"Internal Customer Relationship Management (IntCRM): A Framework for Achieving Customer Relationship Management from the Inside Out"

AUTHORS	Frank L. Eichorn
ARTICLE INFO	Frank L. Eichorn (2004). Internal Customer Relationship Management (IntCRM): A Framework for Achieving Customer Relationship Management from the Inside Out. <i>Problems and Perspectives in Management</i> , 2(1)
RELEASED ON	Wednesday, 17 March 2004
JOURNAL	"Problems and Perspectives in Management"
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"



© The author(s) 2024. This publication is an open access article.



Internal Customer Relationship Management (IntCRM) A Framework for Achieving Customer Relationship Management from the Inside Out

Frank L. Eichorn¹

"Effective solutions of complex business problems always involve more than toolsthey must include people and processes," Kathleen Goolsby

Abstract: Customer relationship management (CRM), a relatively recent term, describes a set of tools and processes being marketed to large organizations as a way of facilitating comprehensive customer service organization-wide. Unfortunately, although many firms are implementing CRM systems to manage their external customer interfaces, they are not integrating or aligning the underlying business processes and information systems. The result is a customer experience that may appear innovative but, beneath the surface, is still encumbered by poor communication and coordination between territorial departments, fragmented data systems, and incongruent process flows.

Successful CRM implementations require a holistic approach that integrates internal leadership, culture, organizational structure, business processes, and information systems with external customer touch points. The tools and methods that focus on the external components are commonly referred to CRM, and the complementary and somewhat analogous internal components can be called internal customer relationship management (IntCRM²). Internally, the underlying behaviors, attitudes, and motivation among functional business units, whether they are internal or outsourced, must reflect the same concern for customer satisfaction that management espouses toward external customers, including prioritization of requests among departments. The processes designed around the customer experience must drive priorities. When customer satisfaction is on the line, everything else should take a lower priority. Only by internalizing these values at all levels a company can truly develop world-class customer service and satisfaction.

The same practices and procedures for establishing effective IntCRM apply whether the processes to be integrated are internal or outsourced to another firm. In fact, the same practices that constitute the foundation for successful IntCRM are the prerequisites for successful outsourcing – clearly formulated and articulated business processes; clear, open communications; and relationship building at all levels of the organization.

This paper examines recent research that addresses these internal processes, including service quality assessment models. From this foundation, it then develops a comprehensive framework for implementing and assessing IntCRM in service organizations.

Customer Relationship Management

Real Market.com defines customer relationship management (CRM) as finding, getting, and retaining customers. According to this simple concept, an entire industry of software vendors and consultants has evolved, eager to provide the CRM cure for all an organization's troubles. Unfortunately, these vendors frequently offer "how to" (often out-of-the-box) solutions to this

¹ Director, Credit Data Management, Wells Fargo Company, e-mail: frank@supersportkarate.com

² The acronym ICRM was recently published in an article, Internal CRM: ERM for Internal Customers, by Williams Cusak, but he defines ICRM as the employee-organization relationship, not the internal business unit relationships or processes.

complex problem. This paper examines the problems with this boilerplate, narrowly focused approaches and summarizes recent research and literature suggesting a more holistic approach to CRM.

The ideas in this paper best apply to retail and service organizations. Although CRM is important for manufacturing firms, that sector of the economy has made progress with B2B communication systems and just-in-time production during the last two decades. At the same time, our economy is rapidly evolving into a service economy. By the early 1990s, almost 75 percent of employment and the gross national product came from the service sectors (Bowen 2002). Service and retail organizations have distinct dimensions, behaviors, challenges, and infrastructure concerns, resulting from the permeable boundaries between customers and employees, including sales representatives, service providers, store personnel, and customer service representatives. These relationships involve frequent and close interaction, presenting constant opportunities for nurturing- or damaging-customer attitudes and perceptions. Consequently, customer satisfaction should receive top priority.

Due to the relative importance of customer service and satisfaction, organizations and academicians should focus on this topic, paying close attention to the obvious dependencies between satisfied, productive employees and satisfied customers. However, Tornow (1991) suggests that the most of large service organizations consider employee satisfaction and customer satisfaction as totally separate domains. This constructivist view has led to initiatives that are not aligned and organizations that espouse customer service, without the means to deliver.

A New Concept?

CRM, as a new information technology (IT) concept, has dramatically increased in popularity during the last decade. Though vendors and business executives may praise CRM as the latest panacea to slumping market share, customer service as competitive advantage is as old as commerce itself. Meredith (2002) accurately suggests that CRM is "neither new, nor is it a breakthrough, and it is certainly not leading edge. It is not an idea, a technique or a panacea." CRM is simply the basis of a market economy. What has changed in recent years is the tremendous advantage that can be gained in customer service by leveraging various technologies for managing information and communication. Large organizations with millions of customers can begin to apply the same principles employed in small companies by collecting and organizing customer information and making it available to their frontline staff.

Technology approaches are the focus of most large CRM vendors. Consider the CRM architecture diagram (Figure 1) used by Siebel Systems, one of the leading vendors at the CRM market space. It provides some insight into vendor approaches and their limitations. The most notable deficiency is the missing cross-functional linkages between internal departments and business units. It also assumes that the central database is the single receptacle for all customer information and is accessible by all company personnel that need it, not just external customer service personnel. Too often, other databases, or even paper file systems, contain important customer information that is never integrated into the central data store. In addition, Siebel's offerings focus exclusively on the IT components, not the supporting infrastructure. This is one of many examples where the vendors focus only on the tools and packages to support CRM, which is just the "tip of the iceberg." In developing a customer-centric infrastructure, 60-70 percent of the work needs to occur below the surface (Kline 2001). This paper examines that 60-70 percent.

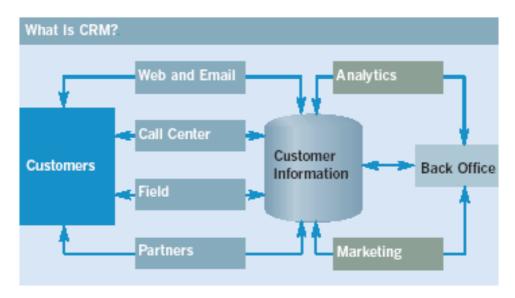


Fig. 1. Siebel Systems CRM Architecture

Whatis.com (2003) more comprehensively defines CRM; though under close scrutiny, the definition lacks in specific detail:

- Helping the enterprise to enable its marketing departments to identify and target their best customers, manage marketing campaigns with clear goals and objectives, and generate quality leads for the sales team
- Assisting the organization to improve telesales, account, and sales management by optimizing information shared by multiple employees, and streamlining existing processes (for example, taking orders using mobile devices)
- Allowing the formation of individualized relationships with customers, with the aim of improving customer satisfaction and maximizing profits; identifying the most profitable customers and providing them the highest level of service
- Providing employees with the information and processes necessary to know their customers, understand their needs, and effectively build relationships within the company, its customer base, and distribution partners.

While this definition and approach appear broader, they exclude steps aimed at the internal components necessary for successful CRM implementation. Too often, software vendors and consultants attempt to employ technology-only solutions aimed at helping companies achieve the holy grail of CRM. Their advertising rhetoric undeniably sounds attractive, promising tremendous advances in getting and retaining customers. As a result, companies have invested millions of dollars in CRM projects. The next section examines the success of such efforts and the perceptions of both customers and organization.

Is CRM Delivering on Its Promises?

According to 2001 statistics published by the Gartner Group, 55 percent of all CRM projects produced no measurable results. In the same year, a survey conducted by Bain and Company indicated that CRM ranked in the bottom 3 in customer satisfaction of the most popular 25 technology tools. In another Bain's survey that year of 451 senior executives, 1 in 5 reported that not only did their CRM initiatives fail, but they actually damaged customer relationships! (Rigby et al, 2002). These failures are thought to explain why the scores on the American Customer Satisfaction Index declined significantly in most service-sector industries from 1995 to 2002 (Bowen 2002).

Some companies are dissatisfied with their CRM projects, they are actually suing the vendors. W.L. Gore, a Delaware firm, sued PeopleSoft and Deloitte and Touche for failure to de-

liver on their promises as well as damages to operations within the company. Investors are also unhappy, as evidenced by a class action lawsuit against Oracle for inflated earnings and misrepresenting CRM software effectiveness.

With the failure rates so high, why did the Meta group report (Knowledge Management 2001) that most of the companies it polled planned to increase their CRM project investments by as much as 75 percent over the next few years? Is it a case of throwing good money after bad, or is the elusive target of excellence in CRM that desirable?

Is CRM Worth the Trouble?

Competition within service-sector industries requires new strategies. The Internet and other advances in information transfer and availability have made switching costs extremely low. As a result, quality of service has become a predominant strategy for differentiation and competitive advantage (Paradise-Tornow 1991). In addition, companies are increasingly outsourcing functions associated with external CRM, such as call centers and telemarketing, and internal functions, such as accounting and human resources. This division presents even greater challenges in ensuring that customers have a consistent positive experience and that internal systems are connected and integrated.

Although terrible service stories are ubiquitous, CRM is expensive and time-consuming. Forrester Research indicates that the average CRM project in a large organization takes 24 months to complete and costs from \$60 to \$130 million. Considering the amount of time and money lost, combined with such poor success rates, why bother? Does a relationship between service quality and financial performance really exist? The research suggests it does. A 1991 Tornow's study demonstrated a strong correlation between customer satisfaction and organizational performance. More recently, Rogg et al. (2001) found that 70 percent of customers surveyed reported that service quality and staff attitudes were the primary reasons for switching among companies, not the product or service itself.

Knowledge Management (2001) supports the notion that most CRM failures are because of overzealous vendors focusing on a single dimension—technology—without trying to align related processes or develop a customer focus across the organization. Much of the recent literature echoes these observations. Even though actual practice and implementation can be slow to evolve, CRM experts and academic researchers are increasingly publishing new literature espousing the virtues of more holistic and comprehensive approaches.

Relevant Research and Approaches

Systems theory and the concept of examining organizations as holistic structures have been around for several decades but only recently they have gained popular acceptance. One of the factors contributing to the recent acceptance of these ideas is the realization that command-and-control, hierarchical, function-based organizations are incapable of reacting to the accelerating rate of technological change and its effect on markets. This section examines several holistic research topics that address various dimensions of a comprehensive IntCRM framework.

Viable System Model

Any discussion of holistic, integrated systems should begin with a review of the Viable System Model (VSM), developed by Stafford Beer in the 1970s as a conceptual tool for modeling, understanding, and redesigning organizations. The model incorporates systems thinking principles, including the inherent complexity, self-organizing, and recursive properties of an organization. The overall premise is that traditional, military-style organizational hierarchies are slow and inflexible. At the same time, very flat structures comprising competing, disjointed, autonomous units have significant risks. The VSM provides a framework for finding the correct balance between these two extremes and ensuring the synergy and cohesion of the organization.

VSM incorporates many cybernetic principles, including self-organization, emergent properties, and recursivity. All systems respond to external and internal factors through the emergence of self-organizing behaviors and characteristics unique to the system. In addition, underly-

ing interdependencies are present, because all systems are at the same time a part of a larger system and comprise smaller subsystems. In biological systems, this occurs naturally. In man-made systems, such as organizations, these dependencies and interactions need to be identified and managed to ensure cohesion. Failure to recognize this complexity can often lead to unintentional, destructive actions. For example, many organizations attempting to streamline operations or cut budgets, implement shortsighted cuts or downsizing measures without understanding the whole system. Stories abound of entire departments being eliminated because the organization thought they were redundant or unnecessary and then discovered the loss of key processes or personnel. A ridiculous, but illustrative, analogy is the overzealous dieter who has amputated the arm to lose 20 pounds.

The VSM suggests that an integrated organization is a collection of autonomous units that are interconnected and possess a level of cohesion that results in a unified whole. Each of the autonomous units must have five key systems in place for effective operations:

- *Implementation*. The primary activities of the unit, either the product or services for which it is responsible.
- *Coordination*. The systems or processes in place that ensure these products or services are distributed to those business units that require them. IT systems frequently facilitate these activities.
- *Control*. Two-way communication between sub-units and meta-units that ensures viability. However, direct supervisory intervention can be significantly reduced through exception reporting and monitoring channels. Care must be taken to ensure a balance between trust and verification.
- *Intelligence*. Another two-way communication link between the unit and its external environment. It is the process for maintaining awareness of external markets and conditions. This function has a future orientation.
- Policy. Function that provides clarity about the overall direction, values, and purpose
 of the organization as well as defining the measures for organizational effectiveness.
 One of the keys related to organizational effectiveness is the relationship between the
 intelligence and control functions. These complementary functions act as checks and
 balances and provide connectedness. Policies must ensure that this balance is
 maintained.

Customer Trust and Value

In order to effectively attract and retain customers in the relationship-driven service industries, a company must not only identify and satisfy the needs of those customers, but it also must offer a value proposition that includes trust. Trust is the foundation of any relationship, but few studies have examined the company behaviors and practices that build or deplete customer trust. Siredshmukh et al. (2002) first identified the dimensions involved in trust, which include operational competence, operational benevolence, problem-solving orientation, and satisfaction. Next, they conducted extensive research to develop parameters for assessing effectiveness in each of these areas. They used perceived value as an independent variable and analyzed the statistical correlation to the trust dimensions. They found that customers expected friendly, helpful service when interacting with the company staff. Within normal ranges of behavior, this did not increase trust, but when employees did not exhibit such behaviors, trust greatly decreased. On the other hand, problem-solving behaviors by employees increased customer trust. In short, customers expect to be treated courteously, are impressed when employees attempt to help solve their problems, and are offended by an unfriendly staff. Another relevant finding of their research was that effective internal relationships and cross-functional processes increase the perception of organizational competence.

The results of their study can give companies an idea of where to focus their efforts in relationship management and further validate the notion of the organization as a complex, holistic system.

Employee Satisfaction and Customer Satisfaction

Considerable research has shown a strong relationship between employee perceptions of organizational practices and customer ratings of organizational effectiveness—that is, satisfied employees equal satisfied customers. Harter et al. (2002) performed a meta-analysis of 7,939 business units in 36 companies and found that business-unit-level employee satisfaction correlated with business unit performance. The metrics used for their analysis and research provide useful input in the development of the IntCRM framework.

To measure employee satisfaction, the researchers implemented the Gallup Workplace Audit (GWA), which comprises 12 specific items and an overall satisfaction rating (Gallup Organization 1999). Ratings are made on a 1-to-5 Likert scale and focus on areas that can be directly impacted by business unit managers:

- 1. I know what is expected of me at work.
- 2. I have the materials and equipment to do my work better.
- 3. At work, I have the opportunity to do what I do best everyday.
- 4. During the last 7 days, I have received recognition or praise at work.
- 5. My supervisor, or someone at work, seems to care about me.
- 6. There is someone at work who encourages my development.
- 7. At work, my opinions seem to be taken into account.
- 8. The mission/purpose of my company makes me feel my job is important.
- 9. My fellow employees are committed to doing quality work.
- 10. I have the best friend at work.
- 11. During the last 6 months, someone has talked to me about my progress at work.
- 12. During the last year I have had opportunities to learn and grow at work.

The dependent variables for this study were much more extensive and fell into several groups: customer satisfaction (survey results), profitability, productivity, and turnover. The regression analysis showed the strongest correlation between employee satisfaction and productivity and profitability, and the overall study results support for the notion that employee satisfaction directly affects organizational performance and financial results.

Rogg et al. (2001), in their study of 351 small businesses, found a direct correlation between employee satisfaction and customer satisfaction. Specifically, they focused on the overall climate of the organization as measured by employee satisfaction with hiring, training, performance assessment, grievance, and management competency metrics. Though somewhat linear in its depiction of causality, their model is one of the most comprehensive representations of the various parameters and dimensions that constitute the holistic nature and complex interrelationships of an organization.

SERVQUAL Model and Adaptations

In 1994 Hemmasi et al. published the service quality (SERVQUAL) tool, a generally accepted survey instrument. SERVQUAL attempts to measure the gap between customers' expectations of a service and the perceptions of actual service received. Like any popular process or approach, it has received considerable criticism. The most frequent critique is the use of a survey instrument for data collection and the inherent limitations that implies. A second criticism is that it focuses on the human element of service but fails to address the processes.

Sureshchandar et al. (2001) extended the SERVQUAL model by taking a broader view of service quality and augmenting SERVQUAL with additional components that address the processes, procedures, systems, and technology they saw as necessary to ensure seamless service delivery. In their research, they postulated that service quality involves five dimensions: the core service, human element of delivery, systematization of delivery (non-human element), tangibles of the service, and social responsibility (treating all customers fairly). Their suggested framework still employed a survey instrument, but they expanded the Likert scale to 7 and proposed that it has wider application and provides a more comprehensive picture.

The Customer Value Workshop (CVW) Model, developed by Bennington and Cummane (1998), is another adaptation of SERVQUAL designed to ameliorate the inherent weaknesses of survey instruments and develop a deeper understanding of customer needs and desires as well as

those company behaviors that drive customers away. CVW extends the SERVQUAL goals by employing focus group techniques with customers to identify satisfactory and unsatisfactory attributes and characteristics of service. This combination of qualitative and quantitative techniques yields much richer information and, although impractical on a large scale, is another mechanism that may be used by companies to collect customer input and improve relationships.

Total Quality Management

Total quality management (TQM), which has been around for two decades, is a comprehensive method of improving processes and practices throughout an organization. Tena et al. (2001) identify four broad dimensions within the scope of TQM:

- *Customer focus*. Customer satisfaction must become the common goal for all activities across the organization.
- *Continuous improvement*. Appropriate performance metrics need to be identified and self-assessment processes implemented and standardized.
- *Employee fulfillment*. This involves several factors, such as motivation, training, performance assessment, and teamwork.
- Treating the organization as a total system. Strategies and policies affect the entire organization. Management must be engaged and manage the organization as a collection of processes, not functions.

They extended the research on TQM by demonstrating that it significantly improves financial performance and organizational competencies. Their research further validates the use of a holistic approach that impacts the core culture, complex social relationships, and tacit knowledge of an organization. This type of approach enables an organization to improve its core competencies—such as CRM.

Capabilities Portfolio

Plakoyiannaki and Tzokas (2002) acknowledge that most of CRM failures are attributable to a lack of underlying infrastructure capabilities within a firm, specifically related to market orientation, IT, and integration. They postulate that CRM success depends on identifying the gaps in such capabilities and designing strategies for improving them. Their approach concerns the collection and sharing of information to improve customer relationships. Successful internal relationships are a prerequisite for successful external customer relationships and excellent customer support. These internal relationships and information sharing also result in an understanding of identities, sharing and understanding of culture, cross-pollination of ideas, and empathy. In addition, these relationships should be built around an overall context of business processes, not functional departments. This requires identifying how products, orders, and information move through the organization. Plakoyiannaki and Tzokas's approach involves the following:

- Creating a corporate culture that encourages processing and cross-functional sharing of information and knowledge, one that appreciates learning and internal relationship building
- Developing corporate strategies directed toward customer satisfaction and value
- Improving information processing and flows within an organization, including their capabilities for collecting, organizing, sharing, and, most important, mining the data
- Identifying their target markets and the value propositions for them, including channel and campaign management that establishes two-way information flows to ensure continuous learning
- Establishing and monitoring performance measures and incorporating this information into the decision-making process.

The capabilities portfolio model (Figure 2) illustrates the integration of the different dimensions involved in to a comprehensive organizational framework that supports CRM.

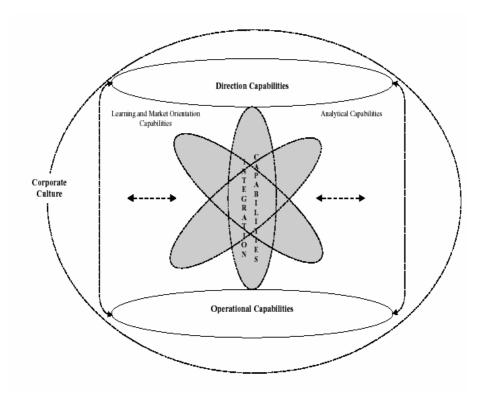


Fig. 2. Capabilities Portfolio Model for CRM

Service Logic Model

In 1995, Kingman-Brundage et al. proposed the service logic model (SLM) as an integrative and collaborative tool for examining cross-functional relationships within organizations. The authors recognized that traditional functional or departmental organizational structures are not conducive to creating an infrastructure that supports seamless customer service. They also state that service production is a multidimensional phenomenon with a high degree of intangibility. They reference Richard Normann, who stated in 1986, "...designers of effective systems must think in terms of wholes and of the integration of structure and process."

The SLM (Figure 3) illustrates the connections between employee and customer perceptions and the actual processes. It shows the integration of technical, customer, and employee components and how they combine to form a service experience. It can be used as a framework for analyzing and discussing the various dimensions. The authors' cautionary observation is that when the technical logic component is divorced from the service component, "it takes on a life of its own to the mutual dissatisfaction of customers and employees alike" (Kingman-Brundage et al. 1995).

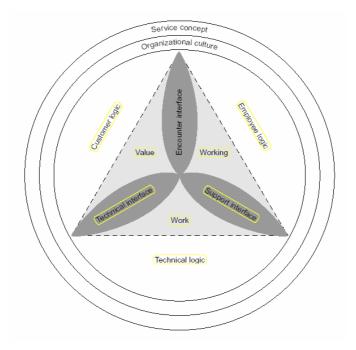


Fig. 3. Service Logic Model.

Holistic Systems – Internal Infrastructure to Support External Practices

From the review of this research and literature, three key dimensions emerge as critical to deploying effective CRM: a customer-focused culture established and supported cross-functional relationships, and information flows that allow data sharing and comprehensive customer data access. CRM tools and approaches implemented without an internal infrastructure congruent with these new practices do not succeed (at best) and may appear hypocritical to customers (such as when customer service representatives are trained to announce their intentions to provide outstanding service, but their actions and attitudes still reflect apathy and indifference). It is analogous to a casual acquaintance or coworker inquiring, "How are you today?" but having no real interest in hearing your response.

The premise behind IntCRM is that a holistic approach that connects internal processes to customer needs and achieves internal integration and congruency with external practices is critical to achieving successful CRM. As Plakoyiannaki and Tzokas (2002) state, "inter-functional coordination based on alignment of functional areas, promotion of interdepartmental connectedness, information sharing and strategy integration is imperative for supplying superior value to customers."

Emerging worldview ontology recognizes that systems are complex, involving numerous relationships, dimensions, and factors. Within an organization, the system components become increasingly interdependent, but they also exhibit increasingly independent behavior (Gharajedaghi 1999). Gharajedaghi defines five principles that explain the assumptions and behavior of an organization:

- Openness. Organizations operate within a larger context or system.
- Purposefulness. Organizational behavior is driven by its goals and reason for existence.

- *Multidimensionality*. Organizations are complex systems made up of other complex systems, one of which is human beings. The number of factors and variables is enormous.
- *Emergent properties*. Organizations exhibit new behaviors and properties that result from the interactions and relationships.
- *Counter-intuitiveness*. Bounded rationality limits our ability to comprehend the complexity and therefore predict the outcomes.

The multidimensionality, unpredictability, and recursive properties of complex systems are arguably impossible to model. However, the remainder of this paper attempts to integrate these principles into a comprehensive framework that helps to understanding and evaluate the symbiotic relationship between internal processes, attitudes, relationships, and behaviors and external CRM.

Premises and Assumptions

In order to develop a comprehensive IntCRM framework, we must summarize the relevant assumptions and principles that can be distilled from the research outlined in the earlier sections. This summary provides a foundation and establishes the basic underpinnings of the IntCRM structure. The components are then integrated and consolidated to form a comprehensive framework and assessment tool.

Holistic System

A foundational concept for IntCRM is that organizations are most effective when viewed not as collection of functions—sales, inventory tracking, accounts receivable, and information technology—but as a set of connected processes operating synergistically to fulfill customer requirements and expectations. However, the application of traditional organizational principles results in the creation of logical business unit boundaries. These business units simultaneously require autonomy and interdependence to ensure maximum operational effectiveness. The challenge is to identify and manage the interdependencies successfully. Effective approaches include business process flows that are clearly designed and articulated to eliminate departmental barriers and give personnel at all customer touch points complete visibility of information related to the entire process.

Complexity

It is impossible to understand the multitude and variety of factors impacting any system at any level, from the individual employee, to the business unit, to the organization, to the external markets. The best approach is to recognize this complexity, establish clear and open communications channels to improve learning and enable rapid and flexible response to new knowledge and changing conditions.

Customer Value

Addressing CRM and IntCRM first requires an understanding of the value proposition sought by the intended market. Red carpet treatment is cost prohibitive and inappropriate for highly competitive, price conscious markets. Also, many companies arrogantly assume they know what satisfies their target customers without ever attempting to listen to them. They often simply provide window dressing for customer service. For example, telephone scripts often include statements about providing the highest quality service, but personnel fail to actually deliver it because they have no real motivation, no access to the necessary information, or no authority to solve the customers' problems.

Unfortunately, these customer service gaps exist externally and internally. To really understand customer needs and desires, organizations should use third-party firms to conduct surveys and focus groups for external customers and employ reflexive practices (Langer 2001) to improve internal understanding and communication.

Satisfied Employees Provide Better Customer Service

In service organizations, employee satisfaction directly correlates with customer satisfaction and organizational performance. Neglecting employee needs and satisfaction never yields sustained high performance.

In addition to satisfying their employees, organizations need to have the right resources in the right places. In particular, personnel who interact with customers function as direct representatives of the company. These people should be carefully selected, highly trained, and well compensated. They need to be intelligent, resourceful, and enthusiastic about the company, the products, and delighting customers.

Technology Can Only Facilitate Improved Customer Service

In service industries, technology components, such as telephony and the Internet, must be leveraged to improve the customer experience, not used as an attempt to replace all human interaction. Internally, technology must improve business processes and cross-functional collaboration. IT in particular must be tightly integrated and aligned with these business processes, and all technology should be driven toward improving service delivery and customer experience. More important, personnel must avoid blaming technology for business process problems. Too often, hardware performance or software capabilities become the scapegoat for poorly designed process flows and poorly understood or communicated requirements. Poor integration between the business and IT staffs and processes (both are necessary) is often the root cause. Another example of "technical logic" (Kingman-Brundage et al. 1995) functioning autonomously, this separation presents special problems in today's environment, where outsourcing has become increasingly popular. Many companies consider outsourcing as a way to offload internal problems, but it increases the complexity required to maintain connected processes, such as efficiently collecting and maintaining data.

Culture Is Critical and It Starts at the Top

Leadership defines and establishes the culture of an organization. This requires more than corporate edicts or mission statements. Leaders must "walk the talk" by encouraging open honest communication, demonstrating genuine concern for employee needs, supporting initiatives and investments that improve capabilities, and implementing projects and programs aimed at internal and external customer satisfaction.

Cross-Functional Collaboration

Creating an organization of connected processes begins with adopting a process-versus-function approach. Besides needed changes in culture, motivation, and technology development techniques, it includes potential changes in corporate structures. Traditional, hierarchical structures are functional by design and can inhibit the necessary cross-functional collaboration required to allow rapid response to changing market conditions and business requirements. "If management wants to operate successfully within its external markets, it must first achieve effective internal exchanges with its employees." (Zerbe et al, 1998). This is true regardless of the particular organizational structure, and for certain approaches, such as outsourcing, it is even more critical.

IntCRM Framework

This section integrates the factors described in the preceding section to develop an internal framework that can be used to "assess" an organization's capability to adequately implement CRM practices. We also provide metrics to assist in qualifying and quantifying such an assessment. While the underlying premise is that improving such capabilities enhances an organization's ability to successfully implement CRM practices, we offer no guarantee.

The basic proposition of the IntCRM framework is that the organization must focus on the key dimensions of culture, relationships, and information flows to assess and improve its ability to deliver successful internal and external customer service. Culture, the necessary foundation, begins with leadership and attitudes. A supportive culture encourages the development and nurturing of cross-functional relationships, critical to successful operations. Proper leadership, culture,

and existing relationships break through barriers to developing processes and systems for sharing and leveraging information.

Figure 4 highlights these key dimensions and illustrates the "iceberg" concept, showing the relative importance and magnitude of these components as they relate to successfully delivering effective CRM.

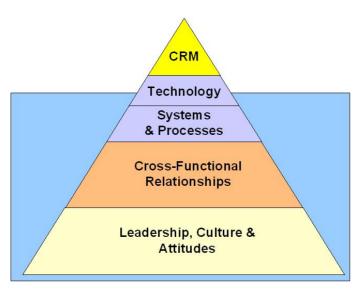


Fig. 4. CRM Iceberg

CRM

For the purposes of the IntCRM model, we broadly define CRM as the management of customer identification, acquisition, and communications directed toward simultaneously satisfying the customer value proposition while maximizing organizational performance. In the diagram, the CRM tip of the iceberg represents the external interfaces experienced by the customer as a result of successfully executing the underlying supporting processes.

Specific organizational requirements related to this dimension include the following:

- Clearly defined target markets, for example price-conscious customers versus those demanding the highest quality
- Clearly defined customer value proposition for that market
- Appropriate marketing strategies and campaign management practices
- Appropriate customer contact channels, such as the Internet, e-mail, and telephone.

Technology

Technology components facilitate improved communication, information flows, knowledge creation, and management, both internally and externally. The challenge is to ensure that technology is driven by and integrated into business processes—not functions. A key step in ensuring this integration is to implement a project structure for all initiatives, especially technology. Critical components of a project structure are the staffing, financing, management, and accountability for the results. Business managers initiate, finance, and direct projects; ideally, they are technologically savvy. Organizations should hire and train them with the necessary skills to understand and leverage technology.

IT and business resources must work together to ensure that technology development or acquisition projects adequately meet requirements. Appropriate project durations, also critical, must be limited to a cycle relative to both the business funding cycles and the nature of the prob-

lem or goal. Projects that extend beyond a single budget cycle must often recompete for subsequent-year funding, regardless of original approvals. Just as important in today's rapidly changing environments, very long projects can lose momentum because of changes in personnel, the market, or technology. Finally, the entire project team is accountable for results, with finger-pointing unacceptable.

The organizational technology required to support successful CRM includes the following:

- Reliable communications technologies—maximum Internet availability and minimum response time, responsive call centers, no balking (long queuing), etc.
- Customer data capture, organization, distribution and analysis, and sophisticated data exploration and mining capabilities
- Flexible and responsive information delivery channels
- Comprehensive customer data available to frontline staff
- Scalable and interoperable hardware and software platforms.

Connected Systems and Processes

In addition to technology for facilitating internal processes, relationships are necessary to ensure connectedness and strategic alignment. Human beings want to satisfy their immediate needs: demands outside their normal physical or logical boundaries take a lower priority. Departments cannot integrate successfully unless they establish relationships that bring them into each other's normal boundaries. Organizations can encourage and stimulate these relationships through holistic process definition, performance metrics tied to teamwork and collaboration (instead of individual achievement), support of activities required to develop internal relationships (travel, extra-curricular activities, etc.), and a culture that accepts, supports, and encourages continuous process improvement.

Identifying and managing the organization as a series of processes, rather than functions, is the foundation for moving forward. An effective start is to adopt the Japanese concept of *Gemba*, which focuses on finding the mission-critical processes of an organization that support and result in products or services that "delight" customers. Basically, Gemba involves working backward from understanding the value proposition sought by the customer and determining the execution steps required for efficient and successful delivery. In manufacturing, companies such as Volvo and Dell have successfully implemented Gemba concepts through a team-based production approach. The team takes total ownership of production from start to finish, creating a sense of pride and improving quality and thus increasing customer satisfaction. Applying this technique to service and retail organizations can require more creativity, but the concepts of ownership and process still apply.

Organizational processes required to support successful CRM include the following:

- Identifying internal processes directly related to satisfactory customer experience
- Encouraging service innovation—continuous process improvement practices
- Establishing frontline problem solving authority, capability, and motivation
- Executing performance tracking, data mining, and campaign management activities tightly integrated and directly tied to decision making
- Setting business unit and employee performance metrics directly related to customer satisfaction.

Cross-Functional Relationships

Successful execution of CRM requires interaction and coordination between traditionally segregated departments. The organization must collect, organize, and integrate all requisite customer data in a comprehensive data store – accessible by all who interact with the customer – to create and maintain a comprehensive customer view. Before organizing the data to support this access, the organization must design processes that support the mutual cooperation and interdependence necessary to capture, process, and store the information.

As a tool suite, CRM facilitates this interaction (Plakoyiannaki and Tzokas 2002). However, technology simply allows companies to accomplish tasks faster and cheaper. If the business processes and internal relationships do not exist to support interdepartmental information flow and sharing, the technology is not likely to accomplish it. Business units need to understand their interdependency so that technology blends with processing. Encouraging such interaction requires leadership by example, understanding the value to the customer and the organization, performance metrics aligned with cooperation as opposed to individual successes, and local management efforts to build cross-functional relationships.

These relationships are even more important and more challenging when departments are geographically dispersed or exist in an entirely separate outsourcing firm. Managers and staff on both sides must understand the importance of and be motivated to frequently communicate, formally and informally. Processes and mechanisms must be developed to ensure smooth data transfers and information flows.

Outsourcing – Solution or Transfer

Many organizations are turning to outsourcing as a way to "buy" functional expertise. For the purposes of the IntCRM discussion, outsourcing firms are considered by internal customers, and the same principles apply to these relationships as to other cross-functional relationships, with a few notable differences. Gartner Group research (Goolsby, 2001) validates this assumption, indicating that most companies involved in outsourcing relationships do not invest enough time and effort into the necessary integration. Successful IntCRM requires the same level of crossfunctional integration and relationship-building whether an internal department or an outsourced firm performs the functions.

The following section describes some current trends and problems in outsourcing, suggesting ways to manage these relationships in accordance with IntCRM principles.

Current Trends

Popular outsourcing services include accounts payable and receivable, human resource management, marketing, manufacturing, customer service, and CRM. Many factors drive the current trend:

- Shorter product and process life cycles due to rapid advances in technology
- Promise of scalability and cost reduction
- Competitive environment that demands increased market speed and agility
- Sense of urgency to respond to market shifts and customer demands.

Advocates suggest that outsourcing firms are specialists that have the tools, talent, and processes to quickly provide efficient, state-of-the-art solutions for these functional areas. While this sounds promising, too many companies are attempting to use outsourcing as a solution to deeper organizational problems. According to Kathleen Goolsby (2001) from the Outsourcing Center.

All of the people and business processes associated with "outsourcing" must be linked with the rest of the company's business processes and service delivery. Too often, organizations embark on an outsourcing relationship before ensuring that such internal integration is in place. Management considers the outsourcing firm as a savior, and when problems persist, the outsourcing firm also becomes the scapegoat.

When organizations enter the outsourcing relationships without a supportive culture and leadership, without developing and nurturing the relationship, and without integrating systems and processes to ensure smooth information flows, the endeavor does not succeed. Kim and Chung (2003) substantiate this assumption and indicate that only 38 percent of the outsourcing relationships they researched were considered as successful.

Successful Outsourcing

The foundations of successful outsourcing match those of successful IntCRM: a process-oriented approach and customer-focused culture with sound relationships, managed expectations, and set procedures for integrated communication and information transfer. However, other dimensions can make the outsourcing relationship more complex; the most notable are the legal and contractual requirements. Cross-functional agreements between departments in an organization rarely carry monetary or legal penalties related to performance. Although establishing the proper contractual framework is important, the corporate legal departments—not the managers and staff members directly involved into the work and relationship—should handle it. If the properly trained legal departments do not handle these negotiations, failed expectations can strain relationships and result in unnecessary dissolution of the partnership.

Culture is another dimension that can challenge outsourcing relationships. The initiating firm can possess a supportive culture and leadership driven toward customer service, teamwork, collective goal setting, etc., but the prospective outsourcing firm may not. These cultural mismatches often stem from differences in ethnicity or nationality. To avoid them, organizations must make a cultural assessment part of their due diligence before selecting a firm. Such differences are not necessary barriers, but they must be recognized, understood, and managed.

The following paragraphs highlight recent research findings published by the Outsourcing Center from evaluations of relationships nominated for the *Outsourcing Journal* 2002 Editor's Choice Award and shows how they fit into the IntCRM framework.

Culture, Leadership, and Attitudes

- Local authority and escalation. Decision-making and problem-solving authority must be delegated to individuals directly involved to the process and interacting with the customers, internal or external.
- *Partnership*. Recognizing that these relationships represent a partnership involves not just documented procedures and processes, but also attitudes.
 - Care must be taken to avoid defensive pride and overcome egos. Managers and staff need to recognize the value of synergy to overcome territorial reactions.
 - Problem-solving should involve joint efforts and no finger-pointing.
 - Risk and reward mechanisms must be established using positive language and approaches instead of negative ones, such as penalties.
- *Customer value*. Business processes exist to satisfy customers—period. Making a profit is a byproduct of satisfied customers. Any other approach is shortsighted and probably cannot be sustained.
- *Empathy*. When outsourcing, understanding the customer's interactions and perceptions is critical in determining the functions to outsource. An organization needs to be sensitive to customer feelings about a third party managing certain financial or private information.

Cross-Functional Relationships

- Relationships. Managers and staff at all levels of the organization must develop and nurture relationships with their peers in the departments with which they are interconnected, internally or externally.
- Effective communication
 - Includes formal processes for jointly setting objectives and strategy, prioritization, and problem resolution.
 - Encourages frequent informal communication—knowledge results in ownership and empowerment.
- *Relationship skills*. As Collins (2001) says, the first step in a building of a world class team is "get the right people on the bus." Managers must possess effective relationship building and communication skills, not just organization ones.

Systems and Processes

- *Process, not function.* Understanding and design of systems and flows—in the context of process versus function—is just as important, if not more so, when external firms handle the work.
- Project organization. All new initiatives should involve a project team, managed day
 to day by a separate individual, who communicates and coordinates with the appropriate managers and staff but is not distracted or encumbered by daily business demands.
- Technology
 - Goolsby (2001) suggest that systems must minimize the number of humanto-computer interactions. Throughout the process, multiple system interfaces indicate a lack of integration and increase both employee learning curves and opportunities for errors.
 - Monitoring systems should be established that track system performance, customer performance, and data integrity in an effort to allow preemptive and proactive problem-solving and system modification.

Culture and Cross-Functional Relationships

Creating a culture where collective learning is valued and rewarded and necessary to develop a mindset for relationship building. CRM vendors and proponents frequently evangelize about the need for two-way communication with customers. Such communication is equally important for departments and business units.

The following characteristics indicate an organizational climate that accepts and encourages cross-functional relationships:

- Cross-boundary project teams
- Team recognition programs
- Intolerance for finger-pointing or assigning blame
- Organizational performance metrics, customer satisfaction, and new initiatives aligned with processes, not departments
- Collaboration apparent at all levels, starting with upper management.

Leadership, Culture, and Attitudes

"Corporate culture is acknowledged as by far the most significant determinant and the greatest hurdle for the course of a CRM system" (Plakoyiannaki and Tzokas, 2002). According to Steve Horne, president of Analytics CRM consultancy group in New York, culture comes first and technology comes second. "If a company isn't ready or capable of changing its business processes and culture to focus on the customer, CRM will fail" (Coffee 2002). But culture does not change overnight: deeply rooted in attitudes, processes, and artifacts, like any self-protecting system, it defends against changes or disruptions.

Time and the size of the organization influence the formation of culture, attitudes, and reputations. Therefore, changing customs in large, established firms is more difficult than in small, startup companies, and dramatic change may be impossible or, in some cases, takes too long to be useful.

Leadership, internal and external relationships, and the larger systems in which the organization operates affect the development and evolution of culture and attitudes. The culture drives and is driven by the organization's purpose; this purpose evolves. Initial goals or financial objectives may be mandated, but system goals are affected by leadership actions and responses to actions and interactions. The organization's self-image and self-organizing behaviors propel further evolution.

Culture is affected by, and is a product of, employee satisfaction. Not surprisingly, many research studies show that employee satisfaction correlates with customer satisfaction. Rogg et al. (2001) demonstrated that the internal practices and the climate of an organization directly impact organizational performance. Of the 28 variables examined, those with the highest correlation were as follows:

• Internal practices

- *Job description*. Clearly defined roles and responsibilities.
- *Training*. Relevant, periodic courses.
- Hiring. Qualified staff.
- Performance review. Regular feedback and merit-based salary increases.
- Policies. Fair and adequately communicated HR policies, including drug and alcohol use, diversity, employee assistance, and behavior related to emergencies or tragedies.

Climate

- Customer orientation. Customer-focused attitudes, goals, and objectives.
- *Managerial competence*. Clear communication of objectives and feedback on performance.
- Employee commitment. Employees willing to make sacrifices for the organization.
- Cooperation and coordination. Departments effectively working together to accomplish goals.

IntCRM Metrics and Multidimensional Visualization

The previous section illustrated the holistic nature of the IntCRM framework and decomposed the four dimensions to identify factors within each one. This section graphically displays the factors and dimensions using multidimensional graphing techniques to give a simpler visual representation of the complex IntCRM framework.

Though challenging, a useful technique for visually displaying multidimensional qualitative data is the Kiviat graphs. Phil Kiviat introduced them in 1973 to leverage human beings' perceptual ability to quickly recognize shapes. Kiviat graphs and other, similar charting techniques produce geometric patterns as a visual tool that allows users to quickly determine the relative performance or assessment of a system by the quality of the shape. For example, the Kiviat graph produces a multipointed star by the juxtaposition of axes whose "good" values alternate between high and low. A perfect score produces a perfectly shaped star.

In any graphing approach, the challenge is to display the level of aggregation that provides useful and actionable information. For IntCRM, the decomposition of the four dimensions into their subsequent attributes provides a sufficient level of granularity for performance assessment and gap analysis. However, it results in four separate graphs. To get a more complete picture of the entire organization, we can superimpose the graphs using different colors or layer them to create a three-dimensional star.

Using the information and attributes described earlier for the four dimensions, we can list eight complementary factors for each that provide a summary picture of the key elements. In a Kiviat graph, the values range from a low of 0 in the center to a high of 100 on the perimeter. In order to illustrate purposes, the four graphs produced here use scores of 10 and 90 for all factors. In the factor list, each item is prefaced with an indication of whether a low (L) or high (H) score is good. Although this demonstrates a visual technique for displaying IntCRM factors, we recommend further research to determine the appropriate data collection mechanisms, quantifying metrics, and scale mapping.

Technology Axes

- H Central data base for collecting and organizing customer data.
- L Proliferation of silo databases to support individual business units.
- H Direct data capture into systems used for business intelligence and customer support.
- L Multiple back-end business units that manipulate source data.
- H Responsive delivery channels to support target markets.
- L Poor customer feedback and satisfaction ratings (call centers, Internet, surveys).

- H Redundant, reliable automation systems.
- L Inability to access real-time, customer information during service experience.

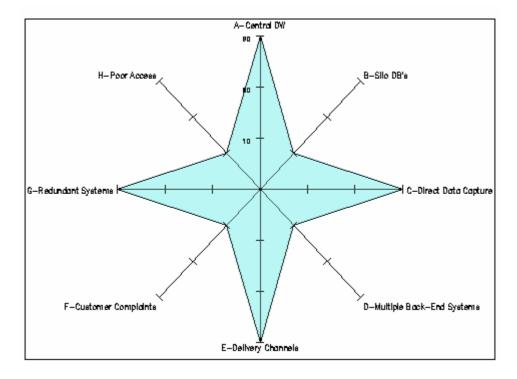


Fig. 5. Technology Factors

Connected Processes Axes

- H Existence of continuous process improvement programs, policies, and reward systems.
- L Primary employee reward and motivation systems designed around individual performance.
- H Delegated decision-making and problem-solving authority.
- L High customer turnover ratios and frequent complaints.
- H Organizational and business unit performance metrics tied closely to customer satisfactions ratings and metrics.
- L Penalties assessed or imposed for failure of new ideas or processes.
- H Significant organizational budget for business-driven, technological innovation.
- L Policies and procedures that inhibit cross-departmental cooperation and collaboration.

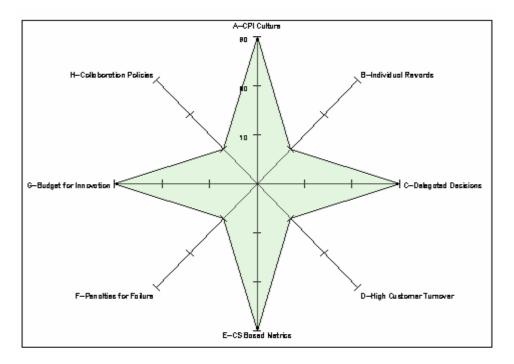
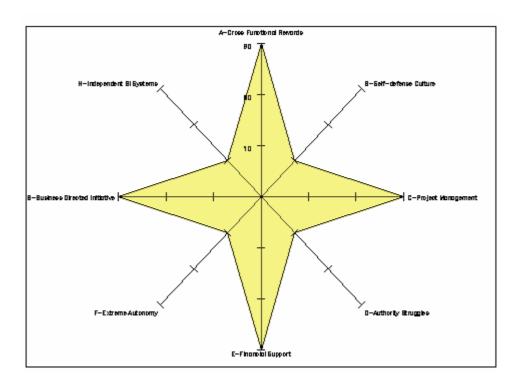


Fig. 6. Connected Processes Factors

Cross-Functional Axes

- H Existence of cross-functional team recognition programs and incentives.
- L Corporate culture or tolerance for finger-pointing, assigning blame, and other self-preservation behaviors.
- H Project management organization: the use of rigorous project management standards and techniques for large initiatives.
- L Frequent occurrences of authority struggles on projects, initiatives, and decisions.
- H Budget to support team and relationship-building activities, cross-training, etc.
- L Extreme autonomy for business unit initiatives and technology investments.
- H Business-driven process for prioritizing and funding new projects, initiatives, and technology investments.
- L Independent data and information sources for decision making.



Leadership, Culture, and Attitudes

- H Clearly H Existence of level 5 (Collins 2001) leadership characteristics within top corporate management team.
- L Decision making primarily driven by short-term financial goals and metrics.
- H Clear communication of management vision, goals, and objectives.
- $\bullet \quad L- Internally \ focused \ attitudes \ and \ behaviors \ at \ all \ levels \ of \ the \ organization.$
- H Defined employee roles and responsibilities.
- L Infrequent management feedback and review for employees.
- H Budget and support for frequent and relevant employee training and professional development.
- \bullet $\;$ L-Poorly communicated HR policies regarding employee behavior, expectations, etc.

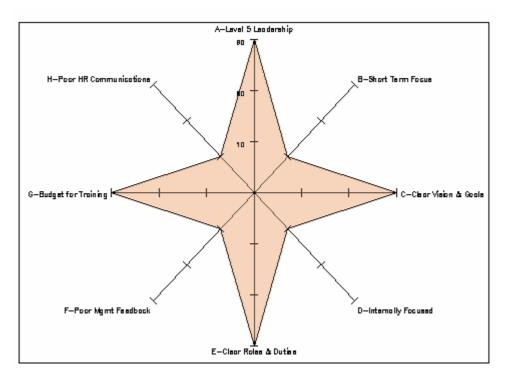


Fig. 8. Leadership and Culture Factors

Integrated Graph

Each of the individual graphs is a simple visual tool for determining the correct balance of factors necessary for that dimension. Merging the four graphs into an integrated view can also be useful as a somewhat holistic illustration of the overall organization across all factors and dimensions. For this example, we arbitrarily skewed the scores for more realism. If perfect graphs were overlaid, the layers would be indiscernible. In the next research, a more sophisticated graphic tool could be used to rotate and display the graphs linearly to create a more three-dimensional display.

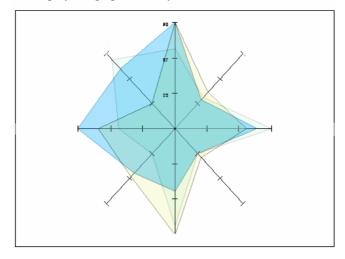


Fig. 9. IntCRM Integrated Graph

Conclusions

Research suggests that CRM, though arguably not a new concept, is clearly an important focus for organizations. Research has repeatedly demonstrated that customer satisfaction correlates with the success of the firm. Advances in technology enable large organizations to provide an intimate customer experience. Many CRM projects and initiatives focus on facilitating this experience, frequently without concern for the underlying infrastructure, that is, the IntCRM required to support such practices. Organizations frequently exacerbate their situation by simply acquiring CRM "tools" or outsourcing their "problem" areas, only to discover that they have masked or transferred their deficiencies.

Successful internal customer relationships are perhaps the most important component necessary for successful external relationships. Unfortunately, many large organizations have hierarchical structures that are roadblocks to creating the proper climate, or implementing the level of connectedness required, to develop and optimize these internal relationships to successfully support CRM.

Improving of these relationships requires an examination of all levels of the organization. Before embarking on an expensive CRM project, companies need to perform a comprehensive audit of internal capabilities and take steps to build the ones needed to ensure integration and foster a customer-focused culture throughout. The IntCRM framework provides a template for this examination and can assist in identifying areas needing improvement. It also directly relates to establishing the organizational foundation needed to establish successful outsourcing partnerships. Outsource firms must be treated just like another department of the organization. This treatment includes customer- and relationship-focused leadership, culture and attitudes attuned to customer service at all levels, connected business processes that ensure smooth flows and direct access to all customer information, and cross-department collaboration throughout the process to delight the customer.

Future Research and Recommendations

This paper attempts to integrate recent relevant research and ideas regarding CRM into a comprehensive framework, with focus on the internal dimension required to support CRM. It identifies four key areas: technology, systems and processes, cross-functional relationships, and leadership, culture, and attitudes. Decomposition of the four dimensions yields fundamental factors for each area and attributes that might be used for assessment. While this paper offers a more complete picture of the organizational complexity related to CRM, subsequent research could expand on the IntCRM framework to develop a CRM Capability Assessment Model (CRMCAM), somewhat analogous to the Capability Maturity Model used for software development. Such an extension would provide the additional detail necessary for developing a clearer picture of an organization's capabilities and include evidence to validate the model. The CRMCAM could evolve as a standardized tool for allowing organizations to assess their existing capabilities and develop more efficient and appropriate strategies for ther improvement.

References

- 1. Bennington, L., and J. Cummane. 1998. Measuring service quality: A hybrid methodology. *Total Quality Management* 9:395.
- 2. Boyd, J. 2001. IT Says No to CRM Integration. *InternetWeek* 886:1.
- 3. Bowen, D.E., and R. Hallowell. 2002. Suppose we took service seriously? *Academy of Management Executive* 16:69.
- 4. Broadbent, M., and P. Weill. 1997. Management by Maxim: How Business and IT managers can create IT Infrastructures. *Sloan Management Review* 38:77.
- 5. Chan, Y. E., S.L. Huff, D.W. Barclay, and D.G. Copeland. 1997. Business Strategic Orientation, Information Strategic Orientation, and Strategic Alignment. *Information Systems Research* 8:125.

- 6. Chaston, I. 1998. Evolving "New Marketing" Philosophies By Merging Existing Concepts: Application of Process Within Small High-Technology Firms. *Journal of Marketing Management* 14:273.
- 7. Coffee, P. 2002. In Pursuit of a CRM Process. *eWeek*, http://www.eweek.com/article2/0,3959,9495,00.asp.
- 8. Collins, J. 2001. *Good to Great*. New York: Harper Business Press.
- 9. Einhorn, B. 2001. Know Your IT, Know Your Customer. *Business Week Online*, http://www.businessweek.com/.
- 10. Garajedaghi, J. 1999. *Systems Thinking—Managing Chaos and Complexity*. Boston: Butterworth-Heinemann.
- 11. Goleman, D. 2002. Primal Leadership. Boston: Harvard Business School Press.
- 12. Goolsby, K. 2002. Governing Attitudes 12 Best Practices in Managing Outsourcing Relationships. White Paper, the Outsourcing Center, Dallas, TX.
- 13. The Snowball Effect. White Paper, the Outsourcing Center, Dallas, TX.
- 14. Integrated People + Processes + Tools = Best of Breed Service Delivery. White Paper, Gentronics, Billerica, MA.
- 15. Harter, J.K., F.L. Schmidt, and T.L. Hayes. 2002. Business-Unit-Level Relationship Between Employee Satisfaction, Employee Engagement, and Business Outcomes: A Meta-Analysis. *Journal of Applied Psychology* 87:268.
- 16. Heylighen, F., and C. Joslyn. 2001. Cybernetics and Second-Order Cybernetics. *Encyclopedia of Physical Science and Technology*.
- 17. Kathuria, R., and F.Y. Partovi. 2000. Aligning Work Force Management Practices with Competitive Priorities and Process Technology: A Conceptual Examination. *Journal of High Technology Management Research* 11:215.
- 18. Kim, S., and Y. Chung. 2003. Critical Success Factors for IS Outsourcing Implementation form an Interorganizational Relationship Perspective. *Journal of Computer Information Systems* Summer:81.
- 19. Kingman-Brundage, J., W.R. George, and D.E. Bowen. 1995. "Service logic": achieving service system integration. *International Journal of Service Industry Management* 6:20–30
- 20. Kline, H. 2001. CRM: Overcoming the Infrastructure Hurdle. *Business Communications Review* July 2001.
- 21. Kleijnen, J.P., and M.T. Smits. 2003. Performance Metrics in Supply Chain Management. *Journal of Operational Research* (in press).
- 22. Knowledge Management. 2001. Use of CRM under fire for failing to deliver benefits, *KM Magazine* December/January 2001.
- 23. Ladkin, P. 2003. Measuring the Quality of Service, http://nakula.rvs.uni-bielefeld.de/made/folie/folie04.html.
- 24. Langer, A.M. 2001. Fixing Bad Habits: integrating technology personnel in the workplace using reflective practice. *Reflective Practice* 2:99.
- 25. Lengert, W., U. Gebelein, and G. Lavaux. 2000. IT-based Quality Management of Earth-Observation Operations at ESRIN .ESA Bulletin 103, http://esapub.esrin.esa.it/bulletin/bullet103/lengert103.pdf.
- 26. Levey, R.H. 2002. How to Solve the CRM Puzzle. *Direct*, http://directmag.com/ar/marketing solve crm puzzle/index.htm.
- 27. Meredith, B.H. 2002. Making CRM Work. NZBusiness Nov.
- 28. Noirhomme-Fraiture, M. 2002. Visualization of Large Data Sets: The Zoom Star Solutions. *The Electronic Journal of Symbolic Data Analysis* (in press).
- 29. Paradise-Tornow, C.A. 1991. Management Effectiveness, Service Quality, and Organizational Performance in Banks. *Human Resource Planning* 14:129.
- 30. Parks, B. 2003. Where the Customer Service Rep is King, Business 2.0 June.
- 31. Phipps, S. 2001. Beyond Measuring Service Quality: Learning from the Voices of the Customers, the Staff, the Processes, and the Organization. *Library Trends* 49:635.

- Plakoyiannaki, E., and N. Tzokas. 2002. Customer relationship management: A capabilities portfolio perspective. *Journal of Database Marketing* 9:228.
- 33. Report on Customer Relationship Management. 2002. An Overview of 'Critical' CRM Technology Issues 2002:5.
- 34. Lessons Learned from Today's Big CRM-Related Lawsuits 2003:1.
- 35. Rigby, D.K., F.F. Reichheld, and P. Schefter. 2002. Avoid the Four Perils of CRM. *Harvard Business Review* February:101.
- 36. Rogg, K.L., D.B. Schmidt, C. Shull, and N. Schmitt. 2001. Human resource practices, organizational climate, and customer satisfaction. *Journal of Management* 27:421.
- 37. Schein, E.H. 1990. Organizational Culture. American Psychologist 45:109–119.
- 38. Sharif, N. 1995. The Evolution of Technology Management Studies. *Elsevier Science Professional Lecture* 1073-4457.
- 39. Sirdeshmukh, D., J. Singh, and B. Sabol. 2002. Consumer Trust, Value, and Loyalty in Relational Exchanges. *Journal of Marketing* 66:15.
- 40. Stremersch, S., B. Weiss, G.C. Dellarrt, and R.T. Frambach. 2003. Buying Modular Systems in Technology Intensive Markets. *Journal of Modeling Research* XL:335.
- 41. Sureshchandar, G.S., C. Rajendran, and T.J. Kamalanabhan. 2001. Customer Perceptions of Service Quality: A Critique. *Total Quality Management* 12:111.
- 42. Tallon, P.P., K.L. Kraemer, and V. Gurbaxani. 2000. Executives Perceptions of the Business Value of Information Technology: A Process-Oriented Approach. *Journal of Management Information Systems* 16:145.
- 43. Tena, A.B., J.C. Llusar, and V.R. Puig. 2001. Measuring the relationship between total quality management and sustainable competitive advantage: A resource-based view. *Total Quality Management* 12:932.
- 44. Tomback, M. 2003. The Changing Landscape of Outsourcing. Benefits Quarterly 19:13
- 45. Tornow, W.W. 1991. Service Quality and Organizational Effectiveness. *Human Resource Planning* 14(2):86–88.
- 46. Tornow, W.W., and J.W. Wiley. 1991. Service Quality and Management Practices: A Look at Employee Attitudes, Customer Satisfaction, and Bottom-Line Consequences. *Human Resource Planning* 14:105.
- 47. Whatis.com. 2003. Customer Relationship Management, http://searchcrm.techtarget.com/sDefinition/0, sid11 gci213567,00.html
- 48. William, G., and M. Cusak. 2003. Internal CRM: ERM for Internal Customers, ITPapers.com, http://www.itpapers.com/cgi/PSummaryIT.pl?paperid=8124&scid=1
- 49. Yallof, J., and C. Morgan. 2003. Beyond Performance Standards: How to get the most from your outsourcing relationship. *Benefits Quarterly* 19:17.
- 50. Zerbe, W.J., D. Dobni, and G.H. Harel. 1998. Promoting Employee Service Behaviour: The Role of Perceptions of Human Resource Management Practices and Service Culture. *Canadian Journal of Administrative Science*.