Chapter 3
Organizing for Database Marketing

Abstract Quantitative analysis is endemic to database marketing, but these analyses and their implementation are not conducted in an organizational vacuum. In this chapter, we discuss how companies organize to implement database marketing. The key concept is the "customer-centric" organization, whereby the organization is structured "around" the customer. We discuss key ingredients of a customer-centric organizational structure: customer management and knowledge management. We also discuss types of database marketing strategies that precede organizational structure, as well as employee compensation and incentive issues.

3.1 The Customer-Centric Organization

Successful implementation of database marketing certainly requires mastery of data management and modeling methodology. However, these tools are not applied in an organizational vacuum. In this chapter we discuss how to design organizations for implementing database marketing successfully.

A key concept to emerge in this context is that of the "customer-centric" organization. This means that the organization is structured "around" the customer – from the customer in, rather than from the product out. In the words of industry expert David Siegel as quoted by Stauffer (2001), "If you really care about customers . . . then you have to reorganize your entire company around customers." Stauffer then says, "It's not organizing the company to serve customers. It's letting customers determine how you organize." Galbraith (2005, p. 6), states customer-centricity as an imperative: "The need for customer-centricity is not going away, and it is up to each company to determine the level of application . . . required for success."

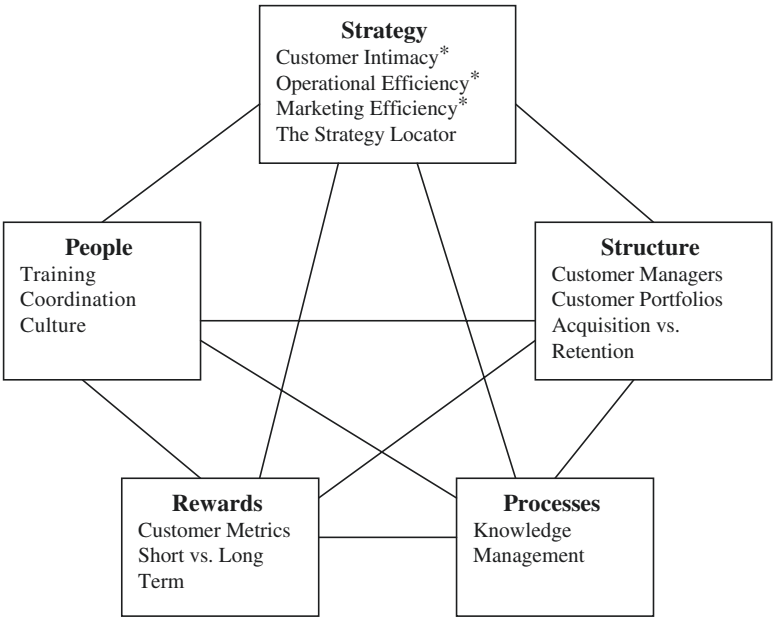

Fig. 3.1 Star model of the customer-centric organization (From Galbraith 2005).
* These concepts are used by Langerak and Verhoef (2003).

We will frame our discussion using the "Star" model developed by Galbraith (2002, 2005). The Star model emphasizes five ingredients for successful organizational design: strategy, structure, processes, rewards, and people (Galbraith 2005, p. 15). Strategy refers to the goals of the organization and the means by which it intends to achieve them. Structure refers to the organizational chart – what departments and positions need to be created, and how will they interact. Processes refer to the means by which information flows within the organization. Rewards refer to the compensation and incentives that ensure the employees of the organization perform effectively. People refers to the policies that ensure that employees have the right skills and "mind-set" to implement the organizational design.

Figure 3.1 shows the Star model applied to designing the customer-centric organization. Listed under each of the five components of the framework are the key issues that will be discussed in the following sections.

3.2 Database Marketing Strategy

The organization design for implementing database marketing emerges from the firm's database marketing strategy. The key issues are: (1) What is that

strategy, and (2) How will the organizational design establish a competitive advantage?

3.2.1 Strategies for Implementing DBM

3.2.1.1 The Langerak/Verhoef Taxonomy

Langerak and Verhoef (2003) distinguish three types of CRM strategies: Customer Intimacy, Operational Efficiency, and Marketing Efficiency. Customer Intimacy means that the company's strategy truly is to deliver personal service to its customers, to know them on an intimate base and customize its products, services, and communications to them. Operational Efficiency employs CRM to reduce costs and utilize non-marketing resources efficiently. Marketing Efficiency uses customer data to improve marketing productivity, i.e., making marketing more effective at achieving less churn, more successful cross-selling, and in general, greater customer profitability.

Langerak and Verhoef argue that organization design should follow from which of the three strategies the company pursues. For example, they study a private investment banking firm whose strategy was Customer Intimacy, but the company approach to customer service was actually quite impersonal. The firm realized it needed to develop personal, intimate relationships with its customers. They grouped their customers into three need segments ("self-made man," "strategy maker," and "security seeker") and assigned a customer management team to each group. They created an organizational structure that best implemented their strategy.

Langerak and Verhoef also studied an insurance company that competed on operational excellence, i.e., "price, convenience, and speed." This meant that the company needed to keep operations costs as low as possible, and develop ways of interacting with customers that were as fast and efficient as possible. This strategy required a highly transactional relationship with customers. The company adopted an organizational structure based fundamentally on data management. The data management group fed information to the rest of the organization to help it be more efficient. It especially supported the firm's efforts on the Internet channel, where products could be personalized at low cost.

Finally, Langerak and Verhoef studied a holiday resort company whose marketing efforts were highly inefficient. They provided mass-mailing offers with very low response rates. They needed CRM to improve marketing efficiency. Accordingly, they set up a CRM department that focused on data mining, database management, and integrating database marketing and customer contact efforts. The system was in place only to increase the productivity of their marketing efforts.

The main point is that the three generic CRM strategies identified by Langerak and Verhoef each require different organizational designs and different levels of customer-centricity.

3.2.1.2 Galbraith's "Strategy Locator"

Galbraith (2005, pp. 32–33) also proposes that the desired degree of customer-centricity depends on the strategy of the company. He develops a "Strategy Locator", a measurement scale consisting of two dimensions: Scale and Scope, and Integration. Scale and Scope refers to the number and variety of products marketed by the company. Integration refers to the degree that the company's products must be packaged or bundled together to deliver satisfaction to the customer. According to Galbraith, the higher the company scores on this scale, i.e., the degree to which the company offers many varied products that must be integrated, determines the degree to which the firm must be customer-centric.

Galbraith describes a chemical company that only required "light-level" customer-centricity. The company had relatively few products that did not need to be integrated. It therefore rated low on the strategy locator. The organizational design did include some elements of customer-centricity – e.g., customer management teams – although the formal organizational structure centered on functions and geographic areas.

Galbraith then describes an investment bank that required a "medium-level" degree of customer-centricity. This company had a moderate number of banking products that required integration. It therefore rated medium on the strategy locator. The organizational design included not only customer managers, but formal processes to ensure that customer contacts were coordinated within the customer management team. Formal reward structures based on customer performance were implemented, and formal CRM training programs were put in place.

Galbraith uses IBM as an example of requiring a "complete-level" degree of customer-centricity. IBM has several different products, requiring a high degree of integration. IBM therefore rates high on the strategy locator. IBM's strategy focused on delivering customer "solutions", a highly customer-centric idea. The notion was to solve the customer's problem, whatever products and services were required. Given the complexity of problems, this required very high coordination among IBM management. IBM now has a solutions-oriented structure where Product managers work with the customer to deliver the right combination of IBM products and services to solve the customer's problem. Its processes help ensure that customer plans and priorities are shared easily among the relevant managers involved with the customer. The company still uses quotas to reward salespeople, a product-centric approach, but also formally assesses

the "competencies" of its employees to make sure they match customer needs.

3.2.2 Generating a Competitive Advantage

Firms are constantly trying to establish a competitive advantage – a core competence that gives them a sustainable edge over its competition. One possibility is that the organizational design through which the company implements database marketing might be a source of competitive advantage.

Peteraf (1993), articulating the "resource-based view of the firm," defines four factors that determine whether a company's competences will translate into competitive advantage: heterogeneity, ex-post limits to competition, imperfect mobility, and ex-ante limits to competition.[1] Heterogeneity means that firms within the industry have different competencies. For example, one firm may develop a marketing analytics group that is different, and better, than the groups at other companies. Ex-post limits mean that the company's capabilities are difficult to replicate. For example, competitors may know which software package the firm uses for cross-selling, but because the firm has an organizational structure that emphasizes customer management, it knows its customers so well that no other firm can duplicate its success. Imperfect mobility means that the resources that give the firm its competitive advantage cannot be obtained by another firm. Competitors often try to hire away a firm's best managers. However, a customer manager might be effective because the scale of the firm permits frequent interaction with the marketing analytics group. So a firm cannot simply hire this manager away and expect the same success. Ex-ante limits refer to first-mover advantage. For example, a company that first uses CRM for operational efficiency may be "ahead of the curve" in terms of the organizational structure that best supports this strategy.

3.2.3 Summary

Strategy plays a pivotal role in determining the organizational structure for implementing database marketing. While "customer-centricity" has come into fashion, Langerak and Verhoef (2003) as well as Galbraith (2005) argue that not all organizations need to adopt the same degree of customer-centricity. Another major theme is that the goal is to wed the firm's database marketing strategy with an organizational design that creates a competitive advantage for the firm.

[1] The authors thank Professor Margaret Peteraf and Justin Engelland, Tuck MBA 2005, for helpful discussions on this topic.

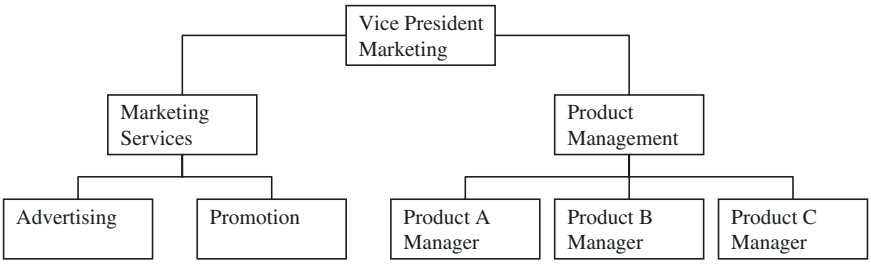

Fig. 3.2a Product management (Adapted from Peppers and Rogers 1993).

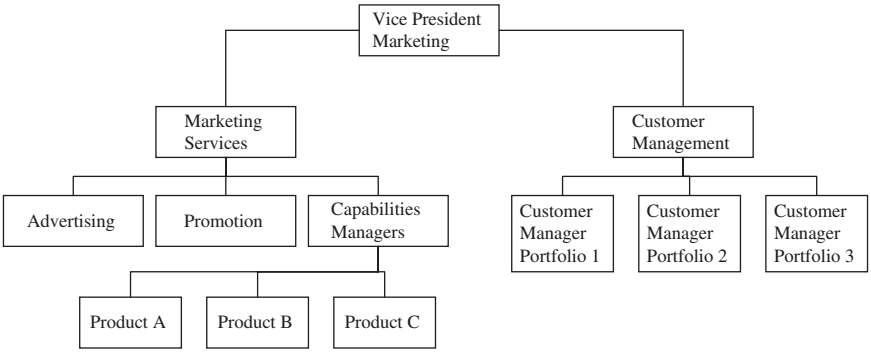

Fig. 3.2b Customer management (Adapted from Peppers and Rogers 1993).

3.3 Customer Management: The Structural Foundation of the Customer-Centric Organization

3.3.1 What Is Customer Management?

The customer management organization structure has been articulated by Peppers and Rogers (1993, pp. 175–206). Their idea is that the marketing efforts of the firm should be organized by customer groups or "portfolios", each portfolio managed by a customer manager. This is in stark contrast to the product management structure. Figure 3.2 illustrates. In the product management structure (Fig. 3.2a), product managers run their products as profit centers. They are responsible for generating sales and profits. They rely on the traditional "Four P's" (product, price, distribution, and promotion), draw on services provided by advertising and promotion departments, and work closely with production managers on product improvements and quality.

The customer management framework (Fig. 3.2b) clusters the firm's customers into portfolios. One possible clustering is by sales level – heavy,

medium, and light user customer portfolios. Each customer would be assigned to one and only one portfolio. Each portfolio would be managed by a customer manager. The customer manager would draw support from advertising and promotion departments, and from "capabilities managers," the former product managers who would now be responsible for making sure the products performed up to the standards needed to serve customers. Customer managers would work with product managers on quality issues as well as new product features and other product development tasks.

The customer manager's goal is to increase the lifetime value of the customers in his or her portfolio. This emphasizes the long-term orientation of the customer manager. Peppers and Rogers define the customer manager's job as follows (1997, pp. 356–357): "... *someone* must be assigned the responsibility for managing *customers individually*.... The customer manager's responsibility is to manage each customer relationship, supervising the firm's dialogue with each, finding products and services for each, and determining how best to customize to meet each customer's individual specifications. In short, the customer manager's job is to delve more and more deeply into each individual customer's needs in order to lock the customer in, make the firm more valuable to the customer, and increase the company's margin – with each customer."

3.3.2 The Motivation for Customer Management

The motivation for customer management rests on three assumptions: (1) Stronger customer relationships yield higher sales and profits. (2) The product management system is not effective at developing customer relationships. (3) The customer management system is effective at developing customer relationships.

The premise for the first assumption is that the customer is more powerful today than ever before. In a B2C context, customers in industries ranging from financial services to telecom to travel to retail face an ever-expanding array of choices and they make choices with more information (due to the Internet). In B2B industries, companies ranging from IBM to Xerox face the same sophisticated customer. Companies like P&G are becoming more like B2B companies – their customers are Wal-Mart and the newly consolidated supermarket companies. The assumption that better customer relationships feed firm performance has received some empirical support (Reinartz et al. 2004; Zahay and Griffin 2004; Day and Van den Bulte 2002; Chaston et al. 2003), although more work is needed.

The second assumption has not received empirical testing. The logic is that product management maximizes sales, not customer satisfaction. Each of the firm's product managers acts individually, with the result that customers are bombarded with offers and selling pitches. The customer is "turned off" by this marketing blitz, and perhaps most importantly, finds him or herself

owning the wrong products. A good example would be financial services, where the customer becomes over-invested in retirement products like IRAs when he or she should be investing in college-funding instruments. In short, the firm spends too much money on marketing, many of its efforts cannibalize each other, and they don't yield better customer relationships.

The third assumption, that customer management is effective for developing customer relationships, has also not been tested directly. In Sect. 3.5, we discuss evidence that customer-oriented incentive systems produce more satisfied customers and better marketing performance. But this does not validate customer management *per se*. These incentives could be used for product managers as well as customer managers.

In summary, the motivation for customer management is that customer relationships are vital, product management is antithetical to this goal, and customer management will be successful at achieving this goal. This motivation has received some empirical support but much more evidence is needed.

3.3.3 Forming Customer Portfolios

A major challenge is how to define customer portfolios. Peppers and Rogers advocate that firms define portfolios based on customer needs. This allows the customer manager to specialize in serving the needs relevant to these customers. There are many ways to actualize this idea. One method is to group customers by volume. This is consistent with customer tier management (Chapter 23). An airline for example may have customer managers for its premium tier customers. While customer volume is a natural grouping scheme, there are many others. A financial services company may group customers by life-stage, e.g., young professionals, families, and retirees. A software company may group customers by line-of-business, e.g., education versus business, or by industry. In fact, a major challenge in customer management is to decide exactly how to form the customer portfolios, and how many portfolios should be defined. This is very much the perennial marketing issue of how a market should be segmented.

One challenge in defining customer portfolios is customer movement between portfolios. For example, the financial services customer manager for young professionals should be concerned with passing along good customers to the customer manager for young families. The customer manager for low-volume customers should be concerned with turning them into high value customers. The compensation system becomes key – it should be based not only the current profitability of the customer portfolio, but also on how many customers the customer manager converts to high volume customers, or the number and quality of young professionals the customer manager passes along to the young family customer manager. Referring back to the Star model (Fig. 3.1), this is an example where structure (the customer management system) interacts with compensation.

3.3.4 Is Customer Management the Wave of the Future?

To flesh out the key issues for firms deciding whether to pursue customer management organizational structures, in this section we discuss the pros and cons from an advocacy viewpoint.

3.3.4.1 Why Customer Management Is Inevitable

Customer management is inevitable and the firms that move first toward this system will achieve the highest rewards. The reasons for this are:

- *Customer satisfaction is the key to success and customer management will produce higher customer satisfaction than product management.* Customer management is truly focused on serving customer needs, whereas the product manager's goal is to sell product.
- *Customer management creates sustainable advantage.* Customer management encourages each company to know the needs of *its* customers better, and it is difficult for other firms to replicate this knowledge.
- *Product management is inherently short-term.* This is because it emphasizes current profits for one product. Customer managers are concerned with lifetime value of the customer, which is inherently long-term.
- *Modern Information technology enables customer management.* Until recently, firms did not have the data management systems nor the statistical tools required to pursue customer management activities such as cross-selling, lifetime value management, churn management, etc. These systems and tools are now in place.
- *Customer management may be revolutionary but it can be implemented in an evolutionary fashion.* For example, MacDonald (2001) reports that Nike Canada assigns "consumer champions" to specific customer groups. Customer champions do not have line responsibility as prescribed by a complete customer management structure, but they can change the conversation from "let's sell more basketball shoes" to "let's increases sales to teenage boys".

3.3.4.2 Why Customer Management Would Not Work

There are just too many practical, cultural, and structural reasons why customer management will be very difficult to implement. These include:

- *Product management is deeply ingrained in corporate culture.* Companies are product/sales/short-term oriented. Wall Street demands this, and it produces the most easily measured results. Customer management requires too much of a change in organizational culture.

- *Customer management will steer companies away from their distinctive competencies.* Most companies have distinctive competencies and cannot deliver the best product in each category. Customer managers may urge a financial services firm sell a mutual fund, but if this is not a high quality fund, this will produce dissatisfied clients in the long run.
- *Customer management will create even worse conflicts than those found among product managers.* Each customer manager will want more funds and will make competing demands on capabilities managers. For example, managers of the teen-age customers will demand certain features for the company credit card, while mangers of the 50+ customers will demand other features. Who has the authority to referee the demands of the customer managers for new product features versus the capabilities manager's view that these features are too expensive?
- *It is difficult to measure the key performance indexes for customer managers.* Performance indices for customer managers include share-of-wallet (SOW) and lifetime value (LTV). But SOW is difficult to measure because Firm A does not have data for how much business each customer does with Firms B and C. LTV calculations require many assumptions about retention rates, etc. It's impossible to design a reward system based on such fuzzy measurements.
- *It is not practical for many companies.* How can General Motors organize around Teens, Young Families, Young Professionals, Elderly, etc? How can General Mills organize around Families with Children, Singles, Elderly, etc? They just don't have direct access to customers on that basis.
- *Do customer managers have the expertise*? A customer manager must have the expertise to diagnose customer needs and prescribe the right products for each customer. In many industries, the product is so technical that no one manager can possibly understand all the products. IBM may try to address this through a team approach, but that requires a lot of coordination.
- *Customer management is expensive.* It adds a new layer of managers – the customer manager. It does not eliminate the product manager – it just changes his or her responsibilities. The result is higher personnel costs in salary and support.
- *Product management takes into account customer needs anyway.* Product managers are marketers – they develop products to fit the needs of a target group.

3.3.5 Acquisition and Retention Departmentalization

Until now, our focus has been on managing current customers, but what about the management of customer acquisition? An important aspect of the customer-centric organization is the division of efforts into acquisition and

retention. These are two very different functions. For example, Del Rio (2002) describes a wireless phone company with separate departments for acquisition and retention. Publishers have traditionally employed acquisition editors, who sign up authors and books, and managing editors, who manage the editing, production, and marketing of the books.

The advantage of this departmentalization comes from the fact that acquisition and retention require two different mind-sets, involve different tools, and have different success measures. Acquisition is entrepreneurial. It is more straightforward to measure, reward, and motivate. It is short-term. Retention management is quite different. It is difficult to measure (i.e., it relies on lifetime value and share-of-wallet), and therefore difficult to reward. It is long term.

The disadvantage of acquisition/retention departmentalization is that the acquisition department may not acquire the right customers. For example, an acquisition manager might use price discounts to attract customers who are inherently deal prone churners; impossible to retain.

The key challenge therefore lies in coordination. Incentives could be used to make sure the acquirers attract the right customers. These might entail measures such as lifetime value. Ainslie and Pitt (1998) provide interesting evidence that it is possible to develop models that guide acquisition efforts according to long-term customer management goals. They model prospects in terms of their ultimate profitability, risk, and responsiveness to future modeling efforts. Then they prioritize customers in terms of an overall index of these three criteria. Thus it may be possible to use predictive models to facilitate coordination between acquisition and retention.

3.4 Processes for Managing Information: Knowledge Management

3.4.1 The Concept

Knowledge management is the systematic process of *creating, codifying, transferring, and using* knowledge to improve business performance. Knowledge management pertains to any type of knowledge generated by the organization, but in the context of database marketing, we are concerned with knowledge about the customer.

Davenport and Prusak (1998, pp. 1–6) distinguish among data, information, and knowledge. Knowledge management systems entail all three. Data is the raw, stored input, unanalyzed. Information is compiled data that "makes a difference" (Davenport and Prusak p. 3) in a decision. Knowledge is one step up from information. It is a mix of "experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information" (Davenport and Prusak p. 5).

For example, consider a cross-selling campaign for audio speakers that can be used with a computer. Each customer's response can be recorded. This is data. The data can be compiled to yield a response rate. This is information. It can be used to calculate profitability of the campaign. The data could be analyzed to determine that those who responded had bought a computer in the last 3 months. The insight, or knowledge, generated is that customers who have recently invested in computer hardware are "ripe" for peripherals. This suggests a particular target group as well as copy ("no new computer system is complete without the best speakers . . . ").

Knowledge management draws on information technology, economics, organization behavior, human resource management, and marketing. Information technology underlies the data warehousing issues that are crucial for knowledge management. While we are not aware of formal economic analyses of knowledge management, Davenport and Prusak (1998) argue that the firm faces both an internal and external market for knowledge. There are buyers, sellers, and prices. Organizational behavior scholars have studied knowledge management under the label "organizational learning" (e.g., Argote 1999), focusing on how organizations learn, how they forget, how they remember, and how information is shared. Human resource management views knowledge management as a human capital issue, and is concerned with how to provide the skills for employees to learn and share their learning (Tapp 2002, p. 110).

Marketers have touched upon knowledge management in their study of "marketing orientation." In fact, Kohli and Jaworski (1990) define marketing orientation as the generation, dissemination, and utilization of information related to customer needs. This is very close to our definition of knowledge management.

3.4.2 Does Effective Knowledge Management Enhance Performance?

As just mentioned, the concept of marketing orientation is similar to knowledge management. Therefore, the evidence of a positive relationship between marketing orientation and firm performance (Jaworski and Kohli 1993; Moorman 1995; Moorman and Rust 1999) suggests knowledge management can pay off. The caveat, however, is that these studies focused on the general collection and utilization of customer information, and not on knowledge gained through database marketing.

Some research connects knowledge management with successful CRM. Chaston et al. (2003) surveyed 223 UK accounting firms. They measured knowledge management in terms of orientation toward acquiring knowledge from external sources, exploiting new knowledge, documenting carefully, making information available to all employees, and improving employee skills. They thus covered the create–codify–transfer–use dimensions of knowledge management (DiBella et al. 1996). They measured CRM orientation in terms of maintaining close contact with clients, regularly meeting with clients,

gaining knowledge through building strong relationships, tailoring service toward clients, and gaining revenue mainly through repeat sales. The authors found a strong correlation between knowledge management and CRM. Firms that were above average in CRM orientation were above average in knowledge management. They were also above average in sales growth.

Croteau and Li (2003) surveyed 57 Canadian firms with greater than 250 employees, representing a variety of industries. Knowledge management was measured using scales such as "able to provide fast decision-making due to customer knowledge availability". The impact of CRM efforts was measured using company self-reported satisfaction with retention rates, loyalty, market share gains, innovative and convenient products. In a multi-equation structural model, knowledge management was found to be a significant predictor of CRM impact.

These studies suggest a connection between knowledge management and CRM. They help justify the view that data and CRM go hand-in-hand (O'Neill 2001; Swift 2001). However, they do not distinguish the type of knowledge being managed, i.e., whether it be data, information, or knowledge in Davenport and Prusak's framework. Further research is needed to sharpen our understanding of exactly what types of knowledge are most important for enhancing CRM efforts.

One potential benefit of knowledge management is that it provides continuity as employees move to other firms. In fact, employee turnover was arguably the prime stimulus for the emergence of knowledge management as a field (see Tapp 2002). Knowledge management can be viewed as a way of capturing the knowledge of current employees so if they physically leave, their wisdom still remains. However, studies are needed to investigate whether in fact this benefit materializes in the real world.

3.4.3 Creating Knowledge

The first step in the knowledge management process is creating knowledge, which can be categorized as internal versus external, and undirected versus directed.

Internal knowledge creation takes place as part of the process of analyzing data and making decisions (Davenport et al. 2001a). Gillett (1999, fig. 4) reinforces this point. Many lessons are learned each time a modeler builds a predictive model and a manager uses it to target. The result is a repertoire of experiences that creates knowledge about what works and doesn't work.

Knowledge can also be "created" externally, most obviously by hiring another firm's employees ("grafting" in the words of Huber 1991). At the micro level, grafting may be of individual employees (e.g., hiring the CRM manager from a rival company); at the macro level, grafting can occur by purchasing an entire company. For example, DoubleClick gained much knowledge of the list industry by purchasing Abacus.

Directed knowledge creation takes place when a company proactively focuses on a particular topic. For example, a service company may focus on customer satisfaction (DiBella et al. 1996). Davenport et al. (2001b) say that successful companies focus on learning about top customers, or customers most likely to provide future earnings. They cite FedEx and US West as examples. P&G focuses on understanding Wal-Mart. Microsoft began focusing on CIO's when it became clear that business customers were a prime source of future growth.

Undirected knowledge creation takes place as a "spin-off" benefit of the analysis/decision process. For example, a manager may want to design a frequency reward program. Upon tapping the firm's knowledge management system, the manager realizes that not much is known about the topic. The manager therefore conducts his or her own research, surveying other firms' programs and conducting survey research. Another form of undirected knowledge creation takes place as current employees mentor new employees. The new employee questions why something is done a certain way, and that forces the current employee to crystallize his or her knowledge.

Experiments are an effective way to create knowledge. They allow companies to test fundamental assumptions as opposed to marginal improvements (DiBella et al. 1996). The prevalence of experimentation in database marketing makes it particularly prone to this type of learning.

A final issue in knowledge creation is that it requires managers to have the *wherewithal* and *ability* to interpret data and information. For example, the most immediate use of a predictive model might be the prioritized list of customers. However, knowledge is created when the model-builder and the marketing manager sit down and review the important variables in the predictive model. Therefore, knowledge creation requires time, training, and often group work (Gillett 1999). Davenport et al. (2001a) report that most companies are not succeeding in turning data into knowledge, and are neglecting "the human realm of analyzing and interpreting data and then acting on the insights" (p. 118). They cite their own studies as well as two prime examples, supermarket scanner data in the grocery chain industry, and Web transaction data. The data certainly are being created, but managers simply do not have the time to generate information from the data, much less knowledge.

One response to this is to make more knowledge creation activities directed, or to require managers to record what they learned. Firms need to foster a work environment that allows time for reflection. This is a challenge for today's downsized companies.

3.4.4 Codifying Knowledge

Knowledge needs to be stored for two reasons. First, it enables more efficient transfer to other employees. Second, knowledge not recorded can be forgotten. Organization forgetting is a significant phenomenon (Argote 1999). It

happens through employee turnover and through lack of repetition (e.g., "we once ran a campaign like this, but that was several years ago, and frankly, I forgot what happened").

The key issues in codifying knowledge are what to store and how to store it. Knowledge should be stored to the extent that is useful *and* necessary to sustain the firm's strategy. Obviously, companies whose strategy is to develop customer relationships must store all data, information, and knowledge related to customer relationships. However, there still may be a surfeit of knowledge to store and decisions need to be made as to what knowledge will truly be useful in the future.

The details of how to store the knowledge are the domain of information technology. Although expensive, it is *relatively* straightforward to compile and record customer data and information; that is what CRM information systems are designed to do. Insights, i.e., true knowledge, can be tougher to codify. This can be done by requiring key employees to write white papers. Expert systems are another possibility, as are knowledge maps (Davenport and Prusak 1998; Vail 1999).

Davenport et al. (2001b) emphasize the need to store both quantitative and qualitative data, and cite P&G as a company that tries to do both through either face-to-face meetings or "discussion databases" (p. 65). Sometimes, however, it will be very difficult to codify what is learned. Harley-Davidson and the Jeep division of DaimlerChrysler rely on ethnographic research to understand their customers. Consultants conduct the research, and communicate what they learn through discussions with managers, but this does not formally codify it.

Another issue is whether there should be one knowledge repository (the "enterprise warehouse") or several. Assuming cost is not an issue, the obvious preference is for one repository. This facilitates cross-referencing and equal access. However, perhaps due to costs, Davenport et al. (2001b) report that most firms do not store all their knowledge in one place. They cite Dell, who at the time of their paper, had not integrated their online data with data from the calling center.

Finally, knowledge is not only of the facts, but also of processes. It is perhaps even more important to codify processes. Davenport et al. (2001b) discuss Kraft's "3-Step Category Builder," a process for analyzing a product category and deciding how it can be grown.

3.4.5 Transferring Knowledge

There can be both formal and informal mechanisms to transfer knowledge to the appropriate people. The most common formal mechanism, especially for transferring data and information, is to train managers to access customer information housed in the data warehouse. Information also can be

transferred automatically, e.g., a customer profile can appear on the screen when a catalog company representative is talking with the customer. Other formal forms of knowledge transfer are through in-house seminars and white papers.

Informal knowledge sharing is perhaps the most difficult to orchestrate. It involves installing a culture and a physical environment to facilitate conversation. For example, it would be a good idea to locate the model builders adjacent to the managers who make decisions based on the models, and to encourage mentoring whereby senior managers transfer their experiential knowledge to junior managers.

Huber (1991) summarizes the vast research from the organization behavior literature that describes the circumstances under which knowledge sharing will occur. Informant A may have to knowledge to transfer to Recipient B. Transfer is more likely if A views the information as relevant for B, A's costs of sharing are low, A's workload is low, A has incentives for sharing, and B has high power/status in the organization.

3.4.6 Using Knowledge

Using knowledge is probably the most critical component of the knowledge management system. What good is the knowledge if it's never used? If the first three steps – creation, codification, and transference – have been achieved correctly, usage should follow, because this means that insightful, relevant knowledge has been created, it's available in "the system", and it's easy for the manager to tap this knowledge base.

Consumer behavior researchers have established that individuals will use information to the extent that it is accessible and diagnostic (Feldman et al. 1988). Accessibility follows to the extent that the knowledge information system makes knowledge easily available, i.e., that knowledge transference is effective. Diagnosticity follows to the extent that the information is useful. Designers of knowledge management systems need to make sure that both these conditions hold. For example, in a study of a US health insurance company, Payton and Zahay (2003) found that "ease of use", i.e., accessibility, and "quality" of the data, i.e., diagnosticity, were the two key factors determining employee use of the corporate data warehouse. Top management support and training were also important factors.

The diagnosticity of information is difficult to judge, because it is subjective to establish whether the knowledge is truly useful. For example, a company's knowledge management system may contain information that says recent purchasers of computers are prime candidates for cross-selling external speakers. However, a new manager may believe these insights are not useful in today's marketing environment. The new manager may be of the opinion that it doesn't make sense to cross-sell external speakers to someone who has

recently bought a computer system, because either the speakers would have been included in the purchase or if the customer wanted the speakers, he or she would have bought them then and there.

The difficulty is that the new manager might indeed be correct and the knowledge may not apply to today's marketing environment. It doesn't make sense to require the new manager to use the information. Perhaps the best tack is to make the information easily accessible, but allowing the new manager to make judgments as to whether the information is useful.

3.4.7 Designing a Knowledge Management System

Figure 3.3 suggests a process for designing a knowledge management system. The first step is to make sure the pre-requisites (the company's database marketing strategy, information technology infrastructure, skills, and organizational culture) are in place, (Davenport et al. 2001a). The strategy guides which knowledge gets created and stored. The information technology structure is essential because it defines the capability for housing the customer data as well as other forms of codified knowledge. Croteau and Li (2003), in their study of Canadian firms, found that technological "readiness" was an important precursor of successful knowledge management efforts. Employees need to have the skills to create, codify, transfer, and use knowledge. There needs to be an organizational culture that values knowledge.

The next phase is to design the core of the system: the content, creation activities, codification procedures, transference techniques, and usage mechanisms. Content decisions involve the topics and depth of knowledge that will be part of the system. Topics follow from the strategy and includes aspects of customer behavior, previous campaigns, strategies, etc. An important decision needs to be made regarding depth of knowledge – is this an information system or a knowledge system?

The various means of creating knowledge described in Sect. 3.4.3 need to be reviewed and prioritized. For example, how much will the knowledge management system rely on grafting? How will these activities be formalized? If there is to be a large emphasis on undirected proactive research, do managers have access to the tools they need to conduct that research? For example, if

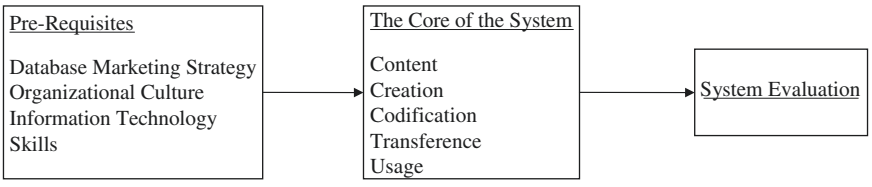

Fig. 3.3 Designing a knowledge management system.

a manager wants to learn about what types of customer tier programs work, does he or she have access to the customer data to conduct the investigation? Does he or she have access to the library resources one needs to learn vicariously about what other companies do and what academic researchers have learned?

Decisions need to be made on codification (Sect. 3.4.4). What will be required in terms of white papers and internal seminars? Is all the relevant information being captured and put into a usable computer format? A key decision here is on centralized versus decentralized repositories. As discussed earlier, centralized is attractive for cross-referencing and access, but may not be practical.

The issues discussed in Sects. 3.4.5 and 3.4.6 need to be addressed in order to make sure the knowledge will be transferred to those who need it, and in turn that the recipients will indeed use the knowledge. For example, decisions need be made that will ensure the system is *used* effectively. This includes the fine line between encouraging use and requiring it. On one extreme, the company can include a requirement that all proposals for marketing activities refer if possible to knowledge gleaned from the knowledge management system. On the other extreme, there can be no requirements.

A final step is to set up a mechanism for evaluating the system. Researchers have conducted cross-sectional studies showing that companies with more sophisticated knowledge management systems achieve better customer relationship outcomes (e.g., Chaston et al. 2003). However, to assess the value of the knowledge management system for a particular firm, a before–after type analysis is called for. This is difficult to execute because the knowledge management system's value would appear mostly in the long-term. One might find 2 years after implementing a knowledge management system that retention and loyalty have decreased. However, these indicators might have decreased even more if it weren't for the system. In some cases, competitive data might be available to serve as a cross-sectional benchmark.

Sharp (2003) describes one company's innovative approach to evaluating its knowledge management investment. The company was Shell International Exploration and Oil (SIEO). SIEO invested $6 million in a knowledge management system with a focus on enhancing knowledge transfer. SIEO measured ROI for this investment first by surveying disseminators of knowledge as to what types of questions were being asked. This provided them with a frequency distribution across all types of questions. SIEO then went to the users (engineers) and asked them to put a dollar figure on how much the information they received was worth for particular types of questions. These numbers were multiplied by the distribution of questionnaire frequency to determine ROI. SIEO calculated an ROI of 50, meaning that the $6 million investment had generated $300 million in financial benefit over a 3-year horizon.

The obvious concern with this methodology is whether users can self-report the value of the answers they receive. They may have a cognitive dissonance

bias that inflates the value ("I decided to use this system; therefore, it must be valuable"). In addition, there is no benchmark. What would have happened if the knowledge management system had not been available? However, to its credit, SIEO made a reasonable effort to determine what they had gained from their investment.

3.4.8 Issues and Challenges

Knowledge management is clearly a crucial organizational process for implementing database marketing. The organizational learning literature provides a strong academic tradition in this area. But sorely needed are marketing-oriented studies on all aspects of knowledge creation, codification, transference, and usage, in a database marketing/CRM context. Among some of the key issues are:

- Which knowledge creation activities are most important?
- How important is *knowledge* management rather than *information* management? Is it worthwhile to generate, store, and disseminate insights that go beyond the narrow information typically available from compilations of customer data?
- How do we ensure that potential users will actually use the knowledge captured by the system (see Huber 1991)?
- How can companies evaluate their investment in a technology that is so broad in scope and so long-term in presumed effect?
- What in fact are the typical ROI's earned by investments in knowledge management systems, and what determines those ROI's?
- How important is organizational culture in the creation and use of knowledge? Perhaps cultures that emphasize teamwork and collectivism are more conducive to knowledge management effectiveness than cultures that emphasize entrepreneurship (see Deshpandé et al. 1993).
- Can knowledge management be a source of competitive advantage? It would appear that large-scale knowledge systems are imperfectly mobile, although there can be some leakage if managers switch firms and bring insights along with them.

3.5 Compensation and Incentives

Managers and employees in all organizations respond to incentives. For example, if the company needs to increase its acquisition rate, employees should be rewarded based on how many customers they acquire. Since database marketing allows managers to measure performance more accurately, developing appropriate incentives becomes even more relevant for successful

implementation of database marketing. We will review some theoretical work in this area, and then discuss some empirical findings.

3.5.1 Theory

Hauser et al. (1994; "HSW") conduct an economic analysis to investigate how companies should use compensation incentives to reward employee-induced increases in customer satisfaction (long-term) versus employee-created immediate sales (short-term). In database marketing terms, this is the basic trade-off between acquisition and retention. The model uses a principal-agent framework where employees (agents) are not certain what will be the results of their efforts, and company management (principal) cannot perfectly observe the amount of employees' efforts. Companies compete on price and their compensation reward structure.

HSW construct a two-period model for two competing firms. Demand depends on prices and customer perceptions of quality. Employees can expend efforts to increase perceived quality, through efforts "a" that increase immediate first period sales, and efforts "b" that increase satisfaction in the first period and increase sales in the second period. The total employee effort is $a + b$. The firm cannot observe a or b directly, although first-period sales and satisfaction are indirect measures of these efforts. Employees cannot directly observe the impact of their efforts either, although they know what efforts they expended.

The focal firm and the competitor choose prices and compensation systems to maximize profits. The solution procedure assumes that the firms are Stackelberg leaders with respect to employees in that employees optimize efforts based on a set of prices and reward functions. Firms find optimal price based on a given reward function, and then find the optimal reward function, taking into account competitor as well as employee reactions. HSW show that the derived compensation (w_1 in period 1; w_2 in period 2) are linear functions of sales (q) and observed satisfaction (s):

$$w_1 = \alpha_1 + \beta_1 q_1 + \eta s \tag{3.1a}$$

$$w_2 = \alpha_2 + \beta_2 q_2 \tag{3.1b}$$

A key finding is that firms are better off rewarding employee-induced improvements in customer satisfaction ($\eta > 0$) as well as sales levels, no matter what its competitor does. The result is quite sensible. Even though the firm cannot observe employee efforts to create satisfaction, the firm knows that satisfaction is created through these efforts and satisfaction increases second-period sales. If customer satisfaction is not rewarded, the firm loses out on second period sales. HSW provide insights on how various factors influence the amount to which customer satisfaction should be rewarded:

- The firm should put more emphasis on rewarding satisfaction if employees are short-term oriented. If customers are not naturally long-term oriented, they need incentives to make them so.
- If satisfaction can be measured with greater precision, more emphasis should be placed on rewarding it. This makes sense in that if customer satisfaction is measured perfectly, the firm has a better measure of employee efforts.
- Satisfaction efforts should be rewarded more if they are targeted at customers who have low switching costs, i.e., are likely to churn without those efforts. This makes sense because these customers will churn unless they are satisfied.
- If a firm's baseline perceived quality level is larger, it should put more emphasis on rewarding satisfaction.[2] This is very important because it says that the gains from rewarding customer satisfaction are greater among top tier companies. This might be because the high quality firm can already count on short-term sales so can invest more in creating the satisfaction that will guarantee long-term sales.

HSW provide insightful results that generally support compensation schemes that reward employees who can create satisfied customers. One issue for further research is whether rewarding customer satisfaction increases total industry profits. Rewarding customer satisfaction could set off a "customer-satisfaction war" where firms compete to acquire customers because once these customers are acquired, they are locked in via customer satisfaction incentives.

Another area of reward compensation is for the statisticians who build predictive models. As has been repeatedly shown in this book, database marketing can have a direct and *demonstrable* impact on profits through better targeting. It might therefore make sense to compensate model-builders on the "lift" they generate from their models. A final area is how to compensate employees for knowledge management, especially creation, codification, and transference. It seems that incentives should especially encourage these activities, since these do not have immediate pay-offs.

3.5.2 Empirical Findings

There are systematic and anecdotal empirical studies that are building a case that compensation is a key ingredient to the success of database marketing or CRM efforts.

Reinartz et al. (2004) found evidence that compensating employees according to their success in cultivating relationships with high value cus-

[2] This result is stated and proven in a working paper version of the paper (Hauser et al. 1992).

tomers plays a role in improving company performance. The authors surveyed 211 managers and CRM experts in Austria, Germany, and Switzerland. They measured various aspects of CRM implementation along with market-based performance measures including customer satisfaction, retention, company image, and customer benefits. The authors found for example that "CRM-Compatible Organizational Alignment" enhanced company acquisition efforts in improving market performance. CRM-Compatible Organizational Alignment was a 4-scale item that included incentives to deliver the appropriate service to customers based on customer tier, i.e., "rewarding employees for building and deepening relationships with high value customers." Other items in the scale were less incentive specific (training, organized to respond optimally to different customer groups, etc.) so it isn't clear exactly what the incentive contribution is. However, incentives are definitely part of the picture.

Peppers and Rogers (1997, pp. 79–98) describe an interesting case involving the telecommunications firm MCI. Facing customer churn problems in the early 1990s, MCI instituted a Customer First retention program. The program focused on the top 5% of customers who generated 40% of revenues. MCI assigned customer managers to portfolios of these customers, and rewarded the customer managers based on retention-oriented metrics. According to Peppers and Rogers, the program was beginning to succeed. However, MCI's marketing group, which was compensated based on product-sales statistics, did not like this program because it took away their prime prospects for cross-selling and put them in the hands of the Sales and Services group.

Day and Van den Bulte (2002) surveyed 345 senior marketing, sales, and MIS executives in US companies. They identified potential factors related to CRM success, one of which they labeled "Configuration." Configuration involved "organization structures, incentives, and controls." Configuration turned out to be the most important factor underlying "customer relationship capability" (CRC), and CRC was strongly related to customer retention, sales growth, and profit. This provides further support that compensation incentives are important.[3]

Day (2003) reports that Siebel Systems ties 50% of management incentive compensation to customer satisfaction, and 25% of salesperson compensation to customer satisfaction. To link the employee efforts more directly to their impact on satisfaction, Siebel pays the bonus 1 year after the signing of a contract. Day also reports that Capital One allows a customer representative leeway in the packages he or she can offer a would-be churner to induce the churner to stay with Capital One. The representative is compensated based on his or her ability to retain the customer with as profitable a package as possible. In this way, Capital One rewards employees based on their ability to improve profitable retention.

[3] Note however that Configuration was measured on a single scale that did not refer directly to compensation.

Finally, Srinivasan and Moorman (2002) study the drivers of online retailer performance. They relate organization factors to customer-related investments, which in turn they relate to customer satisfaction, which in turn they relate to performance. They verify the satisfaction-performance relationship by linking BizRate.com customer ratings to executive-reported company cash flow. The most important customer-related investment is found to be expenditures on customer information systems. Having a customer-focused reward system was the second-most important determinant of information system expenditures (marketing/technology interactions were the most important). The implication is that setting up a CRM-related incentive system enhances performance by motivating the company to make the right early investments in customer information technology that in turn pay off in higher customer satisfaction and better company performance. Note this finding also reinforces the Star model (Fig. 3.1), which points out that the elements of organizational design (in this case compensation and knowledge management) all highly related.

3.5.3 Summary

There is good evidence that compensation incentive systems should and do play a role in successful implementation of database marketing. Most of this work is on the incentives–customer satisfaction–performance link. Hauser et al. (1994) provide the theoretical link, while Reinartz et al. (2004), Day and Van den Bulte (2002), and Srinivasan and Moorman (2002) provide the empirical links.

While these results are promising, one important topic for future work is coordinating the compensation schemes of various groups within the company. Hauser et al. (1994) propose that more incentives should relate most directly to the fruits of an employee's effort. For example, if employees focus on reducing churn, they should be compensated based on churn rate. Peppers and Rogers' (1997) MCI case, however, cites problems when one group being compensated based on acquisition and one on retention. In the MCI case, one group increased retention by "fencing in" the most profitable customers, essentially taking them away from the other group that wanted to sell these customers more products. Both groups were responding to the compensation incentive structure, but they were in conflict.

3.6 People

3.6.1 Providing Appropriate Support

Once the firm's strategy, structure, knowledge management process, and compensation are in place, employees need training and support. Training is

especially important for knowledge management, particularly with regard to accessing and using the system (Payton and Zahay 2003). It is also important with regard to customer versus product management – these are two different mindsets. Finally, the organizational culture must reinforce what the rest of the organizational design is trying to accomplish. For example, using the culture types enunciated by Deshpandé et al. (1993), a "Clan" culture, which is characterized by interpersonal cohesion, teamwork, and mentoring, might be appropriate for a firm that wanted to put strong emphasis on the transference component of knowledge management. A "Market" culture, which emphasizes goal achievement and competitiveness, might be more appropriate for a firm that wanted to emphasize a highly results-oriented customer management system.

Another aspect of supporting people is the commitment of senior managers. Senior managers can articulate their support for the organizational design and reward individuals beyond the formal compensation plan. In addition, senior managers can contribute directly. For example, Senn (2006) reports a "Top Executive Relationship Process" at Siemens Information and Communications, in which top executives meet with Siemens' customers' top management on a regular, planned basis.

3.6.2 Intra-Firm Coordination

No matter what organization design emerges from the Star model (Fig. 3.1), it will only be successful to the extent that people work well with each other, i.e., they coordinate. Three potential sources of coordination problems include conflict, poor communication, and lack of education. Following is a list of different personnel who need to coordinate, and potential issues that may hinder coordination:

Groups	**Coordination issue**
Modelers and managers	Communication, education
Acquirers and retainers	Conflict
Customer managers and product managers	Conflict
Channel managers	Communication
Modelers and IT	Communication, education
Marketing managers and IT	Communication, education
Marketing and financial managers	Conflict
Database marketers and senior management	Communication, education

We discuss these issues in more depth in the following two sections.

3.6.2.1 Coordination Within the Marketing Function

Modelers and Managers: Gillett (1999) points out that the model builders and the managers who use modeling results need to coordinate effectively in order

for database marketing to be successful. According to Gillett, this entails understanding each other's needs, managing expectations, and understanding each other's capabilities. These are largely communication and education issues. The model builder needs to be able to translate a business problem, e.g., how to cross-sell effectively, into a statistical analysis that solves the problem. The manager needs to have some idea what models can and cannot do. For example, predictive modeling is very good at prioritizing customers in terms of responsiveness, but not as good at drawing the line in terms of who should or should not be targeted. Managers also need to have realistic expectations on how fast models can be built and how accurate they can be. With today's emphasis on downsized staffing, it is very easy for managers to make unrealistic demands on model-builders. It is difficult for a manager to fathom why it takes a week to produce a predictive model, but these expectations need to be set appropriately.

Gillett (1999) recommends that data-mining should be a team effort, comprised of an IT specialist (for the data), a statistician (to do the data mining), and a manager (to make sure the effort fulfills a business need). The benefits of team play are (1) a result that's more likely to improve business performance, and (2) a set of insights that's more likely to increase the company's knowledge base long-term.

Acquirers and Retainers: One of the hallmarks of the customer-centric organization is separate management of acquisition and retention (Sect. 3.3.5). However, these functions have potentially conflicting mindsets. Acquirers are volume and short-term oriented, since their task is easily quantified. Retainers are customer relationship and long-term oriented. Problems occur when the acquirers attract customers who are difficult to retain. For example, a telecom company may find it easier to attract young users, but these are precisely the customers who innately are more difficult to retain. On the other hand, the customers who are easiest to retain might be the most difficult to acquire. For example, if older people are more naturally brand loyal, they are attractive for the retainers, but difficult for the acquirers to attract.

Customer managers and product managers: The conflict here is that customer managers may demand products that product managers can't produce. For example, the customer manager for teenagers may ask for a line of personal computers with high styling and large disk capacity. That sounds fine, but the product manager for personal computers may also be besieged with requests for other product features from the business customer manager, the educational institution customer manager, and the family customer manager.

Channel managers: Marketing can be organized by channel, and this raises coordination issues (Botwinik 2001). One problem is that in many companies, the online channel initially was set up as a separate profit center as a way to establish a company's web presence. Now companies have that presence, and they need to coordinate among the channels. Whereas originally there may

have a conflict between channel managers in that they were seen as competing for the same customer, now the issue is more on communicating effectively so that the overall customer needs are addressed. As a simple example, a direct sales representative needs to have the customer's online purchase records easily on hand.

Different marketing functional managers: Botwinik (2001) argues that various marketing functions, e.g., marketing, sales, and service, view their domains as distinct and rarely coordinate. However, the customer views his or her relationship with the firm in terms of the overall experience. For example, the customer may have problems with Internet response time. The customer calls customer service, who may fix the immediate problem, but the real problem is that the customer has the wrong computer. Marketing can help identify that need. Then sales can help define the specs for the replacement computer. The three groups need to be communicating with each other so each of them can route customers seamlessly to the appropriate department.

3.6.2.2 Coordinating Outside the Marketing Function

Modelers and IT: While modelers and IT people are both technically oriented, it is not necessarily the case that these two groups communicate easily. Data managers are responsible for organizing so many different data entities that they have a hard time sitting down with an applied model-builder and helping to stipulate the database for a predictive modeling project. On the other hand, modelers may have little taste for defining the variables in the database – they're more interested in seeing what predictive power they can get for a given set of variables, and what statistical techniques work best. Put simply, the data managers need to take a course in statistics, and the data miners need to take a course in data management.

Marketing Managers and IT: IT departments typically handle data for the entire company, including finance and operations as well as marketing. As a result, the marketing department can wait an inordinate amount of time before the database it needs is assembled. The Directors of IT, Marketing, Finance, Operations, and Human Resources need to coordinate and set priorities. Coordination problems also occur when marketing managers want to access the data warehouse through queries, and can't easily translate their needs into a query the system can handle. Cunningham et al. (2006) describe an evaluation tool that can used to measure how well the system satisfies management needs. This should enhance coordination between IT and managers.

Marketing Managers and Financial Managers: This is an arena of potential conflict. The conflict stems from a classic tradeoff between Type I and Type II error (see Chapter 10). Type I error is not contacting a customer when contact would improve profits. Type II error is contacting a customer although this

doesn't improve profits. The problem is that it is difficult to minimize both errors – there is an inherent conflict.

The problem is that marketing, i.e., customer managers, talk about investing in customers and producing long-term results. They feel that Type I is the worse error – nothing is worse than not increasing customer value when the opportunity is there. Financial managers however are more naturally concerned with Type II errors. The worse thing is to waste money on customers who are not worth it. Simply understanding each other's error priorities would go a long way for helping to resolve conflicts, but it appears that someone is needed to set the tone for which error is more important.

Database marketers and senior management: The issue here is one of communication and education, primarily on the part of senior management. Senior management needs to have a clear understanding of what database marketing can do, and database marketing needs to avoid over-selling what it can do. This is similar to the miscommunications that can occur between data miners and marketing managers, but on a more strategic scale.