



# REALIZING BUSINESS BENEFITS THROUGH CRM: HITTING THE RIGHT TARGET IN THE RIGHT WAY<sup>1</sup>

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## *Executive Summary*

*Many companies are in the early stages of implementing customer relationship management (CRM). Although CRM promises increased revenues, profits, and customer service, companies face potential failure because of the complex technical and organizational issues involved. Our research on CRM, and six company experiences in particular, illustrate three CRM "targets" that companies aim for: implement a single or a few applications, create a strong infrastructure to support CRM, or use CRM to transform the organization. These targets have very different impacts and different challenges, as reflected in six lessons: They differ on both costs and benefits; sponsorship varies; each suggests a different evolution for a CRM effort; prepare to get your hands dirty in cleaning the data; ensure that the architecture will scale; and you can (sometimes!) teach old dogs new tricks.<sup>2</sup>*

## Managing Customer Relationships Used to Be Easier

Managing customer relationships was easier in earlier times. Merchants knew their customers – the members of their households, what they generally bought, their likely future purchases, and their current and potential value as customers. This knowledge helped merchants create highly effective customer relationships. However, that close understanding of customers eroded as people became more mobile, cities grew, companies became larger, and marketing reach expanded. This development was unfortunate for customers and companies alike.

Today, many companies are trying to go back to “the good old days” of knowing their customers well by capturing the available wealth of internal and external data, analyzing that data to better understand customer needs, preferences, and profitability, and then leveraging that knowledge in every customer contact. Recent studies show that the movement to customer relationship management (CRM) is gaining momentum.<sup>3</sup> One survey of more than 1,500 companies by The Data Warehousing Institute (TDWI) in 2000 found that 91 percent either have or plan to deploy a CRM solution in the near future.<sup>4</sup>

Over the past few years, the authors (on their own and in cooperation with TDWI and Teradata, a division of NCR) have undertaken a series of studies to examine the CRM phenomenon. Our portfolio of research includes case studies, telephone interviews, and surveys

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<sup>3</sup> Yu, L. “Successful Customer-Relationship Management,” *Sloan Management Review* (42:4), Summer 2001, pp. 18-19.

<sup>4</sup> “TDWI Industry Study 2000: Harnessing Customer Information for Strategic Advantage: Technical Challenges and Business Solutions,” The Data Warehousing Institute, 2000.

of both an exploratory and a confirmatory nature. Receiving special attention has been the study of CRM from a managerial perspective – how organizations are using CRM to realize strategic business goals, the issues and problems they face, and ultimately, the benefits they reap from these initiatives.

Based on our research over the past four years, we have found three important CRM targets:

- *Applications* – Individual CRM applications that deliver business value
- *Infrastructure* – A data, software, and hardware infrastructure that supports CRM applications and will also support future applications
- *Transformation* – An organizational transformation made possible through comprehensive CRM efforts.

Though any CRM effort must ultimately address all three targets to some degree, companies often put special emphasis on one. In fact, by studying CRM efforts that predominantly focused on a single target, we were able to better understand the challenges in addressing each.

Although CRM is on the rise and holds tremendous promise for building mutually beneficial relationships with customers, many companies are struggling with their CRM efforts.<sup>5,6</sup> The TDWI survey found that *41 percent of the organizations with CRM projects were either experiencing difficulties or close to failure. We believe companies can minimize their risks of failure by first having a clear vision for their CRM target – application, infrastructure, or transformation – and then understanding and addressing the issues typically associated with it.*

## What Is Customer Relationship Management (CRM)?

The movement to CRM reflects quite a shift in business and marketing strategy.<sup>7,8</sup> Until recently, vendors

focused on products, and their marketing campaigns aimed to sell those products to as many people as possible. Customers were treated as though they had the same needs and preferences, so vendors emphasized mass marketing.

This approach then gave way to target marketing, where subsets or segments of consumers received marketing messages tailored to their particular market segment. This more selective approach resulted in cost savings and increased response rates.

In the 1990s, relationship marketing (also called 1:1 marketing) emerged. It focused on developing and maintaining relationships with individual customers<sup>9,10</sup> and relied on a two-way dialogue between a company and a customer to develop a deep relationship.<sup>11</sup> Unfortunately, this two-way dialogue proved to be labor intensive and thus had to be limited to a small subset of customers.

CRM extends the reach of relationship marketing by utilizing information technology (IT) to take over the labor-intensive aspects, thereby making it feasible across a wide range of very different customers. Today's emphasis on CRM is driven by the changing demands of the business environment, the availability of large amounts of data, and advances in IT. In particular, IT is a critical CRM enabler.<sup>12</sup>

At its core, CRM is a simple, intuitively appealing concept: attract new customers, know them well, give them outstanding service, and anticipate their wants and needs. When companies do these things well, increased revenues and profits are likely to follow.

But CRM means different things to different people, and it's being implemented in different ways. To some companies, CRM means creating offers to customers based on their past behaviors and demographic characteristics. To others, it means giving service representatives information about customer profitability and how customers generate profits. To still others, it means changing the appearance of a Web site based on customer profiles and preference information.

<sup>5</sup> Rigby, D.K., Reichheld, F.F., and Scheffer, P. "Avoid the Four Perils of CRM," *Harvard Business Review* (80:2), February 2002, pp. 101–109.

<sup>6</sup> Woodcock, N. and Starkey, M. "I Wouldn't Start From Here: Finding a Way to CRM Projects," *Journal of Database Marketing* (9:1), 2001, pp. 61–74.

<sup>7</sup> Dyche, J. *The CRM Handbook*, Addison-Wesley, Boston, 2001.

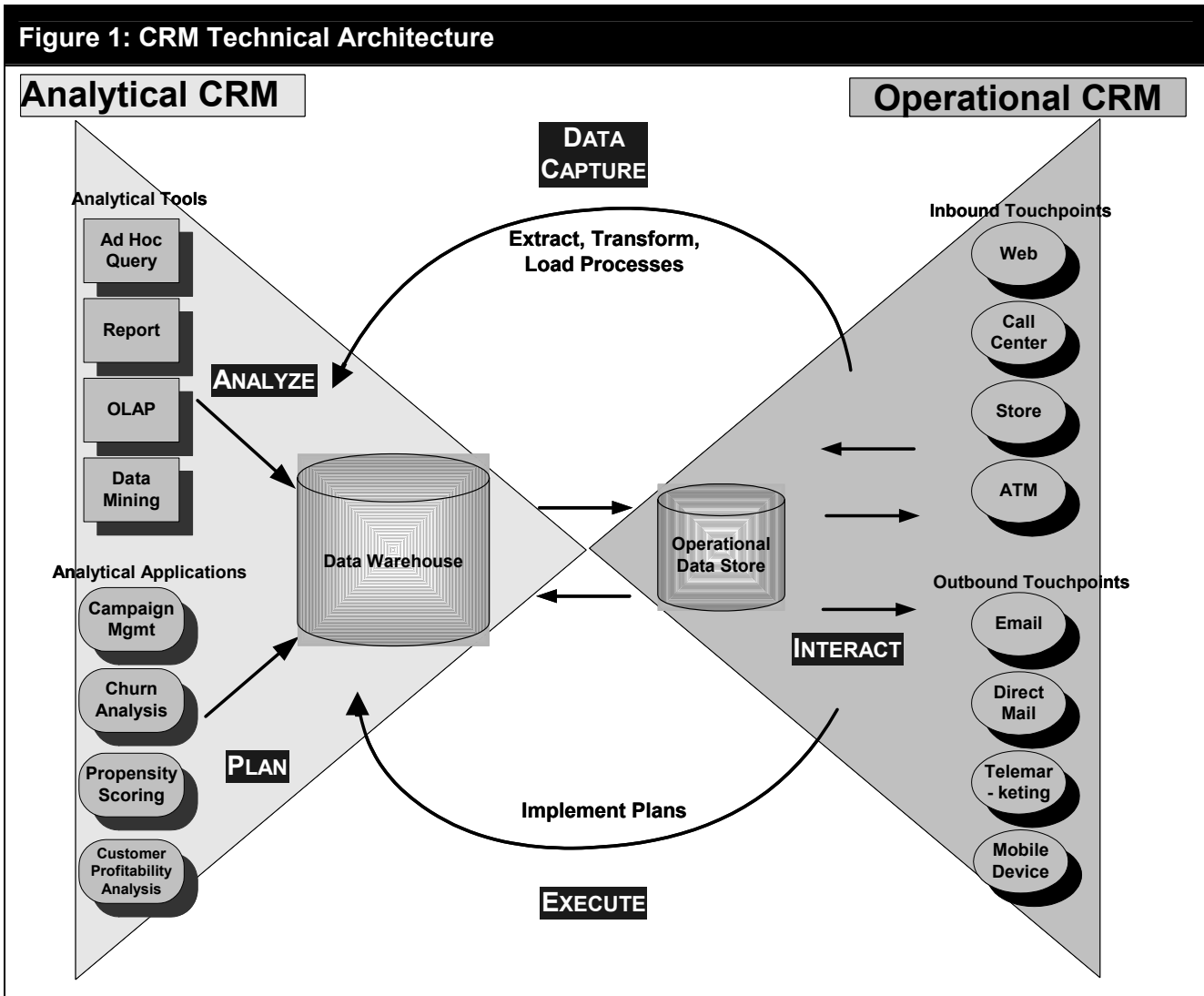
<sup>8</sup> Swift, R. *Accelerating Customer Relationships: Using CRM and Relationship Technologies*, Prentice-Hall, Upper Saddle River, New Jersey, 2000.

<sup>9</sup> McKenna, R. *Relationship Marketing: Successful Strategies for the Age of the Customer*, Addison-Wesley, Reading, Massachusetts, 1991.

<sup>10</sup> Peppers, D., and Rogers, M. *The One to One Future: Building Relationships One Customer at a Time*, Doubleday, New York, 1993.

<sup>11</sup> Dyche, op. cit.

<sup>12</sup> Dibb, S. "Customer Relationship Management and Barriers to the Segment of One," *Journal of Financial Services Marketing* (6:1), 2001, pp. 10–23.



To include its different forms, CRM needs to be defined broadly as:

*Any application or initiative designed to help an organization optimize interactions with customers, suppliers, or prospects via one or more touch points – such as a call center, salesperson, distributor, store, branch office, Web, or e-mail – for the purpose of acquiring, retaining, or cross-selling customers.”<sup>13</sup>*

CRM takes a broad view of a company’s customers by including both current and prospective customers as well as trading partners in the supply chain. To optimize interactions with these customers, it is necessary to collect, store, and manage data on every interaction with them, whether the data comes from a salesperson,

a call center, or the Web. This allows a company to create a “360-degree view” of its customers.

### CRM’s Technical Architecture

As shown in Figure 1, the CRM technical architecture can include many applications, performing both analytical and operational functions.

On the analytical side, a data warehouse typically maintains historical data that supports generic applications, such as reporting, queries, online analytical processing (OLAP), and data mining, as well as specific applications, such as campaign management, churn analysis, propensity scoring, and customer profitability analysis.

On the operational side, data must be captured, integrated, and stored from all in-bound touch points, including the Web, call centers, stores, and ATMs. This

<sup>13</sup> TDWI, op. cit.

data may be augmented with external demographic data. Current data can be maintained in an operational data store that supports operational applications, such as e-mail, direct mails, telemarketing, and customer support. As data ages, it is passed from the operational data store to the data warehouse.

Most obvious in Figure 1 are the many applications supplying and using customer information, the data warehouse, and the operational data store. Two other important components of a successful CRM effort are only implicit in the figure: the data infrastructure necessary to make data sharing possible, and the organizational transformation necessary for an organization to take full advantage of the CRM capabilities.

We should distinguish between “data architecture” and “data infrastructure” here because the terms can be confusing. In most cases, data elements in existing information systems are not consistent across applications for many reasons. Data definitions vary, different identifiers are used, and data formats are dissimilar. For example, different divisions may use different codes and different schemes for identifying the same customers. This means that sharing data between applications is difficult, if not impossible, and sometimes requires manual manipulation.

A *data architecture* refers to the blueprint or plan for the desired extent of standardized identifiers and definitions across applications (and sometimes the means by which this standardization will be achieved). The intent of a data architecture is to ensure that the data used in one CRM application can be shared with all the other CRM applications.

A *data infrastructure*, on the other hand, refers to the actual (as opposed to the desired) state of the existing databases, and the existing state of the data. The critical characteristic of a data infrastructure is the degree to which existing data and databases can be used to support new applications, without incurring data problems. An effective infrastructure is one that can be built upon without changes; an ineffective infrastructure may have to be rebuilt from the ground up before it can support desired new applications. Of course, the best infrastructure is not always obvious up front because desired future applications are not always known.

A data infrastructure should provide a structure of logical consistency that enables data sharing across

applications and business processes.<sup>14</sup> This infrastructure is critical to CRM success.<sup>15</sup>

The newly available ability to access comprehensive customer information (and the insights gained when such information is analyzed) presumably makes possible new ways for companies to interact with their customers. However, these insights and possibilities will have no impact unless the organizations change the way they do business to take advantage of the possibilities. Therefore CRM may involve a significant organizational transformation.

### Three CRM Targets And Six Cases

It would seem that effective CRM efforts need to address all three CRM components, at least to some degree:

- Applications
- Infrastructure
- Transformation

There must be some applications to handle the work, a data infrastructure to share data across applications, and some organizational change to harness the potential benefits.

However, most of the companies we studied can be categorized as focusing primarily on one of these three “CRM targets,” at least initially. This fact made it easier for us to study each target separately, and to understand the difficulties of “hitting” each target.

This section describes the three CRM targets, and for each one, presents two cases that illustrate the approach. The cases focus on the processes – the CRM paths – used to reach the targets, and the benefits realized to date.

<sup>14</sup> Goodhue, Dale L., Wybo, M. and Kirsch, L. "The Impact of Data Integration on the Costs and Benefits of Information Systems." *MIS Quarterly* (16:3), 1992, pp. 293-312.

<sup>15</sup> Abbott, J., Stone, M., and Buttle, F. "Customer Relationship Management in Practice – A Qualitative Study," *Journal of Database Marketing* (9:1), 2001, pp. 24-34.

**Table 1: CRM Efforts Classified by Primary Target**

Lesson	Target 1: Individual Applications	Target 2: CRM Infrastructure	Target 3: Organizational Transformation
#1 The Three Targets Have Quite Different Organizational Costs and Benefits	Costs are relatively low. Greater efficiencies and effectiveness at the departmental level may result in greater local revenues and profits.	Infrastructure creation is costly, requires a "vision" to justify. Departments give up control of "their" data. Possible cost savings from infrastructure consolidation. Possible "quick hit" returns from follow-on applications.	An expensive, risky undertaking, but with the potential for great increases in revenues and profits.
#2 Sponsorship May Vary Across the Targets	Usually initiated at the department level.	Often initiated by corporate IT, but must also enlist wider business sponsorship.	Initiated by top management, but must enlist all levels of the organization.
#3 Plan for the Evolution of Your CRM Efforts	Multiple individual applications may lead to demands for coordination, better infrastructure.	Once the infrastructure is in place, many individual applications become possible. Organizational transformation also becomes possible.	Usually involves new infrastructure and new applications to support new business practices.
#4 Prepare to Get Your Hands Dirty Working with CRM Data	Needed data is limited in scope and volume. Integration problems are easier to solve because the data is controlled at the departmental level.	Large amounts of data are needed from disparate source systems owned by different constituents, frequently without common identifiers. Difficult challenge.	All the problems of the infrastructure target, with the added challenge of supporting new business processes with a changing data infrastructure.
#5 Ensure the Technical Infrastructure Will Scale to Meet Future Challenges	Requirements are localized and easier to understand and predict.	Need to support a multitude of users and applications. Harder to understand and predict requirements. Must be highly scalable.	All the problems of the infrastructure target, with the added challenge of supporting new business processes with a changing technical infrastructure.
#6 You Can Teach Old Dogs New Tricks ... Sometimes	Only a small group of users must learn to work with new applications.	A growing base of users must learn the new decision support environment as data becomes more available. IT personnel must learn new skills and technologies.	Nearly everyone becomes a user in some way. Jobs are changed, eliminated, and created. Many changes in job skills, both for business and IT.

### **Target 1: Individual Applications**

Some companies have a burning need for a specific CRM application and the "quick hit" benefits it can bring. The most popular applications are database marketing (in 56 percent of the firms), telephone call centers (53 percent), Web marketing (50 percent), direct mail campaigns (49 percent), field sales (40 percent), Web self-service (40 percent), Web portal (40 percent), and e-mail marketing (37 percent).<sup>16</sup> Be-

cause these initiatives are often local, with departmental sponsorship and funding, they gain the necessary organizational commitment more easily than larger efforts. Also the local scope eases data integration problems *at first* because only data from a few departmental source systems need to be integrated.

Many companies are not ready to rush into a new way of working with an extensive enterprise-wide CRM effort; their situation and culture encourage a cautious approach – test and prove the concept before rolling it out across the organization. Table 1 summarizes key

<sup>16</sup> TDWI, op. cit.

characteristics of CRM efforts that target individual applications.

## SmarterKids.com

**Company Background.** SmarterKids.com is an Internet-based educational toy retailer that helps parents determine and address educational goals for their children. The company carries products from more than 200 manufacturers, encompassing nearly 6,000 products, and it suggests the appropriateness of products based on information parents provide about their children. SmarterKids.com realized it would ultimately need a comprehensive CRM infrastructure, but it had neither the time nor the resources to build one in the beginning.

### CRM Path

*Delivering incremental benefits.* SmarterKids.com's CRM efforts focused on needed applications that could be implemented relatively quickly. The company began with a Web personalization engine and software to analyze Web behavior. This first effort was very successful. Quickly, other CRM applications were sponsored by different departments and installed. Marketing implemented e-mail campaigns. Customer service installed an integrated suite of applications to provide customer service support via e-mail, live chat, and telephone; and the department monitors the effectiveness of the various service interactions.

*Selling the initiative.* These individual efforts were relatively easy to sell to management. First of all, they tended to have local costs, and the benefits were easily understood at the department level. Second, they fit well with the overall company strategy of "personalized e-commerce to build a learning relationship and drive lifetime customer value."

*Evolution of the CRM effort.* Over time, senior management recognized that the company should combine customer information across CRM applications, which was a challenging feat because each application was a silo system. To pull them together, SmarterKids would have to build a data warehouse and create new organizational processes to keep the data integrated.

*Getting the data right.* The biggest challenge was creating and maintaining a unique identifier for each customer that spanned all the disparate systems. Without this identifier, it would be impossible to engage in "closed-loop analysis" where the results of targeted marketing campaigns could be tracked across all customer touch points.

**Benefits.** Each individual CRM application was highly successful in its own right, bringing great value to the sponsoring department. In 2000, about a year after the first data marts and applications were implemented, SmarterKids began installing a corporate data warehouse and incorporating data from the various systems into the data repository. Despite the integration challenges, management is optimistic that the integrated infrastructure will support a portfolio of CRM applications. In the short term, the company received great returns from its application-centric approach.

## Sherwin-Williams

**Company Background.** Sherwin-Williams is the leading developer, manufacturer, and distributor of architectural coatings and related products. Founded in 1868, in 2001 Sherwin-Williams' Consumer Division managed 130,000 products across 300 diverse brands in 2,400 paint stores nationwide, with \$5 billion in annual sales. With its thousands of external customers and numerous suppliers, the company viewed service to both customers and suppliers as key to its competitive success.

### CRM Path

*Getting the data right.* Sherwin-Williams experienced 28 acquisitions between 1990 and 2000. Patching together the information systems from these companies resulted in a fragmented data infrastructure. For example, there were seven major order systems and innumerable other legacy systems that did not speak to one another. To present "one face" to customers and maintain productive vendor relationships, management realized Sherwin-Williams needed a single, integrated view of its entire business, across all its diverse business units and up and down the supply chain.

A CRM project began with a business requirements assessment. Working with consultants, the Consumer Group identified requirements for an integrated, customer-centric data store. This CRM vision would ultimately require a data warehouse to store the integrated company information, to support a collection of CRM applications. However, champions of the CRM effort believed a project focusing only on the infrastructure would rapidly lose company interest. The concept of CRM (new at Sherwin-Williams) first needed to be proven through real, delivered value.

*Delivering incremental benefits.* Therefore, instead of focusing on constructing a data warehouse, Sherwin-Williams built a series of data marts targeted at spe-

cific CRM initiatives. A steering committee of business users prioritized the data mart roll-out based on payback, data readiness, and sponsorship. The first mart contained the highest impact information: sales performance. Until this data mart was in place, in February 1999, Sherwin-Williams did not know total sales across its 20 business units for any given customer (such as Wal-Mart) without manually consolidating the data from many sources.

*Planning for the evolution of CRM efforts.* Once the first sales mart was completed, the project team created an enterprise architecture to guide the design of future data marts. Sherwin-Williams also created repeatable design and implementation processes to support new marts. Over time, they incrementally added more data marts, such as a category mart to allow customers to better manage products on their shelves using their own categories (finished in December 1999), and a raw materials mart to manage internal supplies (begun in January 2000). The category mart, in particular, strengthened Sherwin-Williams' partnerships with its key customers. Future plans include giving customers and suppliers direct access to CRM applications as well.

**Benefits.** Sherwin-Williams' CRM project has served as a catalyst for improving and strengthening the company's supply chain. One large retailer, for example, learned from analyzing sales data in the category mart that it should keep Sherwin-Williams' paint on store shelves in its southern stores for an additional two to three months each year. The result: \$2 million in higher sales per year. Other major customers have made impressive use of the category mart as well. In fact, Wal-Mart selected Sherwin-Williams as its supplier of the year in 2000, and chose Sherwin-Williams to be its paint department Category Captain, which means Sherwin-Williams manages the paint Wal-Mart sells.

### Summary

As SmarterKids.com illustrates, organizations can realize significant impacts from targeting CRM applications at departments or business units. However, this local approach sometimes leads to complications later on when applications from various departments or business units need to be linked to improve cross-business-unit data sharing.

Likewise, Sherwin-Williams illustrates that a more narrowly focused data-mart approach can move a company into CRM, but it is best guided by an overall architecture, so that additional data marts will use the

same data definitions and thus build toward corporate-wide CRM.

### Target 2: CRM Infrastructure

CRM applications need an underlying technical infrastructure to provide not only the computing power and telecommunications links to connect applications to each other<sup>17, 18</sup> but also logical data consistency so the applications can share information.<sup>19</sup>

CRM implies that companies should interact in a coordinated manner with their customers, across all customer touch points and channels. Without this coordination, communications with customers will be inconsistent, less useful to customers, and have less impact. Thus, companies not only need to store large amounts of data but all their CRM applications need to be able to tap into that data. This sharability requires a data infrastructure incorporating common data models and data standards to which the applications adhere. And it requires a hardware and software infrastructure that provides high-volume storage and fast data retrieval.

When organizations focus on their CRM data infrastructure, they usually have potential applications in mind, but they seek first to put in place a data resource that is integrated across various source systems and customer touch points; uses a single, unique identifier for every customer; and keeps the data accurate, timely, and reliable.

Because IT departments are well aware of the benefits of such infrastructures, corporate IT often initiates such efforts. However, infrastructure investments are costly, and the returns are unlikely to be immediate. To convince top management, IT must sell them on the concrete business value of such infrastructure investments. See Table 1 for characteristics of CRM infrastructure efforts.

### 3M

**Company Background.** 3M is a \$15.7 billion manufacturer with 70,000 employees and 50,000 products. Traditionally, 3M has had very autonomous divisions, with information systems groups at corporate and in divisions. In 1995, top management realized 3M

<sup>17</sup> Broadbent, M. and Weill, P. "Management By Maxim: How Business and IT Managers Can Create IT Infrastructures." *Sloan Management Review* (38:3), 1997, pp. 77-93.

<sup>18</sup> Duncan, N.B. "Capturing Flexibility of Information Technology Infrastructure," *Journal of Management Information Systems* (12:2) 1995, pp. 37-58.

<sup>19</sup> Goodhue, Wybo and Kirsch, op. cit.

needed to become much more customer and market focused. This shift would require more coordination across divisions, which would be difficult organizationally and technically.

### CRM Path

At that time, a veteran IT manager began a crusade to create a Global Enterprise Data Warehouse (GEDW) that would hold all customer, product, and sales information, company-wide.

*Selling the initiative.* The GEDW champion justified the initiative on two counts. First, a common source of all customer data would allow 3M to manage itself as a single global business. Second, replacing the numerous, disparate decision support databases with a single data warehouse would pay for the investment through savings in hardware and personnel, because ongoing maintenance and replacement of the division specific systems was consuming a major portion of divisions' IT budgets.

It took one year to sell this concept because the vice president to whom IT reported insisted that all 50 divisions approve the initiative before the Operating Committee would sign off on it. The GEDW champion had credibility with senior management because of his long tenure at 3M and his proven ability to deliver systems with business value. In addition, he had broad business knowledge and understood the role data played in key business processes.

The year-long sales effort got division vice presidents on board, giving the GEDW strong buy-in. Furthermore, the process showed that sharing data globally would require a non-trivial shift in data ownership. The decision to share sales, profitability, margin, service, inventory, customer, and product data across the business units was ultimately supported by the CEO and the senior vice presidents.

*Scalability.* Financial justification required replacing all existing decision support databases, so the GEDW group spent several million dollars benchmarking the data warehouse technology to prove that it could actually support the load. The group benchmarked five vendors platforms, testing (1) how long each took to load the database, (2) the time required to run various queries, and (3) and the impact of increasing the number of users from 1 to 200. The wisdom of benchmarking was seen when all but one platform crashed as the number of users increased.

*Getting the data right.* Unfortunately, the GEDW group found that the global data definitions developed over several years by a separate global data standards group were nearly useless. They had been written by low-level IT employees who had little understanding of business processes or how the data was used. The GEDW champion therefore assembled a team with *both* strong business knowledge and knowledge of the IT applications, across global and U.S. businesses. This group interviewed 250 mid-level managers and spent more than 20 work-years creating a new global data model and data standards.

*Changing the organization.* Interestingly, even though the corporate savings were significant, and the data was of higher quality, the old divisional IT groups (now centralized) presented the strongest resistance to switching divisional decision support applications to the GEDW – because it meant they lost control of their data and their standalone databases. Only strong lobbying to division management by the GEDW team got rid of those databases.

Once 3M's corporate IT group made the data available, the business units became responsible for creating applications that would leverage it to create business value. Initial indications are that the organization is taking advantage of the new infrastructure. However, the focus of project management has been more on successfully implementing the technical infrastructure and replacing the old distributed decision support capabilities, rather than on using the new capabilities to make business practices more customer-focused.

**Benefits.** Return on investment for the effort was 56 percent, primarily based on cost savings from phasing out maintenance and replacing the old decentralized decision support platforms. 3M has even made a major portion of the product data available to its customers and the public through the Internet, which has led to a second benefit: lower costs in responding to some 5000 daily requests for product information; the warehouse makes this information available via Web, e-mail, or fax.

### Radisson Hotels

**Company background.** Until recently, the marketing department at Radisson Hotels and Resorts could place ads in the travel sections of Sunday morning newspapers and know that by Monday morning, phones would ring in its reservation center. However, with the emergence of database marketing, new customer touch points (such as the Web), and customer loyalty programs, the dependable relationship between



advertising and sales has been called into question. In analyzing marketing trends, Radisson discovered it was gradually losing market share; it would need to take a different marketing approach.

### CRM Path

*IT infrastructure initiatives.* Two early infrastructure efforts initiated by corporate IT laid important groundwork for later CRM initiatives. First was the successful effort (1994 through 1997) to move all Radisson franchisees to a common suite of applications for reservations, operations, and guest tracking. Second was corporate IT's 1996 development of an enterprise data model and data dictionary, which served as a data architecture. Although existing applications were not immediately changed to meet the new standards, subsequent systems (including the central reservation system in 1999) were written to conform to the corporate data model. This meant that by the end of 1999, Radisson had a substantial integrated data infrastructure in place.

*Delivering incremental benefits.* Building from that initial infrastructure, the first initiative of a new Director of CRM in Radisson's marketing department was the "Look to Book" on-line loyalty program, which became a highly successful incentive program aimed at travel agents. It allows the marketing department to create promotions targeted at travel agents, encouraging them to book their clients in Radisson hotels. This program would have been impossible without the standardized reservation system and its common reservation data across all Radisson's hotels.

*Getting the data right.* The Director of CRM soon realized, however, that even with common data across the hotels, the information needed for a comprehensive CRM initiative was not available. Radisson could not track information about specific hotel guests because it had no dependable customer identifier, and its name and address information was of poor quality. Therefore, Radisson could not identify or target particular groups or individuals, and it was forced to rely on external data sources for marketing campaigns.

Marketing and IT therefore began working together closely to devise a way to use credit card and frequent flier IDs (which were more likely to be accurate) to uniquely identify guests and their transactions. To their surprise, marketing and IT discovered unexpected difficulty in communicating about CRM solutions. Outside consultants had to help them reconcile their different understandings about how technology and CRM processes might be joined. In 1998, they

delivered a data warehouse called CustomerKARE that provides an integrated view of Radisson customers.

*Changing the organization.* Some data quality problems stemmed from poor data entry practices at franchises. The franchises tended to think they had unique needs and were justified in doing things "their own way." As a result, improper practices, such as appending clerk initials to a reservation code, or accepting defaults, such as using the hotel's own address in guest records, were common. IT had to make a concerted (and ongoing!) effort to educate franchise employees and police data entry practices.

Recognizing the need to change the corporate mindset, the new director of CRM has been educating senior management on the potential of CRM. She has also begun changing the mix of skills within marketing to support the new mindset. This change has not been easy because some employees are willing and able to make the shift, while others are not. Jumpstarting the change by bringing in key skills and perspectives from outside has been critical.

**Benefits.** CustomerKare has provided a foundation for additional CRM activities. Its data, coupled with guest satisfaction surveys, has allowed Radisson to identify key loyalty drivers and to quantify how much of guests' lifetime value to Radisson can be attributed to their perception of their stay. CustomerKARE data has also been used to identify guests who will receive invitations to Gold Rewards, Radisson's loyalty-based program rewarding customers for doing business with Radisson and its business partners.

### Summary

Both 3M and Radisson Hotels and Resorts have had successful CRM programs by focusing first on their infrastructure – then extending it, and capitalizing on it to deliver value.

### Target 3: Organizational Transformation

For most firms, becoming truly "customer-centric" involves a major shift in organizational culture and business practices. But organizational transformation of this magnitude is difficult and fraught with opportunities for failure.<sup>20,21</sup> The changes extend beyond

<sup>20</sup> Henderson, J.C., and Vankatraman, N. "Strategic Alignment: Leveraging Information Technology for Transforming Organizations," *IBM Systems Journal* (32:1), 1993, pp. 4-16.

<sup>21</sup> Kotter, J.P. "Leading Change: Why Transformation Efforts Fail," *Harvard Business Review* (73:2), 1995, pp. 59-67.

information systems to business processes, incentive structures, organizational structures, and employee roles. Firms that embrace CRM generally make this organizational transformation, slowly – even if that was not intended. Table 1 provides several key characteristics for transformation efforts.

Management in the two cases below intentionally set out to fundamentally change the way they competed by implementing a comprehensive CRM strategy.

## First American Corporation

**Company Background.** First American Corporation (FAC) is a comprehensive financial-services holding company headquartered in Nashville, Tennessee. In 1990, FAC lost \$60 million. It was operating under letters of agreement with regulators, and competitors were waiting to “come in and pick the pieces they wanted.” Clearly, it was not business as usual.

To survive, new management considered several strategies – including becoming the low-cost provider, developing unique products and services, and targeting larger corporate customers. Ultimately, they decided their sustainable competitive advantage would come from knowing their local customers exceptionally well, and then leveraging that knowledge in designing new banking products, creating new channels of distribution, and interacting with customers. This strategy was called Tailored Client Solutions.

### CRM Path

*Determining the scope.* To implement this customer-centric strategy, FAC needed to redesign every aspect of its operations to meet both its clients’ needs and its own profitability goals. FAC would also need a critical piece of IT – a data warehouse called VISION – to hold the integrated customer information, product profitability information, and distribution revenues and costs. Justifying VISION was not an issue; without it, FAC could not become customer focused.

*Creating an effective CRM team.* Initially, FAC’s IT department was to build VISION. Within three months, though, business management realized that neither the chosen tools nor the in-house IT skills would meet the business needs. Due to VISION’s strategic importance, FAC could not wait for its IT staff to come up to speed, so management decided to rely on consultants and technology vendors. A leading consulting firm helped develop the data models and formulas required for cost, revenue, and profitability calculations. Contractors and consultants from tech-

nology vendors were used extensively to help build and operate the warehouse.

FAC paid special attention to transferring the consultants’ knowledge to FAC’s IT staff. The project leader was from FAC’s marketing department, and the project leadership team had key managers from marketing, finance, and IT. A significant problem crept in, making it difficult for FAC to build its internal skill base: Members of the data warehouse team were continuously receiving “off the scale” job offers from other companies, including consulting firms. FAC developed an attractive retention program (e.g., bonuses for completion of the project, commitments for additional training) for key people, but this did not completely solve the attrition problem.

*Delivering benefits incrementally.* For two years, the VISION data warehouse was implemented incrementally, and incremental benefits were regularly delivered to the business users. For example, marketing analysts could identify the top revenue producers by the first release of the warehouse project, and profitability information was available by the second release. Some 50 marketing and finance analysts used warehouse data directly, and reported results and recommendations to management. In addition, hundreds of indirect users received and used reports generated from VISION data.

*Changing the organization.* The technology implementation was only one part of the needed change. Top management also moved decisively to change business processes and organizational mindset. They linked their incremental change management efforts to each new type of information that became available through VISION. Hence, finance moved from being “bean counters” to finding better ways of generating revenue. “Good customers” were now determined by the profitability of their overall relationship with FAC. Marketing moved from a “lollipops-and-balloons” mentality to predicting customer actions through careful analysis, and using this information to promote profitability.

This large amount of change was not easy or comfortable. Throughout the organization, those who could adapt to frequent changes and take the initiative to enhance performance prospered. Those who could not, left. Some areas experienced 100 percent turnover in one year; many others experienced 25-30 percent turnover over three years.

**Benefits and Evolution.** The move to CRM was highly successful at FAC. The organizational trans-

formation efforts and the new CRM warehouse and applications shifted FAC from losses of \$60 million in 1990 to profits of more than \$211 million in 1998. Its Tailored Client Solutions strategy even changed how FAC was viewed in the financial services industry. The CEO of Deposit Guaranty (which FAC acquired in 1998) said that FAC was attractive because he wanted to be part of “a financial institution of the future and not a bank of the past.” He had not encountered banks of similar or larger size with the same CRM capabilities as FAC.

## Harrah’s Entertainment

**Company Background.** While FAC’s organizational transformation was motivated by the threat of extinction, the transformation at Harrah’s Entertainment’s was aimed at taking advantage of a new business opportunity. In the early 1990s, legislation was passed that allowed gambling on Indian reservations and riverboats. This change opened up new markets for gaming companies. Many of Harrah’s competitors responded by building new properties (e.g., the Bellagio and Paris in Las Vegas) and investing vast sums of money in lavish hotels, shopping malls, and attractions such as dancing water shows and a replica of the Eiffel tower.

### CRM Path

*A new strategic vision.* Rather than compete on the basis of lavish attractions, Harrah’s senior management implemented a different business strategy. They decided to build a strong Harrah’s brand identity, promote it across all Harrah’s properties, and aggressively expand into the new gaming markets. Advertising offers would promote Harrah’s brand rather than any single property. A new customer loyalty program, Total Rewards, would give recognition rewards to customers who cross played at more than one property. In other words, the new mission was to build lasting relationships with customers. It was clear this strategy would require a major shift in organizational culture, as well as a major investment in IT.

*Changing the organization.* With this new approach, Harrah’s various casinos would operate in an integrated manner rather than as separate properties, and the gambling experience would be common across the various casinos. This approach was a radical shift in the gaming industry because casino managers have historically run their properties as independent fiefdoms, marketing has been done on a property-by-property basis, and casinos in the same company have competed with one another.

*Creating an effective CRM team.* The CIO and Director of Strategic Marketing led the development of WINet, which collects data from Harrah’s casino, hotel, and event systems. That data is integrated into a patron database, which serves as an operational data store, supporting various customer-facing operations (such as hotel check-in) and marketing activities (such as offering incentives to visit Harrah’s casinos). The patron database is also used with Total Rewards, which rewards customers with incentives such as complimentary show tickets for their gaming and other activities at Harrah’s. Data from the patron database is loaded into a “marketing workbench,” which serves as Harrah’s data warehouse. It supports marketing campaign management and various analytical applications, such as customer segmentation and profiling.

WINet and the marketing workbench shifted the way marketing decisions are made. Harrah’s offers are now based on market segmentation analysis and customer profiling. This more analytical approach replaces the intuition-based beliefs called *Harrahisms*, which had developed over the years and extolled what did and did not work in marketing campaigns.

To execute this new strategy, Harrah’s brought in people with the vision and skills to oversee a significant organizational transformation. In fact, management named a former Harvard professor to be Chief Operations Officer because he knew how to design systems to analyze customer behavior and preference data, and could organize Harrah’s personnel to capitalize on the analyses.

*Scalability.* Development of WINet, and especially the data warehouse, was not without technical problems, though. The initial infrastructure was satisfactory for the patron database, but it proved inadequate for the huge volume of data and queries required of the marketing workbench. The result was unacceptable response times. After considerable effort to scale up WINet, Harrah’s finally had to turn to another vendor with a more scalable system.

**Benefits.** With its CRM initiative, Harrah’s has, indeed, created a brand identity for its casinos. Many customers wager at more than one property, the casinos are operated in an integrated manner, and guest rewards and recognitions are consistent across the properties. In fact, customer responses to Harrah’s offers have doubled, and the company reports a 62 percent rate of return on its IT investments.

## Summary

Companies can adopt an organizational transformation approach to CRM for different reasons. At First American Corporation, CRM was seen as the only way to survive. At Harrah's Entertainment, management saw a way to differentiate its properties from competitors' casinos through a customer-reward strategy involving all its casinos.

In general, changing the technology without transforming the organization (the work processes and the mindset of the employees) often leads to less-than-optimal results. Companies may need to develop a customer-centric culture, hire personnel with the vision and skills needed to implement and practice CRM, and change business processes, organizational structures and reward systems. These changes must take place in conjunction with the changes to information technology, complicating both types of change. Although FAC and Harrah's succeeded, this type of organizational transformation can be difficult and fraught with opportunities for failure.<sup>22, 23</sup>

## Lessons Learned

A number of lessons emerge from our research, other CRM cases, and related research. Perhaps the most important lesson underlying all the rest is that the three different approaches to CRM are actually quite different on many dimensions: organizational costs and benefits, likely sponsorship, speed with which benefits can be achieved, data and architectural challenges, and impact on jobs and needed job skills. Differences along these dimensions suggest the specific lessons discussed below and are summarized in Table 1.

### ***Lesson #1: The Three Targets Have Quite Different Organizational Costs and Benefits***

Individual applications tend to be lower-cost efforts, with the possibility of quick local benefits. On the other hand, as discovered by SmarterKids.com, unless there has been some attention to overall architecture, a sharable infrastructure is unlikely to develop, and it is harder to receive the more pervasive benefits that come from coordinated action among all parts of an organization. Infrastructure efforts have much higher up-front costs, but they provide the possibility of coordination among all customer touch points. Finally,

organizational transformation is a difficult and risky endeavor, but has potentially very high payoffs as the organization shifts its business processes, culture, and technology to truly become customer-centric.

### ***Lesson #2: Sponsorship May Vary Across Targets***

As the cases illustrate, different CRM targets have different challenges, necessitating different kinds of sponsorship to secure funding and organizational commitment. CRM efforts that focus on individual applications tend to be initiated by departments, with specific goals that are easily tracked. The costs and benefits are limited to single departments, and business unit leaders often understand why these applications are being implemented. So they have fairly realistic expectations (if managed properly) about the outcome of this approach. This makes the approval process for CRM applications the most straightforward of the three CRM targets.

Infrastructure efforts typically focus on providing a consistent and standardized data resource – a flexible platform for future applications. Interestingly, moving to an integrated infrastructure for decision support can generate significant savings because it leads to replacing heterogeneous decision support platforms and related IT personnel (as at 3M). In general, though, an infrastructure does not generate positive returns; only future applications do.

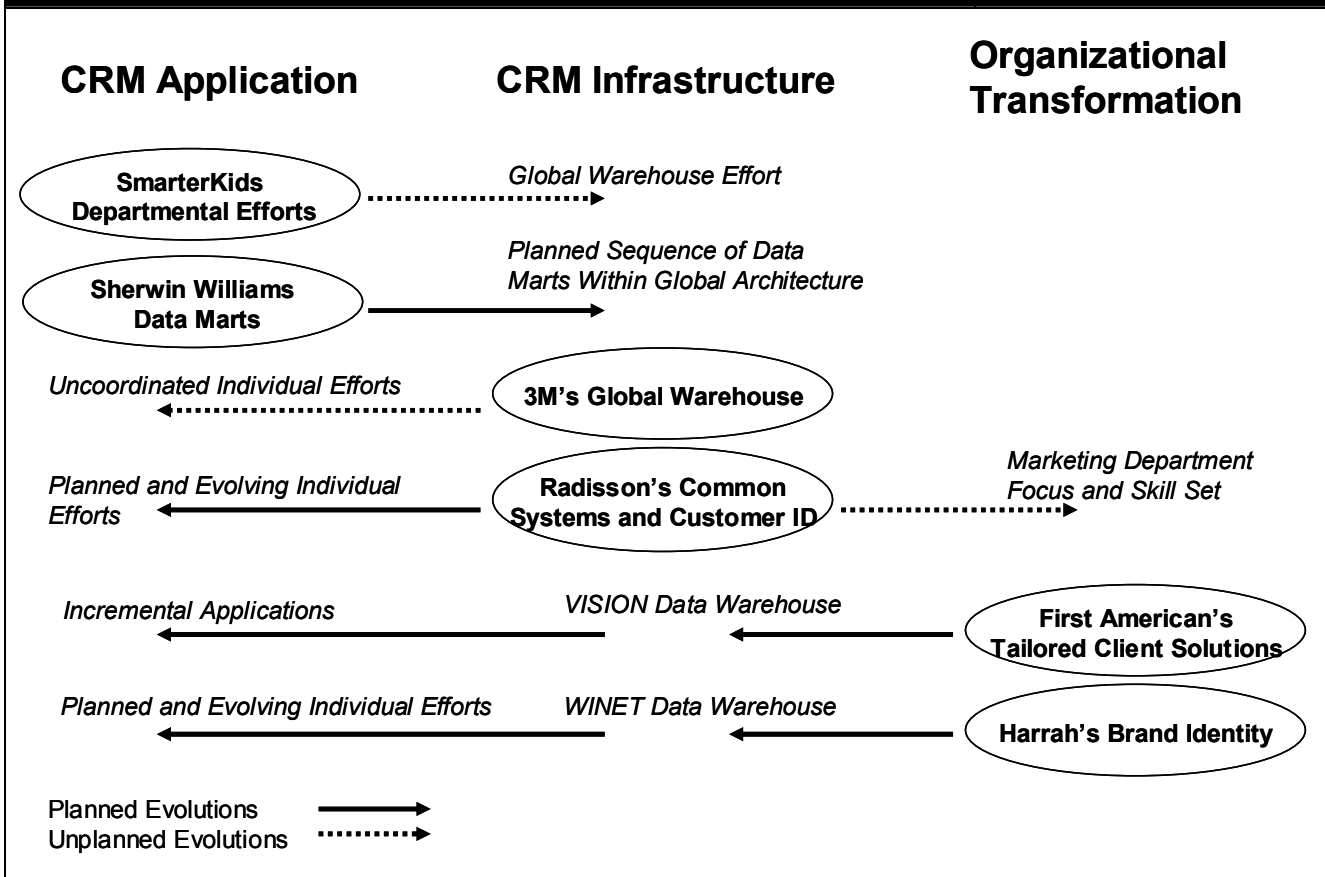
The impetus for CRM infrastructure efforts often comes from the IT group because IT professionals see the difficulties caused by non-standardized infrastructures; business professionals often do not. The high up-front costs and political challenges of sharing data compel IT sponsors to create effective bridges to business leaders through their own business experience, personal relationships, and regular communications. Linking an infrastructure to the ability to deploy one or more high-impact business applications can help generate support for the effort. Unfortunately, without a common vision by the business managers, the first applications that take advantage of a new infrastructure often bear the bulk of the cost of installing it.

Organizational transformation efforts are high-potential, high-risk, and high-cost endeavors, involving both technical and organizational challenges. While individual applications can be viewed as local affairs, and CRM infrastructure efforts as technical concerns, organizational transformation clearly affects the heart of the business and requires overt commitment, first by top management, then by all levels of

<sup>22</sup> Henderson and Venkatraman, op. cit.

<sup>23</sup> Kotter, op. cit.

**Figure 2: Evolution of CRM Efforts**



the organization. For companies like FAC and Harrah's, which are making major organizational changes, a half-hearted movement toward CRM is not an option – there are too many ways for such transformation efforts to fail. A complete organizational commitment is the only possible way to succeed.<sup>24</sup> Organizational transitions are the most disruptive and difficult CRM targets to reach.

**Lesson #3: Plan for the Evolution of Your CRM Efforts**

The implicit assumption underlying this entire discussion has been that targeting infrastructure leads to applications, and that targeting organizational transformations requires infrastructure and applications. However, we found that CRM projects move from target to target at different times. Figure 2 indicates how shifts across targets occurred in the six cases.

Sometimes these shifts are an intended sequence of efforts, planned from the beginning. At other times,

they result from insights gained through experience with the first effort. We thus recommend that first CRM efforts be considered the first of many.

Planning for evolution has important consequences. The choice of customer identifiers should look to the future. Application interfaces should provide access to and from external systems. Technology choices should consider high future volumes of data.

Similarly, management should recognize that seemingly small departmental applications may sow the seeds for eventual organizational transformation. Thus, management should pay close attention to early efforts because they are foundation building.

One might ask whether it is possible to put in place a new CRM infrastructure without completing an organizational transformation. Unfortunately, the answer is yes. Consider 3M, which put in place a data warehouse for all customers and products. If 3M does not transform its organization culture and business practices to take advantage of this infrastructure, it will only realize the operational savings of doing away with numerous separate decision support systems.

<sup>24</sup> Kotter, *ibid.*

Having the infrastructure in place can ease the transformation process, but organizational transformations are difficult for many reasons beyond the technical ones.

***Lesson #4: Prepare to Get Your Hands Dirty When Working with CRM Data, Especially When Building an Enterprise-Wide CRM Infrastructure.***

The companies that participated in the TDWI CRM survey identified data quality as a top technical challenge for a CRM initiative – 79 percent of them found it challenging or very challenging. At Radisson, elaborate match-and-merge algorithms were needed to link customer transactions to unique customer identifiers. Fortunately, data cleansing tools are maturing, and a wide range of packaged software is available to address data quality problems. Many times, though, (as at Radisson) poor quality is linked to poor business practices that ultimately need to be changed. Organizations must begin their CRM implementations knowing that great effort will be needed to change operational systems and business practices to improve data quality to the required level.

The data challenge varies with the CRM target. For applications like sales force automation, the data challenges are limited because the number of information systems that will link to the application are limited. However, incompatible data definitions and a lack of consistent identifiers for key entities, like customer and product, can pose serious problems for infrastructure targets. These difficulties escalate when the target is organizational transformation, and the firm is engaged in major changes to business processes and job roles. Thus, data quality challenges must be expected in infrastructure and organizational transformation targets.

***Lesson #5: Ensure the Technical Infrastructure Will Scale to Meet Future Challenges.***

Companies are often caught off-guard when CRM is embraced by large parts of the organization. Data volumes grow exponentially; the complexity of integrating systems to yield a single customer view increases; and the existing infrastructure needs to incorporate technology advances (e.g., real time information, Web data analysis). Therefore, the initial CRM application or infrastructure will need to scale appropriately. This capability must be considered from the outset.

3M recognized the importance of building scalable CRM infrastructures. In contrast, Harrah's did not. Its initial architecture was satisfactory for the patron database, but it proved inadequate for the marketing workbench. Thus Harrah's ultimately had to turn to another technology vendor to attain satisfactory response times for user queries.

Like data challenges, architectural challenges increase with the level of the CRM target. It is much easier to plan for a local application. Capacity planning is much more difficult for infrastructure projects because potential future applications probably have not yet been identified. The key is to consider the likely scope of future needs, and be sure the technology can scale to that level of demand.

***Lesson #6: You Can Teach an Old Dog New Tricks ...Sometimes.***

Moving to CRM requires new *business* skills. Both Radisson and FAC learned, for example, that relationship marketing requires people with strong analytical, quantitative, and technical abilities. Some organizations need to hire new employees to get the right business skills. Radisson discovered that seeding its marketing department with new hires helped existing staff think in a more customer-centric way. However, both FAC and Radisson found that many employees did not want to change or were not able to make the transition.

Dealing with changes in jobs and job skills is not easy; the difficulty increases as the CRM target becomes more complex. The more pervasive the organizational change, the more dramatic the changes to business processes and job tasks, which increases the management efforts needed to manage the change. At FAC, where the change was especially significant and widespread, those who could adapt to frequent changes and could take the initiative to enhance performance prospered; those who could not left.

## **Conclusion**

Theoretically it might be possible to build a CRM solution and roll it out to an organization at once, along with the many organizational changes that would be necessary for organizational transformation to a new CRM mindset. In practice, though, we have not seen this approach used, even in firms that start with organizational transformation as an explicit goal. This reluctance is probably because starting with a complete

CRM solution requires a clarity of vision that seldom exists at the outset of a project – and it puts a huge cost burden up-front when the uncertainty about business benefits is highest.

Instead, the successful firms we studied used an incremental approach. For example, in developing its CRM infrastructure, FAC set a series of incremental business and technical goals. Each was crafted to yield significant positive financial impact and to change a basic way the bank operated. The first goal was to calculate total revenue by business customer – a figure that had not been available. It was an eye opener to management. The second goal was to calculate profitability by customer – by adding costs to revenues. Additional goals followed. With each goal, FAC changed its business processes, incentive schemes, and management attention to capitalize on its new understanding of its customer base.

Regardless of the CRM target, companies should move quickly to deliver recognizable, measurable business benefits. Another way of saying this is to gather “low hanging fruit” early. Dividing a CRM project into increments, each of which delivers visible business benefits, creates many advantages. First, this approach continually reinforces the value of the overall CRM project and helps maintain momentum. Second, the project team gains understanding and expertise over time as new applications and capabilities are added and as data volumes grow. Third, the organization can learn more about what works from a business sense; it can make corrections as its abilities and its understanding of CRM evolve.

Successful CRM probably requires hitting all three targets, at least to some degree: implementing strategically beneficial applications, improving the underlying data infrastructure, and changing the way the business is run. However, this breadth does not mean that every firm should embark on organizational transformation or CRM infrastructure efforts or even individual applications. Firms differ in the benefits they can derive from the CRM targets and in their strategic readiness to embark on major, risky efforts.

At one extreme, organizational transformation requires decidedly committed support from top management. Such support cannot be turned on and off like a light switch. It only comes when top management has a compelling vision of the future and can see that CRM applications, infrastructure, and transformation are necessary to achieve that vision. In some organizations (as in Sherwin-Williams), top management may need to be convinced of the value of CRM

by concrete results before it visualizes a future that includes major organizational transformation.

In other firms, the most telling benefits might be achieved just by a small number of well-designed individual applications, without major infrastructure or transformation efforts. In general, when appropriate “targets” are chosen, major improvements in business performance can result. However, firms can stunt their potential benefits by not considering the potential importance of all three targets, that is, by treating CRM efforts as purely local affairs without appreciating the synergy that can come from changing selected business processes and culture. Or they can fail to install sufficiently powerful IT infrastructures to permit the needed data sharing across the firm.

Certainly, other IT endeavors beside CRM must address the three targets as well. It is useful to compare how CRM relates to the targets versus how two other major IT initiatives relate: traditional custom-built applications and enterprise resource planning (ERP) systems.

Traditional custom-built applications emphasize individual applications. Their requirement for organizational transformation is often much reduced because they are designed and built to support existing business processes, which often do not differ from the old ways of working. Custom-built applications usually need to interface with existing legacy systems, often creating some infrastructure challenges. However, the scope of custom-built applications is generally limited. The larger the scope, the more difficult is interfacing with the existing infrastructure.

ERP systems, as prepackaged applications, tend to avoid the problems of interfacing with legacy applications. Instead, they replace all (or most) of those applications. Thus, in many respects, ERP sidesteps data infrastructure difficulties by throwing out the old. The cost, though, is that old business processes often cannot be supported by the new ERP. Thus there is often substantial organizational transformation, or at least substantial changes to business processes. Unlike, CRM, though, the organizational transformation is often driven by the requirements of the software rather than by a conscious shift in strategic direction. In many companies installing ERP systems, organizational transformation is more an implementation necessity than a goal in itself.

In contrast, CRM efforts are usually meant to shift the way the firm carries out its business, by changing how it thinks about and interacts with its customers. Appli-

cations to carry out this shift are much more effective when they can share information, so major investments in the technical infrastructure to facilitate information sharing are usually required.

In summary, it is true that regardless of the IT initiative, firms should consider all three “targets” discussed here: individual applications, a data infrastructure to support them, and organizational changes to take full advantage of the technical upgrades. However, when the IT initiative involves CRM, the importance of the later two targets is greatly elevated, even if firms choose to focus initially only on applications.

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## Appendix: Our Methodology

Over the last four years, we studied 14 companies that are leaders in CRM. The companies identified by Teradata, a division of NCR, were winners in The Data Warehousing Institute's annual best practices competition, or were case studies in a major CRM study conducted by The Data Warehousing Institute (TWDI 2000) and the authors. The selection of companies was judgmental and purposeful because we wanted to learn from the experiences of CRM leaders. Being a leader did not mean that a company had to be the best in every aspect of CRM, but it did need to excel in at least one area. For example, some companies were selected on the basis of a single application, others were chosen because of the CRM infrastructure that was put in place, and a few because of their eCRM activities. Data was collected from participating companies in multiple ways. The companies provided documents, presentations, annual reports, and videotapes. At least two of the researchers spent one to three days on-site interviewing senior executives, marketing directors, marketing managers, analysts, CIOs, data warehousing managers and professionals, end users, and in few cases, customers and suppliers. This cross-spectrum of people provided a multi-stakeholder perspective – senior managers, IT, end users, and customers/suppliers. The interviews were 30 minutes to 2 hours in length, taped recorded, and later transcribed. Follow-up conversations with several of the companies have continued in order to keep abreast of their CRM activities.