loyalty that used to be common in the old economy and simultaneously raise switching costs through irreplicable knowledge-based lock-ins. In e-business, such lock-ins can be extended to partner firms as well.

Increasing Returns

Digital capital measures a business's intangible assets. These assets include networked knowledge and relationships with customers and partners. Precisely because of the networks of social relationships that constitute Web communities, digital capital assets exhibit what economists describe as increasing returns. Consider the case of startup e-tailer MensToys.com. At the peak of the 1999 Christmas season, the company ran out of stock of its in-demand Fisher Space Pens. The CEO personally posted apologies on public “hot deal” forums. Within hours, dozens of Web forums had entire discussion threads about the CEO's gesture. The little-known company suddenly gained unexpected popularity and established a positive image among thousands of potential customers. The point is neither that the CEO knew just where to post his personal message, nor that the gesture garnered unintentional free publicity. It is more about how an unanticipated gesture helped build

enviable relational assets with potential customers. As holiday shoppers passed on the good word to other shoppers, word of mouse brought more business faster to MensToys.com than word of mouth could have in a non-networked, brick-and-mortar business. As the good word spread, positive relationships reinforced newer positive ones (to create an increasing returns effect). Increasing returns are therefore best realized when knowledge and relationship assets of businesses feed upon each other.

WEAVING RELATIONSHIP WEBS

Marketing has long been a broadcast discipline grounded in practices developed for selling mass-produced products to broad, homogenous markets. CRM adopts a counterintuitive philosophy that advocates building a business's customer portfolio through transaction-unspecific interaction, collaborative and nonadversarial relationships, networks, and communities of loyal adherents. It is important to recognize that the benefits of e-business cannot be fully realized until collaborating businesses' competencies are used to build win-win synergies for all partners in a business network (often referred to as a b-web), including customers [3]. As both customers and collaborating businesses get increasingly networked, customers become co-creators of value. Amazon.com, Ratingwonders.com, and eBay are excellent examples of businesses that have applied this principle in order to exponentially leverage their knowledge assets and to further relationships with their customers. Every additional feedback rating, transaction valuation, or book rating in these businesses strengthens their relationships with their customers. As we move away from transaction-oriented marketing processes such as order fulfillment and

inventory management toward knowledge-oriented, multi-dimensional, integrated activities like relationship management, coordination requirements and operational dependence on other business processes increase exponentially. E-business systems must facilitate such coordination by design.

Knowledge: Acquisition or Management?

In *The Loyalty Effect* [4], Fred Reichheld and Tom Teal warn that knowledge attrition is a severe problem that causes up to half of the business's knowledge to be lost over a period of 5 to 10 years through employee, customer, and investor turnover. E-business is a wake-up call: the negative impact of losing employees is more pronounced than before. When employees leave, the company loses some of its ability to assimilate customer knowledge, which is becoming increasingly important. More than ever, companies need to retain their employees so that they can absorb customer and partner knowledge more rapidly than their competitors can.

The rapidity of technological change adds yet another dimension to knowledge loss: knowledge obsolescence. Today's innovative knowledge will soon degrade to tomorrow's core knowledge. Core knowledge is simply *expected* of all market players and does not significantly contribute to the ability of an e-business to recognize and opportunistically act on market gaps as they emerge. This means that an e-business must manage, grow, and apply its knowledge at a rate that exceeds that of its competitors. The key lies in *applying* — not merely collecting — knowledge to strengthen customer relationships and loyalty while taking into account your company's history, culture, experience, goals, realities, and unique problems. This process involves the transformation of

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human capital into applied knowledge within customer-interaction processes and decisions.

KM and CRM complement each other well, and when brought together in strategic communities, they can generate extra-normal competitive advantage [8]. In the context of CRM, knowledge management focuses on creating and delivering innovative products or services; managing and enhancing relationships with existing and new customers, partners, and suppliers; and improving customer-related work practices and processes. Just as the scope of relationships extends beyond singular transactions, the scope of knowledge must encompass families of products associated with a customer [12]. Delighting the customer means asking the right questions without losing control of costs or quality. Customer-centric knowledge management can help us ask those questions.

THE KNOWLEDGE-ENABLED CRM FRAMEWORK

Knowledge-enabled CRM is little different from the old-time, small-town system in which the neighborhood grocer knew everyone by name. The customer database was in his head, and business intelligence came from his tacit understanding of each customer's needs. KCRM is the art of transforming knowledge of your customers into a sustainable source of value for your business and your customers, and a mechanism for building lasting relationships with them. The "art" portion is important to remember: just as a fancy Macintosh cannot endow my hands with the artistic capabilities they are severely missing, packaged CRM technology cannot deliver relationship enhancement capabilities unless it is complemented by business insight and market knowledge.

Customer knowledge and relationship management can be analyzed using the customer knowledge-enabled CRM strategic framework illustrated in Figure 1, an extension of the Broadbent-Weill IT infrastructure framework [1]. Four key dimensions constitute the framework: (1) business environment, (2) strategic context of your CRM initiatives and their objectives, (3) e-business strategy, and (4) enabling technology. This framework allows us to visualize CRM as technology-facilitated relationship building involving both customers and channel partners (such as shipping, distribution, suppliers, and cross-linking allies). Direct linkages with the environment and with the strategic context keep technology-driven obsession over customer data in check.

Using this framework for CRM strategy development ensures that customer knowledge management strategy and technology choices are attuned to both the business environment and your business's strategy. In essence, simultaneously tracking internal and external priorities allows businesses to design adaptation into their system architecture and, indeed, their relationship management approach. Linking technology and its business proposition facilitates robust alignment between the two, as described in depth in my forthcoming book [13]. Each dimension is surrounded by barriers, as shown in Figure 1.

1. **Interpretation barrier.** Analyzing the environment is impeded by the inability to interpret what the changes in business environment mean for your business.
2. **Expression barrier.** The context of your knowledge management strategy in general, and customer knowledge management in specific, is impeded by an expression barrier — the inability to express the influence of the business

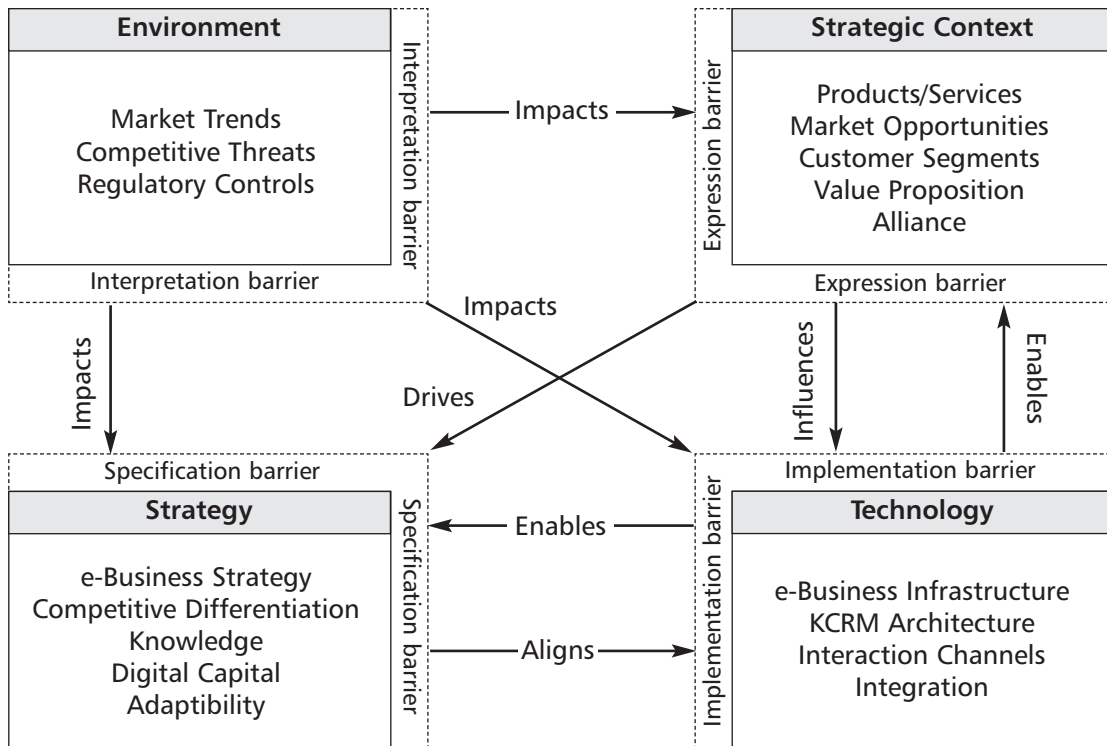


Figure 1: The knowledge-enabled CRM framework.

environment on explicitly identified strategic needs.

3. **Specification barrier.** Likewise, KCRM strategy is slowed down by a specification barrier — the inability to specify what technology is needed to leverage customer knowledge and to build customer, supplier, and business partner relationships.

4. **Implementation barrier.** Finally, technology deployment is inhibited by an implementation barrier caused by an amorphous combination of the lack of technical skills, analysis skills, and know-how; incompatible infrastructure; time pressures; or infeasible technology solutions. In e-business, the implementation barrier often equals the inability to integrate not-so-compatible systems across your business and its partners.

In the following sections, we will examine the four dimensions of the framework and the barriers associated with each.

The Environment

The external business environment impacts your company's strategic context, its products, services, markets, customers, and allocation of resources, and in turn its customer knowledge management strategy. Because technical opportunities, market gaps and trends, competitive threats, and regulatory controls emerge in the environment, the criticality of being attuned to it cannot be overemphasized. The environment impacts both the strategic context of relationship management and business strategy. For example, until late 1999, business-to-consumer (B2C) e-businesses were largely rewarded in the stock market based on the sheer number of unique customers that they had. Around Christmas, thousands of

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e-tailers were literally giving away free goods in the form of dollar-off coupons for new customers. By early 2000, the market also began taking into account how many of those customers actually returned. Not all e-businesses recognized that shift (hindered by the interpretation barrier), but those that did scrambled in every possible direction to implement CRM!

Innovation management researchers describe the ability to interpret, value, and apply external information as *absorptive capacity*. Absorptive capacity is perhaps the key reason why stockbrokers still have to work as stockbrokers (they might have the skills to collect and analyze data but lack the path-dependent knowledge to apply it themselves). As a company gains more experience in an e-business environment, its absorptive capacity will increase, resulting in the gradual erosion of the interpretation barrier. However, this erosion is subject to whether the company builds on the *first learner advantage* that far outweighs the first mover advantage in the digital economy [2].

Strategic Context

The four goals of CRM — identification, differentiation, interaction, and customization — have evolved since the introduction of electronic commerce, and more so with the evolution of e-business. The strategic context of a relationship management initiative drives e-business strategy and influences the choice of customer KM technology. The strategic context is shielded by an expression barrier that hinders articulation of the value proposition of building relationships with customers and channel partners. Pure commodity businesses are rarely suitable for relationship-intensive approaches, although businesses like Amazon, Apple, and Starbucks have taken rather commodity-like offerings and made them relationship intensive. It is important

to distinguish whether an e-business wants to build relationships between itself and its customers or its offerings and its customers. Amazon exemplifies the former; Starbucks and Apple the latter. I argue that the former model is the one that is sustainable in the long run. If an Apple licensee (such as Umax in the past) sells precisely the same system to a customer, the customer might be willing to buy from that business instead of Apple. However, my neighborhood Borders and Barnes & Noble stores sell exactly the same books as Amazon, yet I visit Amazon to browse books and book reviews. Of course, the catch in the former model is that I need not buy from Amazon even though I visit the site regularly; revenue streams are not guaranteed.

In either case, these product and service offerings (often a combination of both), market opportunism, target customer segments, and the extent and value of alliances within the business model all influence the e-business's strategic context.

Strategy

Customer knowledge strategy begins with a business vision that is shaped by a long-term strategic intent. The strategy of an e-business determines how the firm expects to differentiate itself from its competitors and how it intends to avert commoditization of its offerings. The basis for competitive differentiation further determines what knowledge of customers and channel members is even needed. Effective KCRM must result in networked knowledge and relationship capital (collectively called e-business digital capital) that is valuable, rare, and hard to imitate. In analyzing relationship management, it is worth remembering that businesses often bite off more than they can chew: grocery stores, for example, barely analyze two percent of all data that they gather [11]. Strategy formulation therefore

must *initially* focus on valuable knowledge with relatively short-term payoffs.

E-business models that work well in one round of competition might well look very different by the next round. Adaptability of strategy is therefore key. Several management researchers have used different terms to describe the same concept: dynamic capacities, resource recombination, reconfiguration, modularity, and so on.

The degree to which your business exploits its existing knowledge and relationships for short-term gains is known as its exploitation level. This represents the intent to focus on deriving financial and productivity gains from knowledge that already exists, both inside your company and within the channel. Exploitation must also be accompanied by exploration of new business opportunities, creation of new relationships, filling in new and emerging market niches, and assimilation of new knowledge. Balancing exploitation of existing relationships and knowledge with exploration and creation of new sets falls within this task dimension. More significantly, this choice determines what technology investments are best suited to the predominant exploitation or exploration focus. Two things must be kept in mind: (1) being an innovator is of little use if your business is not an exploiter, and (2) exploitation or exploration cannot be financially sustained for too long independently.

Technology

Business goals, not technological feasibility, must drive technology design. The much talked about but frequently ignored alignment of technology and business strategy for customer knowledge management should be *the* starting point of technology selection. While the usefulness of data mining, Web warehousing, and statistical

clustering cannot be discounted in *some* settings, these pieces cannot substitute for common sense. Deployment of technology must therefore be driven by the dual goals of increasing the effectiveness and efficiency of customer knowledge management, not efficiency alone. It is the efficiency mindset that prompts the mindless spamming of 30,000 past buyers from a Web site with “daily specials.” Common sense would say that if customer number 28,407 from Atlanta is a Mac user (he has purchased two iMacs in the past eight months), he perhaps has little use for the newest version of the Windows antivirus suite on the top of that “specials” list. If promotion-driving technology facilitates such mindless relationship breaking, you’ve got other problems to fix before you invest in the latest CRM software suite.

As with the delicate exploitation-exploration balance for strategy, codification and communication must be balanced while choosing technology for customer relationship and knowledge management [10]. Codification (storage, indexing, and retrieval for reuse) and communication are two semi-exclusive approaches to managing customer knowledge. Codification is more focused on technology that enables explicitly recording customer knowledge in transactional databases; this approach works well for routinized encounters such as troubleshooting, support, and credit verification. When customer knowledge is not explicitly codifiable, or when encounters are one-off and unique, knowledge tends to be more tacit, based on experience and employee expertise rather than stored in data warehouses or expert systems. This approach is focused on connecting knowledge workers — employees, business partners, and even customers — through *people* networks.

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Customer knowledge in any line of business rarely falls into either of the two extremes above and instead tends to be somewhere in between. Depending on whether customer knowledge is closer to the tacit end or the explicit end of the spectrum, requirements for systems to support customer interaction will be *very* different. This distinction must consider the customer's *lifetime* value. In other words, if you lose a customer in the current transaction and she vows never to return, how much did your business lose in the long run? If the health of a business depends on customer relationships, then B2C e-businesses should begin to get worried: 75% of first-time buyers empty their shopping carts, killing significant potential sales (up from 67%, and \$3.2 billion, in 1999) [6]. The problem is even more severe if one begins to guesstimate the lifetime value of first-time customers among those.

This subtlety is perhaps better illustrated by a comparison of support delivery at two software vendors: Microsoft, the company with which most consumers have a love-hate relationship, and Niles Software, a specialized bibliographic database developer. When you have a problem with Microsoft Word™, the best “free” support provided by Microsoft is through a self-serve version of a not-so-intelligent-agent, Ask-Jeeves-driven codified knowledge base, whereas the 200,000-odd researchers who use Niles's EndNote can get unlimited free support from a live *human* agent. Both approaches are well suited in their own contexts but would spell disaster if swapped. Microsoft can count on its high levels of lock-in compounded by network externalities (“Curse the company and reinstall your software,” “What else will I use when all my colleagues use Word?”), while EndNote must count on the lifetime value of its users who faithfully purchase every new version sooner or later.

In order to balance strategic certainty against time to market, KCRM requires robust, scalable, responsive, flexible, and adaptable technology. Britannica.com is a poster-perfect example of a business that was unable to scale up fast enough when its product became freely available online. Its servers continually crashed for a straight week in the face of the hundreds of thousands — instead of the expected few thousand — of hits its site got on its opening day. For businesses that are not purely digital product based, technology must be designed to integrate bits and bricks right from the outset. Viewing CRM as a knowledge-facilitated approach to simultaneously broadening and deepening customer and channel relationships is more likely to result in competitive advantage than is the more commonly encountered technology-motivated approach.

CONCLUSION

Technology is neither the Jehovah nor arch-enemy of CRM. The ever-growing business centrality of the customer makes it even more crucial to be able to harvest customer knowledge as action to develop stable, long-term relationships with existing customers; know, understand, and serve their needs; and consistently apply new customer knowledge in order to accurately and rapidly reshape your business's offerings. Automated CRM approaches such as clickstream tracking, Web warehousing, and pattern mining pay too much attention to “word of mouse.” Business intelligence and analytics have a fair place in CRM; however, your own business must know that place. It is too easy to lose the wealth of knowledge in the abundance of that information and end up using your only hammer on every relationship problem.

Customer knowledge management allows you to bring small-town rules to global networks of strangers — at mass-market cost efficiencies. Perfect customer knowledge is impossible to achieve; relative competitor benchmarks set the bar. E-business's transparency simply raises that bar. Viewing your business through the lens of the customer KM framework might provide a more balanced picture of that bar.

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