CHAPTER 5: DISCUSSION

Below we discuss five major findings of our investigation into CRM technology and organization at the three mobile telecom companies.

5.1 Selective Integration among CRM Technology Elements

The research results show that *a complete integration among CRM technology elements may not be necessary, and the level of data integration should be selective.* In the mature market of the Taiwan mobile telecom industry, the use of CRM is essential for sustaining the market competitiveness of the three companies studied. Each of the three companies has integrated the CRM technology elements. Prior research indicates that building a comprehensive, centralized, and integrated repository of all customer data from different sources, in order to create a single view of customers when implementing CRM, should be a priority. However, the three cases indicate that a thorough integration of all the customer data is not necessary because of the high cost of maintaining highly-integrated system, and alternative ways of constructing CRM operations. The necessary yet selective integration among CRM technology elements noted from the research results is depicted in Table 5-1.

Table 5-1. Integration among CRM Technology Elements

Necessary Integration	
C ←→ E	• Customer transaction data should be integrated
E ←→ I	• Customer basic data, call records, billing behavior, and contact behavior • Value chain processes data: marketing, product research and development, and customer services improvement
C ←→ I	• Contact behavior data
Selective Integration	
C ←→ E	• The non-transactional customer interaction data from all front-end interaction channels are not completely stored and integrated in the CRM system
E ←→ I	• Only the data needed for analysis is fed into the DW
C ←→ I	

Note: C: Communicational CRM, E: Execution CRM, I: Intelligent CRM

With the communicational CRM, customer transaction data should be integrated to provide real-time support to front-end interaction channels. The three companies studied all considered this integration a priority and have carried it out. In Company A, all the customer transaction data of mobile services, such as applying for a new mobile phone number, modifying the value-added service, and changing the address, is stored in a transaction database accessible to all front-end interaction channels. The data is real time updated in order to serve customers of all channels.

With the execution CRM, four types of data are fed into the data warehouse – customer basic data, call record, billing record, and contact record. Call records facilitate discovery of patterns in the calling behavior of customers. Billing behavior includes the amount of money of the bill, how customers pay the bill, and the credit level of customers. Contact behavior data includes all the data related to interacting with customers, including applying for a new value-added service through the call center, selling products to customers through outbound calls, customer responses to marketing campaigns, and complaints or inquiries from customers.

However, non-transactional customer interaction data, such as the reason for a customer's inbound call, the number of times a customer calls, customer inquiries, complaints, and suggestions, is not completely integrated with other CRM systems. Only when the call center interaction involves the modification to transaction data, such as applying for a new value-added service, will the shops detect the modification of the transaction data. The web click stream generated at the e-counter and the telephone keypad behavior during the interaction with call center is not stored either. Company A doesn't completely capture and integrate non-transactional interaction data because the different kinds of interaction data, with their different data formats, are difficult to completely capture and integrate. Moreover, the benefits of integrating such data are uncertain. When providing services to customers, complete transaction data support is more important than non-transactional interaction data. Therefore, Company A emphasizes capturing and analyzing the interaction records from call center to make improvements on service quality.

With the intelligence CRM, the three telecom companies emphasized that only the data needed for analysis is fed into the DW. The data warehouse needs not to integrate all the operational data sources and contain all the historical data relevant to customers. There are numerous operational data sources, each of them accumulating huge amounts of historical data. Feeding all that data into the DW would waste the resources of DW and make the maintenance of DW more difficult.

Company B only retains the call record for a specific time period, and call record data it considers important, such as average calling time each month, in the DW. Data from important transactions, such as applying for a new service, must be fed into the DW, but data on certain detailed behaviors of service use, such as the Internet access behavior of customers by GPRS, will not be stored in the DW, because the marketing department does not analyze this kind of data. Continuously planning and modifying the data sources of the DW based on user analysis requirements is more critical than feeding all the data into the DW.

This finding is consistent with the view of Davenport, Harris, and Kohli (2001). Davenport et al. (2001) argued that customer data should not all be stored in one physically or virtually integrated repository because it is impractical. For example, it is difficult to integrate the many diverse formats of customer information, and to maintain such a complex repository. They suggest that firms integrate a given data type, such as transaction data, as much as possible, and ensure that each customer has a unique identifier so that data about that customer can be easily located.

5.2 Selective Accessibility to Customer Information

One of the reasons for integration is to build full accessibility for users to serve customers. This assumes that the higher the employee accessibility to customer information, the greater will be the integration of CRM technology elements. If all employees can access all customer-related data, they will understand customers and serve them better. However, in the cases studied, the privacy issues and customer data protection is a major concern. Therefore, not all the customer data is accessible to all employees. They are only permitted to access customer data which is needed for their business operations.

For instance, marketing people in Company C cannot directly access raw data of customers, including detailed call records, customer phone numbers, and customer addresses, because of privacy concerns. Instead, when a user needs to perform data analysis, the user makes a request, and IT department will generate the results of the analysis and return them to the user. While Company A only releases data from the DW to authorized employees, each department has its own employees who are authorized to directly access the DW, or help other employees to obtain the results of analysis, or request the IT department to perform an analysis.

5.3 Creating Better Customer Information Circulation through Organizational Mechanisms

The key to integration among CRM technology elements is enabling smooth information flow among communicational, execution, and intelligent CRM. Based on the research results, we founded that *a certain level of critical information integration can be achieved by organizational mechanisms. Better information integration doesn't necessarily rely on IT, but really depends on organizational customer-oriented thinking. CRM information integration cannot be achieved only by means of IT.*

For example, the back-end departments of Company B obtain customer information from the call center through organizational mechanisms, such as daily reports fed back from the call center, or regular cross-functional discussion of critical issues raised by the call center, to use the information from customers to improve value-generation processes. If there is no organizational thinking on sharing customer information or on cross-functional cooperation, there will be no link between front-line and internal operations.

5.4 Taking "Human Data" Seriously

The three companies studied all *emphasize the importance of human data*, or non-transactional customer information, such as requests, inquiries, suggestions, and complaints. For example, Company C conducts a focus group to contact customers and gather opinions from them when launching new products. Company A has a customer opinion processing system which records the customer opinions from internal or external channels, such as the call center, email, the headquarters' mailbox, and the DGT (Directorate General of Telecommunications). Customer

opinions will be distributed to appropriate departments and be handled within a specified time. Company A holds regular cross-departmental meetings to discuss critical issues raised by customers, and makes improvements to products and services based on customer opinion.

This finding has also been noted in other research. Stringfellow, Nie, and Bowen (2004) indicate that regarding CRM practices, many companies emphasize tracking customer transaction data while neglecting to understand the deep-seated needs of customers. Stringfellow et al. (2004) argue that this lack of insight into customer emotional needs is the reason why CRM rarely realizes its full potential. With this failing in mind, Davenport et al. (2001) stressed the importance of tacit "human knowledge" about customers.

5.5 When CRM Technology Components (Hard Infrastructure) Has Become a Commodity, Organizations Differentiate Themselves through Different Designs of Aligned Organizational Resources (Soft Infrastructure)

The mobile telecommunication service today is faced with a saturated market with full competition. After several years of merging and acquisition among six companies, only three companies remain, and they maintain an equal market share. The research results reveal that the three companies have all established a similar IT platform and mechanism to support customer relationship management strategies. They have all built call centers to serve their customers, and the call centers are linked well with back-office processes, with information well captured by the data warehouse. Furthermore, the three companies all have established their data warehouses for more than six years. They have used similar tools, such as OLAP and data mining, to do the analysis, and they have utilized the analysis results to support the value chain processes, such as marketing, product research and development, and customer service improvement. The integrated CRM technology platform has become an industry commodity, and everyone is capable of acquiring a similar platform with integrated communication, execution, and intelligence. However, the three companies are different in strategies of achieving benefits.

We observe that the three firms focus on developing different company assets, such as branding, service quality, and variable-rate plans to acquire and retain customers. As described in Table 5-2, Company A chose to leverage its enterprise resources, such as its more than twenty-year-old brand image, its large customer base with long-time relationships, and its big pool of enterprise human resources to attract and retain customers. Company B chose to focus on providing the best service quality and the most satisfied products to retain and attract customers. Company C, meanwhile, chose to differentiate itself with quick and trendy products and value-added services to attract young mobile users. The different strategies have affected their target customer segment, product strategies, and channel strategies (described in Table 5-2). Company A's target customer segment is popular market, and its product strategy is leveraging other telecom services to invent a variety of telecom service packages to attract all consumers. Regarding mobile phone products,

about 60% of their mobile phones are at a low price. The target customer segment of Company B is fashionable men and women. Its product strategy is the aggressive promotion of new rate plans which are designed according to customer requirements to acquire customers whose requirements are satisfied. About 60% of the mobile phones sold by Company B are at medium and high prices. Company C targets customers who are young and trendy. Its product strategy is getting ahead of competitors in developing various value-added services to enhance customer usage. About 60% of its mobile phone products are at a medium and low price. Regarding the channel strategy, company A leverages the enterprise resources which contain 27 branch offices and 278 service centers to sell all telecom products to provide customers one-stop shopping services. Company B in the past focused on operating direct shops and franchise stores. At present its channel strategy focuses on stable expansion of direct shops and strengthening the relationship with distributors. Company C and company B have similar number of direct shops and franchise stores. Company C strengthens its channel power by acquiring a mobile phone distributor to gain 260 retail stores of that company.

The different strategies have affected their organizational design in data analysis, data interpretation, decision-making, and customer-oriented thinking. Consequently, they have all achieved different goals in the market competition. Company A stays on top in subscribers, Company B has increased its revenue growth from the third rank to the top in three years and has reduced the customer churn rate from 4.75% to 2.82%, while Company C remains top on generating ARPU (Average Revenue Per User).

Table 5-2 Different Strategies for Achieving Market Performance

	Company A	Company B	Company C
Market Performance			
Mobile subscriber ranking (03/04/05)	1/1/1	2/2/3	3/3/2
Mobile subscriber growth rate (03→ 04, 04 → 05)	-0.92%, -4.02%	-14.55%, -13.04%	46.49%, -6.62%
Revenue ranking (03/04/05)	1/1/1	2/3/3	3/2/2
Revenue growth rate (03→ 04, 04 → 05)	6.80%, 2.47%	4.80%, 3.95%	81.63%, 3.94%
ARPU ranking (03/04/05)	1/2/3	3/3/2	2/1/1
Churn Rate (04, 05)	1.96%, 1.40%	4.75%, 2.82%	3.73%, 2.9%

CRM IT Infrastructure	• Call center • Billing/Customer transaction processing system • Data warehouse	• Call center • Billing/Customer management system /Campaign platform • Data warehouse	• Call center • Billing/Customer transaction processing system/Campaign management system • Data warehouse
Strategy Focus	Leveraging enterprise resources: large base of employees and customers, other telecom services	Caring for customer wholeheartedly: providing the most satisfied products and services to its customers	Quick and trendy products and value-added services to attract young mobile users
Customer Segment	Popular market	Fashionable men and women	Young and trendy
Product	• Leveraging other telecom services to invent a variety of telecom service packages • Mobile phone: about 60% is at a low price	• Aggressive rate plan according to customer requirements • Mobile phone: about 60% is at a medium and high price	• Take the lead in value-added services and continuously develop a diversity of value-added services • Mobile phone: about 60% is at a medium and low price
Channel	• 27 branch offices and 278 service centers • Cooperation with mobile phone distributor	• 30 direct shops and 351 franchise stores • Distributors • Stable expansion of direct shops • Strengthen the relationship with distributors	• 360 direct shops and franchise stores • Distributors • Acquired a mobile phone distributor and gained 260 retail stores of that company

Note: 1. All the market performance data contains the merged companies.

2. The "mobile subscriber growth rate" and "revenue growth rate" of Company C are very high in 2004

because Company C merged a telecom company this year

The lesson learned here: ***when CRM integrated technology becomes a commodity in the industry, how the organizations design the aligned organizational components is the key to differentiation***.

Company A has just privatized from a government-own monopoly. Several years ago, the head office learned to leverage the large customer base of the enterprise, including customers of telephone, ADSL, and other telecom services. They also learned to implement marketing campaigns through a strong team of market arms—the large base of employees. The head office has developed many packages to bind the mobile service with other telecom services and to use the philosophy "everybody attracts ten" to expand the market. The promotion results are part of the indexes of employee performance measurements. The head office is strong on integrating and analyzing information and providing clear directions to local execution offices. The local offices follow the direction with strong teamwork, and they work closely across the nation to share experience and to modify actions in implementing the marketing tasks.

Company B designed delicate and caring service flow for customers at all contact points. Customer problems that cannot be solved by front-end channels are recorded, assigned to appropriate back-end departments, and traced for follow-up processes. The company analyzes the customer waiting time in shops, the response time of inbound calls, the reasons for customer inbound calls, the questions that customers frequently ask, and customer satisfaction rate. According to these analysis results, Company B makes quick improvements on service quality and productivity. The customer opnions from internal and external channels, such as the call center, e-mail, the mailbox, and the Directorate General of Telecommunications (DGT), are gathered for improving the service processes or other value-generation processes. Regular cross-departmental meetings are held to discuss critical issues and make improvements. According to different degrees of customers' contribution to Company B, customers are served by different service representatives with different approaches. Immediate response and effective service are monitored and enhanced continuously.

Company C aims at young and heavy users. They provide various packages bundling trendy mobile phones with different pricing. They have built a quick and effective product line that enhances customer usage. Through analyzing the demands of different customers' lifestyles, Company C designs optional rate plans and value-added services to attract customers who care for value-added mobile functions and enjoy mobile socializing. Company C invests resources in heavy users to tighten the relationship. For medium users, the strategy is to enhance the amount of usage through marketing campaigns and to turn these customers into heavy users. As for low-usage customers, Company C only provides basic services. Business managers are experienced in sensing the market needs and sourcing and aligning with value-added providers. Employees of Company C are clear about the strategy and maintain a "young" atmosphere in the organization.

The three cases demonstrate that today the CRM system has become a competition-sustained infrastructure in the industry, and the soft infrastructure of CRM—organizational resources, such as structure, process, culture, and capability—are dynamically aligned with the company strategy to achieve optimal benefits (described in Table 5-3). Studies have suggested that when IT becomes a commodity, the business process should be continuously integrated and improved according to the organizational elements to create new value (Smith and Fingar, 2003). This continuous effort was also noted in the three cases presented here.

Table 5-3 The Organizational Resources are Aligned With the Company Strategy

	Company A	Company B	Company C
Strategy Focus	Leveraging enterprise resources: large base of employees and customers, other telecom services	Caring for customer wholeheartedly: providing the most satisfied products and services to its customers	Quick and trendy products and value-added services to attract young mobile users
Structure	• Head office consolidates resources, coordinates business groups, integrates and analyzes information, and provides directions • Local offices follow the direction and execute with strong teamwork	• Organizing employees around CRM processes: acquisition and retention division • The product division and retention division share responsibilities of product performance	• Customer satisfaction is a parameter of the annual bonus calculation - encouraging employees to become more customer-centric

Processes	• Customer acquisition:
	  ⋄ Leveraging other telecom services to invent a variety of telecom service packages
	  ⋄ Leveraging large base of enterprise employees to acquire new customers
	  ⋄ Leveraging large base of enterprise customers to do cross selling
	  ⋄ Leveraging enterprise channels to serve and acquire customers
		• Customer retention:
		  ⋄ Trying to manage the entire customer life cycle by taking care of customers according to the relationship status
		  ⋄ Immediate response and effective service are emphasized and enhanced continuously
		• Develop products according to customer requirements
			• Customer usage enhancement:
			  ⋄ Quick and effective product lines
			  ⋄ Aggressive and frequent marketing campaigns
			  ⋄ Cross-selling/Up-selling: promoting complementary or upgrading value-added services to customers
			• Investing the most resources in heavy users

Culture	• Centralized enterprise resources for generating cross market intelligence • Centralized enterprise resources to generate market intelligence and serve local requests of market analysis and product development • Market intelligence sharing and discussing across entire company • Frequent cross-functional communication in local offices • Local offices reflect customer problems and opinions; head office coordinates resources for immediate response	• Intelligence division is responsible for market intelligence generation: to understand customers based on their behavior and opinions • Frequent cross-functional market intelligence dissemination • Cross-functional coordination to make the improvement according to customer needs	• A "young" atmosphere • Market intelligence generation through focus group, customer survey, gathering research reports, customer analysis • Frequently cross-functional communication • Quick response

Capability	• Directive capability: head office
	• Operation capability: local office
	• Learning and market-orientation, integration, and analysis: head office, local office
		• Directive:
		  ⋄ Top management has a strong intention to become more customer-centric
		  ⋄ Enthusiastic and energetic CRM leaders
		• Operation: all employees focus on quality services
			• Advantageous in aligning with content providers
			• Experienced in DW analysis and implementing marketing campaigns