

CHAPTER 4: RESEARCH RESULTS

4.1 Proposition Analysis

The detailed description of the research results of the three cases may be found in Appendices A, B, and C. The summarized score of the research results is shown in Table 4-1.

With respect to the extent of the integration among the CRM technology elements, the three companies are similar. As the interview results summarized in Table 4-2 show, the three companies have integrated CRM technology elements to a proper degree. Although the integration is not perfect, it has already enabled smooth information flow between different CRM technology elements.

There is no great difference among the three companies in their alignment of the organizational elements of CRM. Each of them has achieved basic organizational alignment to exploit CRM technology (Table 4-3).

The value generated from the CRM infrastructure is also similar in these companies. Although each company is ranked differently across different aspects of the mobile services market, such as the market share of total mobile subscribers or the market share of total revenue of mobile service, after the merger with smaller telecom companies, each of the three companies garnered a roughly thirty percent share of the market. The competitive situation in the mobile telecom industry is relatively stable. Company C has the highest ARPU, while Company A has the lowest churn rate. Company B has substantially improved both its ARPU and churn rate. On the whole, with respect to the market performance, there is no great difference between these three companies.

Table 4-1 The Research Result of Three Companies

		Company A		Company B		Company C	
Integration among CRM Tech. Elements	Communicational \leftrightarrow Execution	4.07	4.04	4.23	4.17	3.93	3.98
	Execution \leftrightarrow Intelligent	4.17		4.3		4.1	
	Intelligent \leftrightarrow Communicational	3.88		3.98		3.9	
Alignment of Org. Elements of CRM	Structure	3.11	3.81	3.6	4.04	3.37	3.95
	Processes	4.02		4.1		4.13	
	Culture	4.21		4.32		4.23	
	Capability	3.9		4.15		4.05	
CRM Value - Market Performance	Market Share (Mobile subscribers)	4.2	4.1	3.8	4.05	3.9	4.08
	Market Share (Revenue of mobile service)	3.8		4		4	
	Customer contribution (ARPU)	3.9		4.3		4.5	
	Customer Retention (Churn rate)	4.5		4.1		3.9	

Table 4-2 Summary of Interview Results: Integration of CRM Technology Elements

	Company A	Company B	Company C
C ↔ E	<ul style="list-style-type: none"> ● Transaction data: well integrated ● Non-transaction customer interaction data: not fully captured and integrated (call center: well; shops: incomplete) ● Customer opinion processing system: operational dep. solves customer problems more efficiently ● Operational dep. utilizes customer feedback to make improvement ● Privacy issues: carefully assign accessibility to customer information 	<ul style="list-style-type: none"> ● Transaction data: well integrated ● Non-transaction customer interaction data: not fully captured and integrated (call center: well; shops: incomplete) ● Operational dep. utilizes customer feedback to make improvement through the org. or tech. mechanisms ● Integration between campaign platform and agent channel systems has been done but not very well ● Privacy issues: carefully assign accessibility to customer information 	<ul style="list-style-type: none"> ● Transaction data: well integrated ● Non-transaction customer interaction data: not fully captured and integrated ● Back-end dep. helps call center to solve customer problems ● Operational dep. utilizes customer feedback to make improvement ● Privacy issue: a major concern, strict access control
E ↔ I	<ul style="list-style-type: none"> ● DW data sources: call records, billing data, customer service, product data <ul style="list-style-type: none"> ◇ Only the data needed for analysis is fed into the DW ◇ Fulfilling the main analysis requirement, but still could be strengthen ● Processes supported by intelligent CRM: marketing, call center, product R & D ● DW supports reporting, queries, OLAP, DM, analysis models including customer 	<ul style="list-style-type: none"> ● DW data sources: customer basic data, call records, billing behavior, contact behavior <ul style="list-style-type: none"> ◇ Only the data needed for analysis is fed into the DW ◇ IT dep. plans the DW data sources base on marketing's analysis requirements ● Processes supported by intelligent CRM: marketing, product R & D, customer services improvement, revenue assurance ● DW supports reporting, queries, OLAP, DM, specific applications including campaign 	<ul style="list-style-type: none"> ● DW data sources: customer basic data, call records, billing data, call center interaction data <ul style="list-style-type: none"> ◇ Complete data sources of DW ● Processes supported by intelligent CRM: marketing, sales, services, product development ● DW supports reporting, queries, OLAP, DM, specific applications including campaign management, churn analysis, propensity

	<p>value evaluation, credit model, churn model, up-sell/ cross-sell, customer segmentation</p> <ul style="list-style-type: none"> Operational dep. can conduct the DW analysis by itself or by the help of IT dep. Privacy issues: data access control 	<p>management, churn analysis, propensity scoring, credit level analysis, customer segmentation (driven by business thinking)</p> <ul style="list-style-type: none"> Operational dep. can conduct the DW analysis by itself or by the help of IT dep. 	<p>scoring, customer segmentation, customer profile description.</p> <ul style="list-style-type: none"> Marketing dep. can't direct access and analyze the DW because of data security issues.
<p>I ↔ C</p>	<ul style="list-style-type: none"> Call center interaction data are fed into the DW (campaign responses data is less) Making use of Intelligent CRM for better customer interaction: not very well Intelligent CRM supports decisions on customer services: differentiating treatment to customers according to customers' value Analyzing the service performance of shops and call center to improve the service quality and productivity 	<ul style="list-style-type: none"> Contact behavior data (e.g. responses to marketing campaigns, customer complaints) is fed into the DW (data from shops: incomplete, from call center: well) Intelligent CRM supports effective customer interaction: full-automatic campaign data exchange Intelligent CRM supports decisions on customer services: differentiating treatment to customers according to customers' value Analyzing the service performance of call center to improve the service quality and productivity 	<ul style="list-style-type: none"> Call center interaction data is fed into the DW (minor) Intelligent CRM supports effective customer interaction: not full-automatic, but providing sufficient support Analyzing the service performance of front-end interaction channels to improving the service quality and productivity

Note: C: Communicational CRM, E: Execution CRM, I: Intelligent CRM, Dep.: department

Table 4-3 Summary of Interview Results: Organizational Elements of CRM

	Company A	Company B	Company C
Structure	<ul style="list-style-type: none"> ● Organizational design according to customer groups: corporate customer division ● Flexibly organizes teams to accomplish tasks aimed at different customer groups ● Clearly defined responsibilities ● Appropriate training ● Several customer-oriented performance indicators 	<ul style="list-style-type: none"> ● Organizational design according to customer groups: corporate customer division ● Planing marketing activities with the view of customer segmentation ● Organizing employees around CRM processes ● Clearly defined responsibilities ● Appropriate training ● Customer-oriented performance indicators are fewer 	<ul style="list-style-type: none"> ● Organizational design according to customer groups: enterprise solutions department ● Organizing marketing or product dep. based on customer segmentation ● An important performance indicator: customer satisfaction ● Reward system facilitate customer-orientation: customer satisfaction is a paramer of annual bonus calculation
Processes	<ul style="list-style-type: none"> ● Customer acquisition: mass marketing ● Referral process: marketing by the whole employees ● Relationship maintenance: customer evaluation, loyalty or retention programs, cross-selling/up-selling ● Dynamic R &D / Product design with cross-functional cooperation ● Integrated billing ● Complete and efficient customer services 	<ul style="list-style-type: none"> ● Customer acquisition: mass marketing ● Referral process: occasional MGM programs ● Relationship maintenance: customer evaluation, loyalty marketing, usage marketing, event marketing ● Trying to manage the entire customer life cycle by tracking relationship status ● Dynamic R &D / Product design with cross-functional cooperation ● Integrated billing ● Complete and efficient customer services 	<ul style="list-style-type: none"> ● Customer acquisition: mass marketing ● Relationship maintenance: customer evaluation, loyalty or retention programs, cross-selling/up-selling, event marketing ● Recovery management of churn customers ● Dynamic R &D / Product design with cross-functional cooperation ● Complete and efficient customer services

<p>Culture</p>	<ul style="list-style-type: none"> ● Telecom laboratories/product division: gathering market information, conducting customer surveys ● Annual customer satisfaction survey ● Cross-field/organization-wide conference ● Frequent cross-functional meetings ● Customer satisfaction data dissemination ● Coordination of departments: modify products or services according to customers' needs 	<ul style="list-style-type: none"> ● Intelligence division: customer behavior analysis, market research, intelligence of relationship marketing ● Frequent cross-functional meetings ● Informal cross-functional communication ● Cross-functional coordination to make the improvement according to customer needs 	<ul style="list-style-type: none"> ● Market intelligence generation: focus group, market research reports, annual customer satisfaction survey ● Regular cross-functional meetings ● Customer satisfaction data dissemination ● Periodically review the product development efforts to meet customers requirements
<p>Capability</p>	<ul style="list-style-type: none"> ● Learning and market-orientation capabilities: market-oriented culture, using CRM technology ● Integration capabilities: cross-functional cooperation and communication ● Analytical capabilities: utilize intelligent CRM well ● Operational capabilities: translate customer needs into service/product offerings through cross-functional coordination ● Direction capabilities: the top management leads the company with customer-centric value proposition ◇ Frequent communications 	<ul style="list-style-type: none"> ● Learning and market-orientation capabilities: market-oriented culture, using CRM technology ● Integration capabilities: cross-functional cooperation and communication ● Analytical capabilities: utilize intelligent CRM well ● Operational capabilities: translate customer needs into service/product offerings through cross-functional coordination ● Direction capabilities: the top management leads the company with customer-centric value proposition ◇ Budget and resources support, great enthusiasm 	<ul style="list-style-type: none"> ● Learning and market-orientation capabilities: market-oriented culture, using CRM technology ● Integration capabilities: cross-functional cooperation and communication ● Analytical capabilities: utilize intelligent CRM well ● Operational capabilities: translate customer needs into service/product offerings through cross-functional coordination ● Direction capabilities: the top management leads the company with customer-centric value proposition ◇ Brought the new marketing concept to industry in the early days

4.1.1 Proposition 1: The greater the integration among CRM technology elements, the greater will be the value generated from the infrastructure – Confirmed

In the three cases, the integration among CRM technology elements is similar, and the value generated from the CRM infrastructure is similar as well. Although it is not clear whether a company with greater integration among its CRM technology elements obtains greater value generated from the infrastructure, all cases display a proper degree of integration among CRM technology elements, and the value generated from the CRM infrastructure is also evidently sustaining each company's market competitiveness. No company with a proper degree of CRM IT integration has a disappointing market performance, and no company with roughly the same level of market performance has a low degree of CRM IT integration. Therefore, proposition 1 is accepted.

The proper degree of integration among CRM technology elements contains the necessary integration and the integration which the companies selectively not to conduct it.

The necessary integration among CRM technology elements contains the following three aspects.

- *Integration Between Communicational CRM and Execution CRM*

In order to provide sufficient, real-time support to front-end interaction channels, the three companies studied have all integrated customer transaction data. In Company A, all the data from customer transactions involving mobile services, such as applications for a new mobile phone number, modifying existing value-added services, or changing billing addresses, is stored in a transaction database accessible to all front-end interaction channels. When the call center modifies customer transaction data, the change is immediately visible to the shops. In Companies B and C, the CTI (computer telephony integration) system is used in the call center and is linked to the databases of backend systems such as billing, customer management, and marketing, giving the call center transaction data support when serving customers.

In addition, ***customer problems that cannot be solved by front-end interaction channels can be recorded, assigned to appropriate back-end departments, and tracked for follow-up processes.*** The management of problem solving processes and the support from back-end operational departments is critical in the provision of high-quality, efficient customer service. For instance, Company A has established a customer opinion processing system for managing the process of solving customer problems that flow into it from all channels. Company B also uses a system to record the problems that cannot be solved by the call center and assign them to back-end operational departments for follow up.

Finally, the cycle of effectively utilizing customer feedback to continuously improve value-generation processes is very important. ***The companies all possess mechanisms, whether organizational or technological, that make customer feedback gathered through different***

channels accessible to operational departments. For example, Company A's customer opinion processing system records customer opinions from internal or external channels, including the call center, email, the headquarters' mailbox, and the DGT (Directorate General of Telecommunications), distributes them to appropriate departments, and tracks the handling of customer opinions. The department responsible for the subject of the customer feedback must handle it within a specified time. That time period is a metric of performance that Company A places great weight on. In addition, both Company A and B hold regular cross-departmental meetings to discuss critical issues gathered from customer feedback and make improvements.

- *Integration Between Execution CRM and Intelligent CRM*

In the mobile telecom industry, **indispensable DW data sources include customer basic data, call records, billing behavior, and contact behavior.** The three companies all fed these four kinds of data to the data warehouse. Call records enable them to determine the calling behavior of customers. Billing behavior includes such items as the amount of money of the bill, how customers pay the bill, and the credit level of the customer. Contact behavior includes all the data related to customer interactions, 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. Company C believes that the data fed into the DW is complete because DW data sources for the telecom industry are simpler than those of other industries. Constant planning of DW data sources based on analysis of user requirements is especially critical.

The value chain processes supported by intelligent CRM are primarily composed of marketing, product research and development, and customer service improvement. Intelligent CRM creates greater support for the marketing process. For example, through the support of intelligent CRM, Company C can effectively design and manage marketing campaigns, identify the right products or services for cross-selling and up-selling, and develop appropriate strategies to handle customers who are likely to churn. In the product development process, analysis of customer demand based on customer lifestyle enables Company C to design rate plans or value-added services that provide greater satisfaction for customers.

DW for all three companies **supports generic applications such as reporting, queries, OLAP, and data mining, as well as specific applications, including campaign management, churn analysis, credit level analysis, customer segmentation, and customer value evaluation.** In the mobile telecom industry, the analysis and application of DW has already matured. Supporting these applications is essential for the DW. Moreover, to make them useful for business decision-making, the analysis and application of DW must be driven by business thinking. For example, Company C segments customers according to their contribution (heavy, medium, or low). It directs most resources toward heavy users in order to deepen its relationship with them, offering loyalty or retention programs to high value customers or giving them deep discounts. For

medium users, the strategy is to enhance the amount of usage through marketing campaigns to transform them into heavy users. Low usage users are given only basic services by Company C.

Finally, *in order to increase the efficiency of the analysis of DW, and provide data for analysis requirements as rapidly as possible, DW should be accessed and analyzed directly by users in the operational departments.* Company A and B have provided tools for users to directly perform analysis on DW. In Company A, the marketing division can use OLAP tools to conduct customer behavior analysis and review the results of marketing campaigns. The call center and product division also have their own personnel to access and analyze DW. Additionally, operational departments may also obtain analysis results through the IT department. However, because the requirements of the marketing division for analysis are relatively urgent, the marketing division often performs its own analysis. Company B trains the marketing project managers to use BO (business object), an OLAP tool. Consequently, project managers in the marketing division are able to access and analyze the data from DW.

- *Integration Between Intelligent CRM and Communicational CRM*

Communicational CRM should be supported by intelligent CRM in the following three aspects of business operations.

1. Effective customer interaction

There is organizational support from intelligent CRM to communicational CRM in planning effective customer interaction in all three companies. For example, the marketing department designs marketing campaigns based on the intelligent CRM, and the front-end interaction channels execute the marketing campaigns according to the guidelines from the marketing department.

However, at the moment the technology integration between these two CRM technology elements is less than ideal. For example, Company A use semi-automatic mode, such as FTP (File Transfer Protocol), to provide the name list of customers targeted in a marketing campaign to the front-end. In addition, when a customer comes to the shop or phones the call center, the systems supporting the interaction channels cannot automatically display products appropriate for cross-selling and up-selling to the customer. Company C has also not fully automated this process. However, with the CRM campaign platform, Company B has achieved fully automated campaign data exchange - the name list of targeted customers is automatically generated and sent to the front-end, and customer responses to the campaign are automatically fed into DW.

As marketing methods increase in complexity, the integration between intelligent CRM and communicational CRM will be especially important in increasing the capacity and capability of marketing activities.

2. Decisions on customer services

Intelligent CRM is currently being used to support decisions on customer services. The companies differentiate customer treatment by customer value as analyzed from DW. For example, in shops of Company A, VIP customers will take precedence over other customers and be served in a VIP room. In Company B, when a customer phones the call center, the call center is given the mobile phone number of the caller and the analysis of the customer's data. Different service representatives then serve each customer, as determined by the amount of business they do with Company B. However, Company B believes that this system is still rather primitive.

3. Improving the service quality and productivity

The analysis of customer data is also used for improving the service quality and productivity of communicational CRM. For instance, Company C analyzes data such as the amount and time of inbound calls, customer waiting time, the number of calls hung up by customers, questions that customers frequently ask, and customer satisfaction rate. Company C then carries out service quality and productivity enhancement based on this data.

Selective integration among CRM technology elements of the three companies is summarized as follows.

- *The integration of non-transactional customer interaction data from all front-end interaction channels is incomplete in the three companies*

Based on the interview results of the three cases, we found that the integration of customer transaction data is complete, but the integration of non-transactional customer interaction data from different front-end interaction channels is incomplete.

For example, in Company A, the non-transactional customer interaction data from all channels is not completely captured and integrated. The records of customer interaction with the call center are captured and stored in the call center system. However, non-transactional customer interaction data stored in the call center system, including the reason for an inbound call, the number of times a customer makes an inbound call, and customer inquiries, complaints, and suggestions, cannot be seen at the shops. The shops see the interaction data only when the call center interaction involves a modification to transaction data, such as applying for a new value-added service. In addition, non-transactional interaction data from the shops is not completely captured, and the web click stream from the e-counter and telephone keypad behavior during the interaction with the call center are not stored either.

Company A does not completely capture and integrate non-transactional interaction data from different channels because there are many different kinds of interaction data and it is difficult to completely capture and integrate them. Moreover, the company feels the benefits of integrating such data is uncertain. When providing services to customers, complete transaction data support is more important than non-transactional interaction data. Company A thus puts its efforts into

integrating the transaction data. Company A does place emphasis on capturing and analyzing the interaction records from the call center to make improvements in service quality.

- *Only the data needed for analysis is fed into the DW*

The three telecom companies all emphasized that only the data needed for analysis is fed into the DW. There are numerous operational data sources, and each of them has accumulated huge amounts of historical data. Feeding useless data into the DW for analysis would waste resources and make the maintenance of DW more difficult. Continuous planning of which data sources will be used in the DW, based on user analysis requirements, is more critical than feeding all the data into the DW.

For example, Company B feeds such data as customer basic data, call records, billing behavior, and contact behavior to the DW. Company B does not have definite rule for deciding what kind of data should be fed into the DW. The key point is that data which is essential, helpful, and meaningful for analysis will be fed into the DW. For instance, the reasons for customer inbound calls are fed into the DW. Company B then analyzes the reasons, classifies them, and traces their evolution. It can then focus on the problems that trigger customer calls, to improve the customer satisfaction. In addition, because the call record data represents an enormous amount of information, not all of it will be fed into the DW. Company B retains only the call record of a specific time period and the more important part of the call record, such as average calling time each month, in the DW. Furthermore, while data on important transactions must be fed into the DW, some detailed aspects of customer behavior, such as the Internet access behavior of customers by GPRS, will not be entered into the DW, as the marketing department does not analyze this kind of data. Moreover, the IT department of Company B regularly plans new data sources for the DW based on the analytical requirements of marketing. Company B indicated that planning for the data sources of the DW is a never ending task focused on fulfilling user requirements.

- *Because of privacy issues, the employee accessibility to customer information is carefully assigned*

In telecom industry, protecting the privacy of customer data is a major concern. In principle, not all customer data should be accessible to all employees. Instead, they are permitted to access only data necessary for their business activities.

Data security issue is a major concern of Company C, and its data access control is relatively strict. In Company C marketing personnel cannot directly access the raw data of customers, such as detailed call records, customer phone numbers, and customer addresses, due to security issues. Analysis is performed by the user first generating a request, for which the IT department will then generate an analysis result and return it to the user. There are several approval processes, and not everyone proposing the request can obtain the results of the analysis. In addition, Company A

only releases the DW data to authorized employees. Every department has authorized employees who can directly access the DW. Other employees obtain the results of analysis from them, or request the IT department to perform the analysis. In Company B, the call center representatives only can query a portion of the customer data to obtain support needed for their services to customers.

4.1.2 Proposition 2: The better the alignment between technical and organizational CRM elements, the greater will be the value generated from the infrastructure – Confirmed

The results of the research show that the three companies have aligned the organizational resources to a similar degree, and obtain similar value generated from the CRM infrastructure. Therefore, we accept proposition 2 for the same reason we accept proposition 1.

Though the three companies have not perfectly aligned the organizational elements of CRM, the basic alignment necessary for CRM has been achieved. The basic organizational alignment is discussed below.

- *Structure*

This research defines structure as the **function, accountability, performance measures, and incentive reward and compensation systems** of the organization.

In the three companies the organizational design is mainly focused around functions. ***Fixed organizational design based on customer groups is only found in the corporate customer department.*** Because it is not realistic to design an organization based on customer segmentation, ***the three companies all adopt flexible approaches to organizational design.*** Company A flexibly organizes teams to accomplish tasks aimed at different customer groups. Company B plans usage marketing and loyalty marketing with a view to customer segmentation, but it does not design specific organizations according to customer segments.

In addition, in Company B ***employees are organized around important CRM processes.*** Company B has established a customer acquisition division and a customer retention division. The customer retention division can generate market intelligence by data analysis and market research and use the intelligence to perform usage marketing and loyalty marketing, in order to increase customer revenues and retain customers. Company B argues that if marketing, sales, and service over the customer life cycle are centralized, customers will not be able to obtain disintegrated interactions from Company B.

In order to execute CRM more correctly and effectively, the three companies all ***clearly define employee responsibilities and roles and provide appropriate training to employees.*** For example, the role of the CRM platform leaders of Company B is defined as being the champion of CRM, to lead the entire company in improving its practice of CRM. In addition, Company B regularly

delivers training to marketing PMs to coach them in correct use of the CRM platform – designing marketing campaigns based on relationship marketing rather than mass marketing.

Customer-oriented performance indicators are adopted. Company A has many customer-oriented performance indicators, such as customer satisfaction, the amount of complaints, the efficiency of processing customer complaints, the rate of successful inbound calls, and customer waiting time in branch offices. In addition, customer satisfaction is an important performance indicator in the performance of individual employees, facilitating a customer orientation. In Company B, the product division co-owns the performance measures of the retention division, such as the revenue of content services, because revenue performance reflects good product design. In this way Company B encourages the product division to develop products customers like.

At present, the *reward and compensation system still is not designed to encourage customer-oriented behaviors* in Company A and B. The management of Company B is currently pondering adjustments. Company C, by contrast, has defined customer satisfaction as a parameter of the annual bonus calculation. Since employee bonuses are affected by customer satisfaction, employees in Company C are encouraged to become more customer-centric.

- *Processes*

In the telecom industry, processes which should be aligned include **the marketing and sales process, the product research and development process, the product design process, the billing process,** and the **customer service process.**

The marketing and sales process comprises the customer relationship initiation stage and customer relationship maintenance stage. The three companies *have already aligned the major components of these processes, according to CRM.*

In the *customer relationship initiation stage*, the three companies still use the *mass marketing strategy* rather than targeting high value prospects to acquire new customers. The market scale in Taiwan is too small to support targeted campaigns. Company B and C do not actively manage the *customer referral process*, but Company A has a more formalized referral process to encourage existing customers to recommend new customers. The large base of employees is a strong team of market arms. 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.

At *customer relationship maintenance stage*, the three companies have competently aligned the processes according to CRM. All three companies *perform customer evaluation, stress customer loyalty or retention programs,* and *implement cross-selling and up-selling* to raise customer revenues. Regarding *recovery management*, two of the companies do not try to re-establish relationships with churn customers because they believe that bringing such customers back to the company is difficult, and given the urgency of other needs, it has a low priority.

It should be mentioned that Company B is trying to manage the entire customer life cycle by tracking the status of customer relationships over the entire life cycle and handling customers according to the status of their relationship. That kind of thinking is quite customer-driven.

The following is the example of the alignment at the customer relationship maintenance stage:

- ✧ Company B carries out the processes of **loyalty marketing** and **usage marketing**. **Loyalty marketing** includes *contract renewal* - targeting high-value customers and providing customers with different levels of products; *loyalty programs* - offering benefits or distinguishing services to VIP customers; and *anti-turn* - detaining customers who want to leave. **Usage marketing** focuses on two parts – voice and data. Voice usage is difficult to enhance so Company B places emphasis on raising customer usage of value-added services.
- ✧ Company C has adopted a series of different strategies, investing resources in customer retention based on customer value. It segments customers according to their contribution (heavy, medium, or low). Company C invests the most resources in heavy users, in order to heighten the relationship with them. It carries out loyalty and retention programs directed at high value customers, and offers them deep discounts. For medium users, the strategy is to enhance the amount of usage through marketing campaigns and turn them into heavy users. Low usage users are provided with only basic services.
- ✧ Cross-selling and up-selling: Company C learns which customer segments use a specific value-added service and then promotes complementary or upgrading value-added services in those segments.
- ✧ In addition, companies can contact potential customers at the right time through event marketing.

The three companies also have aligned the value chain processes including the *dynamic product research and development process*, *product design with cross-functional cooperation*, *integrated billing*, and *complete and efficient customer services*.

The product research and development process is designed to collect external market information and internal customer information, and use it as major input for product design.

For example, through analysis of the demands of different customer lifestyles, Company C can develop rate plans or value-added services that obtain increased customer satisfaction.

In Company B, market and customer information are collected through the market research and data analysis department, and the different departments work together to justify product concepts.

The product design process enables cross-departmental planning and proactive information sharing.

For example, in Company B, the product division is usually the leader of a product design project and has to coordinate with other departments, such as billing, retention, front-end channels, regulation, and IT.

In the *billing process*, Company A and B use a convergent bill which provides integrated bill information of all consumption relevant to one customer.

Finally, the *customer service process* is designed to systematically record, trace, and solve customer problems through the cooperation of different departments.

For example, in Company B, when customer problems cannot be solved by call center representatives, there is a system to record problems and assign them to back-end operational departments for handling and tracking of the follow-up processes. In addition, operational departments regularly discuss critical issues arising customer inquiries to the call center and provide needed support to front-end interaction channels. In Company A, there is a customer opinion processing system which records customer opinions from all channels, assigns them to appropriate operational departments, and tracks the follow-up processes. Operational departments must accomplish the processing of customer opinions within a specified time. Company A strongly emphasizes efficiency in the processing of customer problems.

- *Culture*

In this research, the market orientation culture is measured from two levels of organization: the team level and the individual level. Market orientation at the team level consists of three levels of customer-focused actions: **market intelligence generation**, **market intelligence dissemination**, and **market intelligence responsiveness**. Market orientation at the individual level is reflected in **employee empowerment**.

The three companies all believe that in the highly competitive telecom industry environment, a market-oriented company culture is essential.

With regard to *market intelligence generation*, *the three companies have different responsible departments and methods of gathering the market and customer information*, including customer satisfaction surveys, customer behavior analysis, focus groups, and market reports. The purpose is to understand customer needs and detect fundamental changes in the industry. For example, Company B has an intelligence division that contains a data analysis department and a research department. The data analysis department helps Company B understand customers based on their behavior, and the research department conducts market surveys and buys primary and secondary reports to understand customers based on their opinions. In Company A, the product and marketing division requests telecom laboratories to conduct customer surveys every year in order to understand what products or services customers will need in the future. Company C conducts a focus group to gather customer opinions when launching new products. In addition, an

annual customer satisfaction survey is conducted by a third party company for both Company C and Company A.

In the respect of *market intelligence dissemination, cross-functional data sharing and organization-wide communication in the three companies are all implemented*. Each company holds cross-functional meetings frequently. Company A even holds annual interdepartmental, cross-field, and organization-wide conferences, including a product and marketing conference, and a customer service conference, to discuss market trends and developments. Because customer satisfaction information is an important performance indicator and affects the annual bonus of every employee of Company C, customer satisfaction information is disseminated to all employees. In Company A, customer satisfaction information is also disseminated to all employees, and all departments will perform self-criticism. However, because customer satisfaction information is not linked to the daily operations or performance measures of Company B, not all employees will receive that information.

Market intelligence responsiveness is carried out in several ways. The three companies periodically review their product development efforts to ensure that they are in line with what customers want. In addition, different departments are coordinated to modify the products or services according to customer needs. For example, in Company A, the executive vice president of the mobile business group holds a cross-functional meeting every week, in which issues needing coordination between different departments are handled. In Company B, information on customer requirements, suggestions, and complaints is delivered to operational departments, and the business group drives the cross-functional coordination to make improvements as determined by customer needs.

The three companies all believe in *employee empowerment*. Their employees are given the power to make critical decisions on customer problems, and are involved in the customer problem decision-making processes.

- *Capability*

Based on the literature review, the following set of capabilities determines the success of the CRM system: **learning and market-orientation capabilities, integration capabilities, analytical capabilities, operational capabilities, and direction capabilities**.

In the three companies studied, *learning and market-orientation capabilities* are implemented. Three companies have market-oriented corporate cultures and use CRM technology to learn about changes in customer behavior, gather customer information feedback, and generate insights from the customer information.

The *integration capabilities* of the three companies are demonstrated by the cross-functional cooperation and interaction during the product design process and the customer problem

processing process, as well as the cross-functional data sharing and organization-wide communication of market intelligence.

The three companies possess adequate *analytical capabilities*. All exploit intelligent CRM to support the decision-making of the value chain processes, including marketing processes, product research and development processes, and customer service processes.

The three companies also maintain *operational capabilities* that closely track changes in the market and customer needs, and translate these changes into service or product offerings through the coordination of different departments.

The *direction capabilities* of top management of the three companies are shown by their transmission of a customer-centered vision to the whole Company. Each company's approach to a customer orientation is different.

In Company A, the executive vice president of the mobile business group transmits ideas and strategies about CRM to the different divisions through a weekly meeting. Through frequent communications, he leads, controls, and coordinates the customer-centric value propositions of each division.

In Company B, where directing capabilities have historically been less well-developed, the Company has a strong intention to become more customer-centric. The atmosphere of the market and the top management's consciousness of CRM drive Company B's endeavors to implement CRM. The president of Company B supports CRM in budget and resources, and the major driving force of CRM is the director of the customer retention division. She is very enthusiastic about CRM and leads a team that troubleshoots CRM implementation. She believes that if a CRM leader treats CRM as a short-term project that merely needs to be completed, the implementation of CRM will not generate great benefits for the company. The CRM team leader's attitude toward CRM, including enthusiasm, energy, and belief, is the most critical success factor in using CRM.

Company C implemented CRM related technologies earlier than the other two telecom companies in Taiwan, but believes that information technology is only an enabler of CRM, and other organizational elements such as processes, culture, and organization structure should be aligned with CRM. One of the founders of Company C is a telecommunication company in the United States, which brought new marketing concepts to Company C. Company C understood relationship marketing earlier and better than other companies, having brought this new marketing concept to the telecom industry. The top management of Company C believes the telecom industry is highly customer-oriented now and that all competitors have already placed strong emphasis on customers.