

Complexity, Fragmentation, Uncertainty and Emergence in CRM

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"She grabs my hand and tugs me to the dance floor as the music starts. We've just met and I hardly know her, but here we are hand in hand, aside each other, each waiting for the other to start. I take the leap and lead. I bump her, moving awkwardly. She laughs. I try to read through her laugh and nervously adjust. She reacts calmly and inscrutably. Bit by bit, we feel each other out and begin to move gracefully across the floor, for now at least. I will never forget this dance."

So goes the aged-old dance between customer and company. A merchant in ancient Rome fared better than companies today. Back then all customers could be understood with eyes and ears. And a good memory went a long way. Today, companies continue to struggle to know customers better. Layers of workers stand between customers and the executives who guide the organization. Value chains are supposed to collaborate seamlessly on behalf of the customer but don't. Layers of technology spew enormous amounts of usually isolated, often irrelevant and mostly unseen data. We are adrift in a sea of information, thirsting for knowledge about our customers.

It is no wonder that for most customers, businesses look like an Alzheimer's patient. It is not surprising that business fail to remember who customers are from interaction to interaction, nor that they talk with multiple personalities. It is only surprising when companies do remember and speak in one coherent voice.

One of the biggest trends of the past five years, customer relationship management (CRM) technology and its accompanying strategies, seemed promising to many. It was supposed to pave the way to the future by using technology to capture data and provide businesses with a 360-degree view of the customer. In turn this data would enlighten employees, allow different parts of the company to speak intelligently to the customer and give customers the satisfying experience we assumed they have been craving.

Reports have come in from the field. CRM is harder than it seemed. Reasons vary. A research company, The Gartner Group, attributes failure to poor or ignored data, excessive politics, lack of planning, automating flawed processes and ignoring needed skill sets.^[1] In a survey of 219 information technology experts, the CRM Consulting Group found that 62% of companies that implement CRM products aren't customer-focused and only 22% have CRM metrics deployed across sales, marketing and customer service.^[2] Computerworld magazine reports that Mercer Management Consulting calls CRM a money-pit.^[3] Jill Dyche, the author of *The CRM Handbook* (Addison Wesley, 2001), says that managers underestimate the tools, time, budgets and policy changes to do CRM right and that vendors hype the technology.^[4] On the marketing side of the problem, market researchers argue that marketing firms and their client companies fail to perform adequate quantitative market research or rely on failed qualitative research.^[5]

Definitions of CRM may be suspect. Companies often think of CRM as equivalent to technology. Marketers look at CRM and see nothing new. Business people often remark that definitions of CRM are as formless as the Tao. The conventional wisdom seems to be that CRM is a technologically induced business strategy aimed at maximizing business value by delivering customer value. That said, perhaps more lurks beneath the waters undermining even the best-laid CRM plans.

What Is Everyone Missing?

Obviously, CRM is not as simple as it appears at first blush. In our view, the real reasons for this difficulty can be grouped into three categories: 1) dynamic complexity, 2) fragmentation and 3) uncertainty.

Businesses are surrounded by dynamic complexity. Internal upheavals such as mergers, acquisitions, spin-offs, new technologies, reorganizations, abrupt changes in strategy and high employee turnover create chaos within. Rapidly changing market conditions, volatile equity markets, reconstructed value chains, new global competitors with technological innovations, loss of competitive and first-mover advantage and changing customer behavior are forms of chaos originating outside the company's legal boundary. Not only is today's business world moving faster than 30 years ago, it is moving in nonlinear, unpredictable ways. Except for those few (and shrinking in number) industries with relative stability, businesses can no longer extrapolate a well-defined future from past events.

Businesses adopt, by choice or by accident, technological innovation at a rate faster than people, both customers and employees, can absorb the change. While the aftermath of the initial deflation of Internet bubble has slowed the rate of new technology adoption, computers keep getting faster and more adept at

storing information and software keeps getting more complex. It is unlikely that the rate of technology-driven change will drop significantly. In fact, we suggest that this drive to understand and serve customers will continue to spur technology-driven change.

How can businesses present customers with a consistent face when internally all is ajar? Even something as mundane as call-center consolidation within an internally stable business frequently causes difficulties that negatively impact customers' perceptions. Beyond the mundane, companies in all industries have been coping with business fads over the past decade, such as reengineering to revitalize the company or acquisition binges to satiate shareholder demands for rapid growth. Perhaps the fashion industry is more honest. Fads come and go and the participants in the industry realize *it is only fashion*. In the business world, change is adopted because people believe the engineered advantage awaiting them *is real*. CRM is in danger of becoming, or as some would argue is already, the latest business fad.

While the face of business has been changing, so too has the face of customers. Consumers are interested in constructing meaningful life experiences and "playfully and often critically 'sample' different" lifestyles^[6]. Theories of consumer behavior that relied on the consistency and orderliness of consumer behavior are no longer reliable. Global competition and new technologies ensure that as soon as customer behavior is on the "verge of stability and explainability, new products and services are introduced to destabilize the consumer behavior model so as to create competitive openings for challengers."^[7]

Fragmentation is also the new rule. Consumer lifestyles are becoming increasingly multidimensional. Consumer segmentation will be based on wishes and needs, not socio-demographic criteria.^[8] Is this perhaps already the case? The rise of ethnographic, immersive and other qualitative customer research techniques is perhaps an attempt by businesses to reacquaint themselves with their increasingly fragmented customers. For the researcher, traditional variables that have been used to predict or explain consumer behavior are now lacking. Consumers don't just frequently change their "self-concepts, characters and values," they often subscribe to multiple value systems and lifestyles.^[9]

For businesses, fragmentation runs rampant and largely unabated, even with the latest in data and application integration tools and techniques. In the midst of this evolution towards CRM, companies are still fractured along product and brand silos, functional groups such as information technology, marketing and so on, and information channels. Excellence is typically engineered within an information channel (witness the large number of polished but very poorly integrated web sites), a product silo or a functional group. Achieving excellence in handling customers is fraught with difficulty since nearly every part of the organization, and in some cases the value chain, needs to be well coordinated.

This fragmentation ensures that when it comes to customers, valuable information is not retained within corporate memory, is inconsistently communicated across the enterprise and is frequently not automatically linked with other information within needed time frames. Corporate fragmentation creates schizophrenic behavior. In this environment, how can businesses be expected to dance expertly with customers?

Beyond this dynamic complexity and fragmentation, CRM has its own uncertainty. This was not the case when businesses implemented massive enterprise resource planning (ERP) systems over the past decade. CRM is not the same as ERP. When deploying ERP solutions, companies proceeded from a known state – how the company currently procures goods and services and performs its accounting function, to another known state – how the software wants it done. Companies desired and sought revamped business processes to drive their ERP ROI models. Inefficiency was removed through the tried and true industrial-age mechanism of standardization and automation.

When it comes to CRM, the reverse is frequently true. How customers perceive and value the business and its offerings is typically partially known and usually through less-than-reliable anecdote. Here the business is moving from this partially known state to an even more uncertain state: how the customer will soon react to changes in the company's behavior or in the marketplace as a whole. This profound difference in certainty needs to be reflected in how CRM is implemented. Already the large-scale, "do it all at once" ERP-like implementation approach is giving way to a more iterative and adaptive one. Even one of the major makers of complex, high-end CRM software, Siebel Systems, Inc., encourages its customers to use a phased roll-out schedule to produce a "quick win" within three to four months.

Standardization of business processes is also not the goal of CRM. What CRM promises is further differentiation of business processes so that the increasingly multi-dimensional customer is attended to better. While automation is in fact a major benefit in implementing CRM software, efficient tailoring of the customer

experience is still difficult and limited to those areas where new technologies, such as web personalization engines, work best. Businesses are still learning how to efficiently customize the customer experience.

Managing Knowledge In Uncertainty

The knee-jerk reaction for businesses is to consolidate customer information into one repository. This assumption often ignores the deeply social nature of knowledge.^[10] The conventional knowledge management paradigm, which says knowledge resides in people's heads in tacit form (or in computer systems) and must be extracted, converted to an explicit form, stored and communicated across the enterprise, may be flawed or incomplete. The quality of data collected is often suspect and in pursuit of producing integrated knowledge, how employees actually consume information and collaborate with each other is overlooked.

The Data Warehousing Institute recently reported that while achieving data quality is possible, companies often pay lip service to it.^[11] Its study of 647 survey responses from companies in a variety of businesses revealed numerous problems. The study cites two top technical challenges facing companies implementing CRM solutions as 1) managing data quality and consistency and 2) reconciling customer records. The study goes on to show that 41% of CRM projects were experiencing difficulties or were considered a potential flop. According to the study, in 1996 FleetBoston Financial Corp drastically scaled back a well publicized \$38 million CRM project that attempted to integrate data from 66 different systems. The company underestimated the complexity in integration.

Companies also tend to measure what is easily measured: internal activities rather than customer behavior. Forrester reports that while 61% of the firms they surveyed have CRM metrics in place, only 12% have external, customer-focused metrics.^[12] Because the relationship between customers and a business is managed with layers of technology and people, customer knowledge is a derivative of customer measurement. A detailed and causal framework for understanding customers can take months or years to design, validate and implement. Meanwhile, companies merge, new technology changes the landscape and customer behavior changes.

Within knowledge management circles, experts are debating whether knowledge is engineered by converting tacit knowledge to explicit knowledge in an artifact or whether it arises out of the network of human communication and interactions. The latter view says that new meaning emerges from a continuous circle of communication between people. This knowledge is not engineered; it emerges in an unforeseen way as a result of these circular interactions. In our view, this is the duality of knowledge. Both views are correct and require each other in order for knowledge to be created and communicated. Nowadays, structured artifacts (e-mail, web sites, white papers, instant messaging, discussion forums) are becoming a primary means of communication, linking people together in this continuous circle of dialog.

This emergent knowledge management perspective has some unique implications for CRM. This process of "self-organizing interaction, when sufficiently richly connected, has the inherent capacity to spontaneously produce coherent patterns in itself, without any blueprint or program."^[13] For managers faced with the uncertainty within the company and with their customers, emergent knowledge creation capabilities may be the best chance at understanding customers. Rather than laying down clear guidelines on how to meet specific company goals, managers may be better off allowing richly connected communities of employees discern what customers value and let them collaboratively shape the company strategy. The duality of knowledge management reflects the duality of corporate strategy and control: is strategy and control a top-down or bottom-up affair? With the enormous uncertainty companies face in deploying comprehensive CRM solutions, companies should begin to incorporate the emergent, bottom-up view.

What Are The Implications?

The balance of power in this ongoing dance between the customer and the company has shifted towards the customer. They now have the power of information and that gives them the power of choice. More importantly, they have the power of memory and coherency. They can comprehend a company's strengths and weaknesses better than the company can. They can communicate and collaborate with each other on this understanding, frustrating the efforts of even the best marketers. They can coherently manage their own fragmentation of lifestyles better than companies manage their fragmented consciousness. Old forms of competitive advantage based on information control and locking customers up have melted away. A new form of competitive advantage in which advantage is found in superior customer knowledge and quicker business response is emerging.

We believe the attributes businesses will need to fight this new battle include: 1) iteration and adaptation, 2) fluidity in anecdotal, correlated and causal measurement, and 3) coherency through emergent yet directed corporate self-consciousness.

Most experts now argue against large-scale CRM implementation in favor of smaller, more bite-sized chunks. What companies overlook is that in order to gain superior benefits from a more iterative approach, companies need to *learn* from each iteration and apply the learning for advantage. We call that adaptation.^[14] To complete this learning loop, which not only adjusts the activity to the customer, but also causes reevaluation of controlling assumptions or variables, companies need to ensure their CRM iterations complete four stages of business response: 1) perceive, 2) plan, 3) act, and 4) adjust.

Companies rarely observe their internal and external environments with true objectivity. Past experiences, business values and human culture can shape the company's perceptual capabilities. That perception then must be challenged and tested with a planning and prioritization process. As different pieces of customer information are reviewed and discussed, internal political and social processes must (and frequently do) challenge and validate the current perception. Once activities are prioritized and sequenced, companies can act. Because any changes that impact customers contain inherently higher levels of risk, each new or modified activity needs a specific adjustment phase. Within this adjustment phase companies need to be able to quickly alter the activity as measurement data indicates.

These four stages of business response are not linear. In fact, we argue that it is better that they are not executed in a simple linear fashion. Because of the level of uncertainty with regard to customers, we advise that it would be better for companies to plan for a series of perceive-plan loops that inform each other. Since competitors can change their interactions with customers, potentially affecting how a company should interact with its customers, at any point in the process, the CRM implementation team must be ready to challenge current perceptions and reprioritize activities.

We also lobby for strong act-adjust loops in which each major activity is collaboratively designed and quickly validated, that the technology is sufficiently tested, and that the solution is tested on sub-segments of customers before extending the change to all customers. Each of these stages (collaborative design, technical testing, market testing and full implementation) should have one or more measured act-adjust loops with a backtrack to a perceive-plan loop if needed. This is a more dynamic and sophisticated project management approach than is typically employed on CRM implementations.

Executing these perceive-plan-act-adjust loops is insufficient for adaptation. Knowledge gained from these loops must be created, communicated and retained so that subsequent iterations, regardless of the nature of those iterations, can be better informed. It is not uncommon for analysts engaging in market or customer research in the perceive phase to uncover information that can inform another project's act-adjust phase. Consumption, communication and finally retention of the information are crucial, and in that order. The duality of knowledge management can be brought to bear on this problem. Managers must find ways to encourage *consumption* of knowledge, not just production. In many ways, knowledge is easily produced, but not easily consumed. Measures of knowledge management must account for both production and consumption. The perceive-plan-act-adjust business response loop offered here attempts to watch the flow of knowledge from its production phase (perceive-plan) to its consumptive phase (act-adjust). We offer *knowledge turnover* as a metric to count how quickly knowledge is produced and consumed within a company. All means for encouraging consumption should be explored and matched to the situation, including top-down and bottom-up measurement and control strategies, and knowledge-as-an-artifact and knowledge-as-an-emergent-network management approaches.

When it comes to customers, companies frequently manage from anecdote. Stories from the field, limited qualitative research and personal experiences frequently are the chief influences on decision-making. To successfully manage CRM long-term, companies will need to augment their anecdotal measurement approaches to include correlated and causal measurement models. Customer facing activity is too wide and evolving of a field of study to adopt a rigid or incomplete measurement approach. CRM systems stretch across an enterprise involving many business groups and even other companies in the value chain. Companies can break down the field of study along three axes: 1) field breadth, 2) field depth, and 3) tractability. Each of these axes competes for corporate resources and companies need to balance their approach in light of the technological and fiscal constraints.

Field breadth refers to how many customer segments, channel partners and different business units need to be measured. Field depth refers to how granular is the measurement approach in any area. Does the

measurement system apply to segments, sub-segments, or individual customers? Does it measure brand attributes or sub-attributes? How detailed are the behavioral models that, if established, need to be measured? Field tractability refers to how explainable and provable is the measurement approach. Proving causality can be difficult and take time. While some companies, most noticeably the consumer goods companies, do build customer causal models and measure them, most businesses do not wade that far into the causal waters. In between the land of anecdote and causality lies correlation. Here lies some of CRM's best measurement opportunities for those companies.

Businesses need to move fluidly between anecdote, correlation and causality measurement approaches. Moreover, their measurement approach needs to be adaptive so that as customer behavior and market conditions change, the measurement approach changes. Doing otherwise, companies risk measuring the wrong things.

Finally, companies need to find a way to establish coherency in two areas: in the eyes of the customer and internally in some form of corporate consciousness. How a company understands the world, describes it, communicates it to others and populates it with products and services is as varied as there are companies in the world. It is human nature for people to associate with these many and varied cultural units, or tribes. If it weren't human nature, there would be far fewer companies in the world. The series of interactions between employees, partners and customers is the means by which companies create their cultures and define themselves. Companies need to grab hold of this process.

With regard to customers, very little of the correct business response can be driven top-down. While upper management may have key insight and vision, it is nearly impossible for them to have the detailed knowledge of what works and what doesn't. Since the CRM field of study is broad and involves many functional business units, the chances of any one person having that ability is nil. What remains is for the company to figure out a way of coherently building that skill out in aggregate. Discussions on technologies that can richly connect people should take priority over debates over feature sets in CRM software. Integration of people and data are the critical factors in success, dwarfing other factors in importance.

Since many companies are not exactly certain which combination of business units and which value chain members will actually deliver value to customers, managers need to watch for emergent behavior as it unfolds and foster and guide it. This is what we mean by coherency through emergent yet directed self-consciousness. In this paradigm, managers should be more eager to foster the development of and experiment with new combinations of players (be they employees, suppliers, partners or customers) that can share the ability to reinterpret the customer and the market quickly and can collaborate well with each other, and be less concerned with designing the appropriate CRM program in a top-down manner.

To develop coherency, companies need to build out better proprioceptive nervous systems that can detect, integrate and synchronize internal states. Flexible collaboration and communication are the basis for a company's ability to shift easily between what is at the center of corporate attention and the periphery and its ability to convey the attributes of a consistent corporate consciousness to those that comprise that consciousness. This internal nervous system, digital or not, is needed before consciousness can emerge coherently. It can't be easily planned. While it is not a repeatable process, managers should be able to apply the principals in different forms with some measure of success. It is not at all uncommon in business for groups of people, within an enterprise or within its value chain, to sense what is valuable to customers, collaborate with each other in describing that value and then delivering the products and services that deliver that value, all without a proper business plan and sometimes unbeknownst to upper management.

Clearly, however, not all companies need this same dynamic and emergent capability to serve customers. All depends on the stability of internal environments, external markets and customer behavior. Those managing CRM initiatives also need to take into account how the company chooses to operate in its market. Does it wish to take a leadership position to shape its market? Would it prefer a nimble, fast-follower approach? Or would it prefer to opt-out of either strategy and continue as is? The more fluid and dynamic the market and the approach, the more bottom-up and emergent the customer facing capabilities will need to be. CRM solutions should be matched to both the external market conditions and the strategic posture the company adopts.

Concluding Remarks

Reports from field surveys and case studies paint a troubling picture. Companies are failing to implement CRM appropriately. While experts consistently remind businesses that measurement and knowledge are important

components to success, few insights on how to manage CRM successfully are given. We believe that in order for business to be successful in capturing this last form of pure competitive advantage – understanding customers better and responding faster and more appropriately – additional conceptual models and skills are needed. These models and skills are holistic and synthetic, not isolated and analytic.

Because of CRM's newness and the breadth of its applicability, CRM literature is littered with all sorts of advice that reads like a list of now-obvious commandments: enhance customer loyalty, measure CRM initiatives, integrate data, improve data quality, understand what customers value, establish a strategy, manage customer knowledge. Business managers are left unfulfilled with such a list. The lists offer no gradation or explanation of how to mitigate competing choices.

The three dragons threatening CRM – dynamic complexity, fragmentation, uncertainty – must be fought with adaptive iteration; fluidity in anecdotal, correlated and causal measurement; and coherency through emergent yet directed corporate self-consciousness. Each of these approaches can and should be scaled appropriately based on the internal and external conditions. By leveraging our learning capabilities as individuals and teams, mastering new forms of measurement (as it is our primary means of knowing) and actively encouraging collaboration and communication that can transcend old boundaries, perhaps companies can succeed in delighting customers.

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