

# Chapter 8

## Helping SME Supply Chains to Develop Their Target Markets

In Taiwan, small and medium enterprises (SMEs) play a far more important role in the economy than they do in other developed nations. South Korea, whose economic development has in many respects paralleled Taiwan's, began to pay more attention to fostering the growth of its SMEs following the Asian Financial Crisis of 1997. The South Korean government found that Taiwan's experience in this regard offered many lessons. Taiwan's growing presence in international markets is largely attributable to the achievements of its SMEs, but the process of economic globalization also intensified the competition among multinational corporations, prompting a negative impact on the position occupied by Taiwan's SMEs within international markets. Handicapped by their small size and limited marketing and distribution capabilities, Taiwanese SMEs are often obliged to collaborate with leading international corporations when seeking new markets.

### I The Significance of the Supply Chain in SMEs' Development of Their Target Markets

In the past the pronounced industry cluster effect that characterized those Taiwanese industries in which SMEs were dominant led to the emergence of a closely integrated supply chain linking upstream and downstream manufacturers. When Taiwan's SMEs began to develop overseas markets, it usually involved more or less simultaneous entry by the entire supply chain. While the process of economic globalization has opened up new vistas for Taiwanese industry and facilitated the adoption of new

business models, many industries have found themselves affected by changes in leading international corporations' choice of target markets within the Asia region and by the increasingly rapid pace of change in the industry cycle. In these industries the need for a restructuring of the supply chain has become increasingly obvious. In many cases, Taiwanese enterprises have found a niche for themselves within an international supply chain. However, many other Taiwanese SMEs have suffered a serious loss of competitiveness due to the collapse of a supply chain of which they had previously been a part.

With the growing importance of the Internet, digital technologies, and related industries, the pattern of global trade has changed dramatically. On the demand side, personalization, diversification, and service quality have become increasingly important. On the supply side, supply chains have become global in scope, and e-business has emerged as a major new force. Thanks to new developments in information and communications technology, the transaction flows between supply chain participants have become more closely intertwined, leading to the emergence of new business models that emphasize rapid response to changing customer needs and effective utilization of enterprise resources. With the steady expansion of supply chains that are dominated by leading international manufacturers, major distributors, or big trading companies, in many industries the level of industry concentration (at the global level) has been rising, and an integrated business model that is both customer- and value-oriented has become the mainstream.

Having already experienced their "baptism of fire" in the worldwide process of economic globalization, most of Taiwan's SMEs have made efforts to upgrade and transform themselves. However, there has been no significant increase in the share of Taiwanese SMEs' output that is exported, which suggests that the level of integration in the SME supply chain is still insufficiently high, and that there is a need for further reorganization.

The development of "integrated services" or "manufacturing-commercial integration" implies the adoption of innovation- and service-oriented business models within the existing supply chain. By combining the use of the Internet and other aspects of information technology with integrated, standardized processes and methods of information exchange, supply chain management systems can be used to

integrate R&D, purchasing, manufacturing, distribution, global logistics, and after-sales service in line with the needs of downstream customers and end-users. In this way it should be possible to enhance the efficiency of both production and other aspects of operations, reduce inventory, manufacturing, and distribution costs, achieve more efficient management of the flow of money, goods, information, and people, and respond more rapidly to changes in consumer demand, thereby raising the overall international competitiveness of Taiwan's products and services.

The main emphasis in the future development of Taiwan's SMEs should be on integrating the supply chain with target market development. Currently, Taiwanese SMEs face a serious threat from increasingly intense international competition. If they fail to strengthen their logistical capabilities through greater integration, then they will find themselves being swallowed up. New collaborative business models are needed to help Taiwan's SMEs upgrade their manufacturing and marketing capabilities so that they can compete effectively in the global market.

## II Integrated Marketing Services

The underlying goal in encouraging SMEs to make use of integrated marketing services is to strengthen SMEs' marketing capabilities, an area where Taiwanese SMEs tend to be relatively weak. The adoption of integrated marketing services can help SMEs to reduce marketing costs, while at the same time enabling them to gain more effective control over distribution and develop new business opportunities.

### 1. The Significance of Integrated Marketing Services

"Integrated marketing" has been traditionally defined as the simultaneous use of two or more media for marketing purposes. However, in today's increasingly competitive markets, the possession of this kind of integrated marketing capability is no longer suffice. The new concept of "integrated marketing services" emphasizes not only the strengthening of traditional integrated marketing capability, but also providing SMEs with a comprehensive set of services that covers everything from the production of advertising materials through product sales to payment collection and after-sales service. Unlike traditional integrated marketing, the role of the service provider is no

longer confined to passive order processing. The service provider is actively involved in planning marketing flow for the manufacturers, in helping them to develop new target markets and new business opportunities, and in building up partnership relationships.

Integrated marketing service providers are responsible for handling order receipt and for the establishment of market development mechanisms and the mechanisms needed to expedite the flow of materials and money. Their overall objective is to maximize the benefits from participating in the company's activities, providing SMEs with the kinds of services that industry associations and chambers of commerce are currently unable to provide. The range of services that industry associations can provide to their members is generally rather limited. By contrast, an integrated marketing services provider seeks to do more than just assist the companies that use its services. It aims to maximize the business opportunities available to them. SMEs that collaborate with an integrated marketing services provider can hope to achieve the same level of economies of scale as a large enterprise, while maintaining the flexibility of an SME.

## **2. Integrated Marketing Services – Targets and Models**

The potential for establishing an integrated marketing services provider exists wherever there is a group of SMEs that share common interests and common objectives. This group of collaborating SMEs need not necessarily belong to the same supply chain; in fact, they may even belong to different industries. However, the members of the group must have something in common and must complement one another in some way. They may be suppliers of end products or services, components, parts or machinery; they may be financial institutions or companies in related industries; they may include companies in downstream industries, such as distributors or customers, or manufacturers of complementary products; they may be architecture providers, providers of training, education, information, research or technical support services (such as government agencies, universities, think-tanks, or vocational training institutes), or standard-setting organizations. The range of industries in which this kind of integration is possible is thus extremely broad. The three main integration models are outlined below.

### **(1) Innovative Coordinated Planning – Cross-industry Integration**

Cross-industry integration offers the potential for creating different types of value-added. To take one example, Taiwan's bridal outfit rental stores have already begun to collaborate with hotels and are investigating the possibilities for collaboration with transportation service providers and the tourist industry with respect to wedding transportation and honeymoon planning. By collaborating in this way, the companies involved can provide customers with a "one-stop shopping" experience. If, in the future, the involvement of companies in other industries can be secured, then there is the potential for developing even more innovative methods. When companies in different industries are collaborating in this way, the need for effective coordination becomes that much more important. Careful planning on the part of the integrated marketing services provider can help to compensate for areas in which companies in a particular industry may be weak. At the same time, by ensuring that resources are allocated in the most appropriate manner, companies can provide services to other companies in the group based on their own particular area of expertise. By establishing an information platform that supports effective communication, the members of the group are able to gain rapid access to the information and resources they need. The detailed planning that is needed for these various processes inevitably requires a significant level of expenditure. The small scale of operation of most SMEs makes it difficult for them to implement detailed planning with the same level of efficiency as a large enterprise, but if the SMEs have the assistance of an integrated marketing services provider, then they can hope to achieve the same kind of results as a large enterprise. While each maintain their own markets, the members of the group can leverage the services provided by the integrated marketing services provider to develop the group's target market.

### **(2) Bringing Supply and Demand Closer Together – Integration of Complementary Producers**

The type of integration referred to above takes the form of circular integration, with the integrated marketing services company taking responsibility for the integration of the various suppliers' products. The integrated marketing services company also handles order processing on behalf of the SMEs, putting them in a stronger position when negotiating with larger corporations. It is important for the integrated marketing

services company to have offices in each target market and to monitor and coordinate supply and logistics operations. The company can then confirm whether components are being shipped to the assembly plant on time, and whether they are being marketed effectively. With this system, the SMEs can save on shipping expenses, marketing expenses, and inventory costs, while at the same time gaining access to a wider range of markets.

One example here is the placing of orders with Taiwanese SMEs by leading IT vendors such as HPQ and IBM. With demand for notebook PCs continuing to rise, demand for the products of these Taiwanese manufacturers – including Liquid Crystal Display (LCD), motherboards, etc. – has increased too. By collaborating with an integrated marketing services provider, Taiwanese electronics makers can satisfy the international vendors' need for timely delivery, preventing component shortages. After receiving components from the various suppliers, the integrated marketing service provider can then undertake notebook PC assembly in accordance with the customer's requirements, and then go on to ensure that the finished product is delivered to the customer in the shortest possible time. Given the homogeneity of the products, sales volume can be expected to increase steadily. At the same time, by ensuring an efficient, reliable supply, the commercial reputation of the companies involved in the alliance can be enhanced.

### **(3) Establishment of Quality Appraisal Mechanisms – Intra-industry Integration**

Intra-industry integration involves the integration of companies with similar end products. With this type of integration, the integrated marketing services company handles the following areas: (1) Order receipt. (2) Centralized purchasing. (3) Establishment of standards. (4) Marketing. Normally, a small company is in a weak position when negotiating contracts with a large company. However, by working through an integrated marketing services provider, a small company can significantly enhance its negotiating position. Centralized purchasing involves an integrated marketing services provider purchasing raw materials on behalf of a group of SMEs, with large-volume purchasing making it possible to reduce production costs. The integrated marketing services provider establishes a set of standardized production processes. Individual manufacturers can then use these processes as the basis for

product quality control. The more mature the industry is, the easier it is to achieve a standardization of products. Even when the same raw materials are used, it should be possible to vary the specifications, and in this way, standardization can actually help manufacturers to specialize and to raise value-added. If this kind of mechanism is adopted, then the integrated marketing services provider must play the role of quality control manager, thereby contributing to the strengthening of commercial reputation.

### **3. The Contents of Integrated Marketing Services**

#### **(1) Marketing Content Integration**

An integrated marketing services provider must have a clear grasp of when and how to make use of the various tools available to it. Once an appropriate overall strategy has been devised, the company can then arrange the details with experienced marketing services specialists. Nevertheless, possessing an in-depth understanding of the various types of marketing tools is only half the story. What is even more important is that the integrated marketing services provider must have a detailed knowledge of customers' business models and internal business processes. Only then can the various marketing tools be combined in the most effective manner to meet customers' marketing needs at different stages of the operational process, and only then can "integrated marketing" really be said to be taking place.

To achieve the above goal, it is not enough merely to integrate marketing tools, but the integrated marketing services provider must also have an in-depth knowledge of all of the companies' operations and sales-related activities. Different media have differing strengths and weaknesses, and different companies and brands all have their own preferences regarding the types of media they prefer to use. The traditional, go-it-alone model forced companies to waste large amounts of money on broadcasting activity management, leading to a dramatic escalation in costs. By establishing integrated marketing services companies, SMEs can achieve centralized management of different types of advertising activities, thereby reducing their marketing expenses. The integrated marketing service company can also provide SMEs with a full range of product and customer lifespan management services. While applying the various types of marketing tools available to them, they can also build up a comprehensive customer database.

One point worth noting is that, in the case of very small enterprises without a dedicated marketing department, the integrated marketing services provider can serve as a kind of “proxy marketing department” for the SME. In this way, the SME can save the cost of establishing its own marketing department.

One concrete example of integrated marketing services would be for the integrated marketing services provider to undertake the planning of full-function, interactive, e-business-oriented websites for SMEs. The first step here would be the planning of online advertisements to attract potential customers onto SMEs’ websites. The integrated marketing services provider could then add mechanisms for product introduction and withdrawal and for price management, set up a payment mechanisms with an effective encryption system, and finally provide an online customer service system for the handling of customer complaints and progress notification.

One of the key elements in the implementation of integrated marketing services is the collection and analysis of customer data. Ideally, prior to implementing any activity with any marketing tool, it should be possible to access useful information from the database. All information obtained during the course of implementing that activity could then be immediately captured and stored in the database, ready for accessing during the utilization of other marketing tools. The data can also be used as the basis for making adjustments to sales and communication strategies. By combining effective data integration with real-time, interactive tools and user-friendly communication methods, companies’ internal procedures can be linked up with the integrated marketing services provider’s marketing strategy to provide the main source of “motive power” for effective marketing. If the service provider can persuade customers that share a similar target market, but whose products are not in direct competition with one another, to make their respective databases available for cross-tabulation analysis and collaborative sales promotion, then the contribution that databases and marketing partnerships can make will be that much greater.

## **(2) Integration of Planning**

### **a. Coordinating Communication between Companies**

An integrated marketing services provider needs to be able to coordinate communication between companies. Those SMEs making use of the service provider



transmit information to it for dissemination. The service provider is also responsible for coordinating the transmission of information between companies. Preferably, the various companies involved should be able to work together to build sales on a foundation of mutual trust and mutual benefit.

### **b. Coordinating Marketing Strategy between Companies**

Where SMEs make use of an integrated marketing service provider, the service provider will be responsible for coordinating marketing strategy between the SMEs. The service provider must be able to identify the key targets for marketing activity (whether customers or other related parties) and to formulate shared medium and long-term objectives.

### **(3) Integration of After-sales Service**

The provision of effective after-sales services is one of the means whereby a company can strengthen the loyalty of its customers. An integrated marketing service provider therefore needs to do more than marketing products – it must also be capable of providing after-sales service. A service provider may find itself handling product sales for many different companies. If a consumer experiences a problem with one of these companies' products, the integrated marketing service provider should be able to provide the consumer with comprehensive after-sales service, sending the product in question back to the manufacturer for repair on the consumer's behalf. If the integrated market service provider has its own product repair department, then this effective integration of sales and after-sales service will make the consumer feel even more confident about purchasing products through the integrated market service provider. In the case of manufacturers whose products are frequently the subject of complaints, the integrated market service provider can help the manufacturer to make improvements, and in some cases it may be necessary to require the manufacturer to pay more for the provision of repair service on its behalf.

Another type of after-sales service is holding product review meetings by the integrated market service provider on a regular basis. In addition to the sales and support mechanisms, the establishment of discussion mechanisms can ensure that information flows freely between the company and its customers. The product review meeting is a regional discussion meeting mechanism, with customers in different

localities sending representatives to take part. The SMEs making use of the integrated market service provider should also send representatives to outline their product planning for the coming two years. Each meeting can focus on certain specific products, with users being given the opportunity to explain whether the product really meets their needs. By holding regular product review meetings of this type, the companies involved can ensure that their products are designed in such a way as to conform to users' preferences, rather than pushing blindly ahead with R&D efforts that are not customer-oriented. At the same time, companies can serve their customers better by providing more opportunities for consultation, which in turn has promotional benefits.

#### **(4) Integrating the Transmission of Ideas**

To make the process of integration as smooth as possible, the company responsible for supervising the integration needs full support from the manufacturers whose operations are being integrated. Educating these companies is thus an important part of the integrated market service provider's responsibilities. The key elements in this education process include: the building of corporate culture, cultivating the ability to respond rapidly to changes in market demand, cultivating an international outlook, and establishing manpower cultivation centers. These four elements are examined separately below.

##### **a. Creation of a Corporate Culture Conducive to Integration**

To ensure that the integrated market service provider receives full support from the SMEs whose operations it is helping to integrate, the board of directors of the integrated market service provider can be organized so that each SME has a seat on the board. The SMEs will thus be directly involved in supervising the service provider's operations and formulating and implementing its marketing strategy. They can agree between themselves the level of transparency they wish to maintain in the transfer of information between one another, thereby facilitating the open exchange of information on the basis of mutual trust.

##### **i. Building up a Corporate Culture that Encourages the Open Sharing of Information**

An integrated market service provider needs to create an environment that facilitates

the sharing of information between companies, while at the same time ensuring that the companies working with the service provider have a clear understanding of its marketing strategy. The communication content must include the following: the nature of the companies' share objectives; the principles governing collaborative design and innovation; strategies for working together to boost order volume; strategies for centralized purchasing of raw materials, methods for maintaining customer satisfaction, etc. The aim should be to create a "virtuous circle" of bi-directional communication, with active communication and coordination between the SMEs making up the alliance, and the creation of the necessary feedback mechanisms. Finally, the integrated market service provider should undertake a regular review of the communication channels to ensure a smooth flow of information at all times.

ii. **Building a Customer-oriented and Stakeholder-oriented Corporate Culture**

The integrated market service provider needs to ensure that the participating SMEs all build a corporate culture that is customer- and stakeholder-oriented, rather than maintaining a traditional corporate culture that emphasizes only sales and service provision. Manufacturers should be ready to adjust their product line in accordance with customer needs at any time and be capable of providing first-rate products and first-class services.

**b. Cultivating Sensitivity with Respect to Changes in the Market**

One important step is the establishment and sharing of databases. The content of these databases should include customers' needs, information on competitors' activities, etc. Manufacturers must be able to respond rapidly to changing circumstances on the basis of this information, so that they can provide customers with the best possible products and services.

**c. Cultivating an International Outlook**

The integrated market service provider should provide participating SMEs with feedback from its analysis of target markets. By providing them with up-to-date information, it can help the SMEs to develop products that are suited to individual target markets and enable them to develop an international outlook.

#### **d. Establishment of Manpower Cultivation Centers**

Industry conferences should be held on a regular basis to discuss new technologies and other new developments. If a consensus can be reached among the SME participants, then a training center can be established to cultivate talent and provide training for existing employees.

### **4. Integrated Marketing Services Processes**

#### **(1) Operational Processes**

The integration model should operate in such a manner as to facilitate communication between the various stakeholders, to create synergy (in terms of technologies, information, and managerial experience) between SMEs and to maximize the multiplier effect. The first step is for a group of business enterprises with shared goals and interests to join forces to establish an integrated market service provider. Given the rapid pace of change in the market, it is impossible for SMEs to handle every link in the value chain themselves. By collaborating with other SMEs to set up an integrated market service provider, they can create a company that is more focused and more efficient and that can concentrate its efforts on value-creating activities. The integrated market service provider can then undertake surveys and research with respect to customers and other stakeholders, building up a database that can be used to gain an in-depth understanding of customers' needs. This in turn can help the companies participating in the project to forecast their customers' future requirements. Forecasting of this kind can be an extremely important sales technique. Accurate forecasting is a key factor in reducing costs, as by using the information they have obtained to establish a unified database, the integrated market service provider could avoid the need for duplication of effort and make it more convenient to implement the analysis. The existence of this kind of database gives the SMEs collaborating with the integrated market service provider access to a richer store of resources and provides them with the real-time information that they need for decision-making. The integrated market service provider can also help to coordinate communication between participant companies, providing a platform for smooth communication and contributing to the formulation of shared objectives. Databases need to be constantly adjusted in line with the needs of customers and other stakeholders, while identifying

useful information to provide feedback to the participating companies and modifying the marketing strategy as necessary.

## **(2) Marketing Processes**

As a rule, the small size and limited marketing capabilities of SMEs make it necessary for them to rely on intermediaries (such as an integrated market service provider) to develop their target markets. Different models are adopted depending on the exact nature of the relationship between the companies concerned. These include specialist alliances, alliances centered around a core agent/distributor, loose groupings based around a general agent, etc. The shared goal of the companies participating in the network is to achieve integration with respect to media utilization, customers, competitors, etc. By leveraging the transmission and exchange of information between them, they can build a multi-dimensional, multi-sectoral network based on effective collaboration.

The integrated market service provider – serving as a unified integrator – can exploit its understanding of the target market and leverage the existing information platforms to pass the supplier's products and services on to the customer. The established network can thus work to the benefit of all concerned, helping them to improve sales management. It is thus important for the integrated market service provider to communicate regularly with local distributors and sub-distributors by telephone, so that it can provide them with updated product information.

The first step in the building up of the marketing procedures must be to select the Tier One direct transmission platform in the target market. The Tier One platform links up to the Tier Two platform, and so on. All of these different levels can be involved in the process of finding customers. Once this multi-level marketing network has been built up, product information can be transmitted rapidly to target customers.

## **5. Integration Examples**

The small size of SMEs makes it difficult for them to build up their own supply chain. However, there are various different integration models or strategies available that can help SMEs to achieve a new positioning within the value chain and to make the necessary changes to their business model. Three sample integration strategies are

given below for reference.

**Table 8-2-1 Integrated Marketing Services Models**

Integration Item	Integrated Marketing Services	
	Dell	Italy's SME Production Networks
Background	In the computer industry, establishing a component manufacturing capability can be extremely expensive. Dell prefers to spend this money on activities that can create more value for its customers.	The industrial structure of Italy is dominated by SMEs. SME Production Networks have been established to ensure that Italy's SMEs can keep pace with international trends.
Business Model	<ol style="list-style-type: none"> <li>1. The direct sales model – eliminating the price differential that results from working through middlemen.</li> <li>2. Close integration with complementary partners – Dell aims to develop close collaboration with a limited number of suppliers.</li> <li>3. Market segmentation – breaking customers down into groups for the purpose of demand forecasting.</li> </ol>	<ol style="list-style-type: none"> <li>1. The "virtual supplier" model – one SME handles design, order receipt, and logistics, while the others focus on manufacturing.</li> <li>2. Center-satellite clusters – while one SME serves as the central company for the cluster, others supply it with parts and components.</li> <li>3. Distributed production combined with centralized sales – individual SMEs undertake manufacturing particular products in accordance with unified specifications and requirements.</li> <li>4. SME business groups – SMEs that have developed a high level of dependence on one another form business groups through cross-shareholdings.</li> </ol>
Functions	<ol style="list-style-type: none"> <li>1. Establishment of a quality appraisal mechanism.</li> <li>2. Effective coordination of operations.</li> <li>3. Customized production.</li> </ol>	<ol style="list-style-type: none"> <li>1. Centralized purchasing and centralized marketing help to reduce production costs.</li> <li>2. The integration of local culture in SME production networks helps to boost value-added.</li> <li>3. The existence of SME production networks facilitates the development of effective manpower cultivation mechanisms.</li> </ol>

**Table 8-2-2 Strategic Alliance Models**

Integration Item	Strategic Alliances	
	Great Wall Enterprise	Yulon Motor Co., Ltd.
Background	Accession to the World Trade Organization (WTO) has led to a gradual opening up of Taiwan's markets, including the meat market. Leveraging their low labor costs, Southeast Asian producers have been able to flood the Taiwan market with their meat, and Taiwanese meat producers have found themselves faced with increasingly intense competition. To remain competitive, Taiwanese meat producers have had to focus on internationalizing their operations.	Yulon's decision to collaborate with Chinese car maker Dongfeng on production of the Fengshen was based on the fact that, in the past, car marketing and distribution channels in China have been dominated by state-owned enterprises; there was thus little room for the application of modern marketing strategies. Yulon realized that the most effective way of developing the China market would be to collaborate with a low-cost local manufacturer. In this way, Yulon would be able to concentrate its resources on building up its marketing and distribution channels, and on product development.
Business Model	<ol style="list-style-type: none"> <li>1. Vertical integration – integration of breeding, fertilization, feed supply, butchering and sales.</li> <li>2. Formation of alliances with overseas partners.</li> </ol>	<ol style="list-style-type: none"> <li>1. Yulon provides marketing and technology; Dongfeng handles manufacturing.</li> <li>2. Several Taiwanese car component manufacturers have accompanied Yulon in its entry into the Chinese market.</li> </ol>
Functions	<ol style="list-style-type: none"> <li>1. Collaboration based on complementarity.</li> <li>2. Intra-organizational learning.</li> <li>3. Development of export markets.</li> </ol>	<ol style="list-style-type: none"> <li>1. Development of export markets.</li> </ol>

**Table 8-2-3 Integrated Manufacturing Services Models**

Integration Item	Integrated Manufacturing Services	
	Hon Hai (Foxconn)	BMW
Background	Hon Hai is Taiwan's most successful contract manufacturer; its customers include leading international corporations such as HPQ, Nokia, Apple, Sony, and Dell.	Having been in existence for nearly a century, BMW has established itself as one of the world's leading car manufacturers. BMW produces a wide variety of different models to meet different needs. Between them, the three factories in Germany that are responsible for production of the BMW 3, 5, and 7 Series process 40,000 containers' worth of components (from over 1,000 different suppliers) every day.
Business Model	<ol style="list-style-type: none"> <li>1. Centralization of design operations – Hon Hai locates its R&amp;D and design, production process testing, and sample production facilities close to its key customers.</li> <li>2. Manufacturing divided between three main locations – Hon Hai has rapidly built up purchasing, manufacturing, engineering, and quality control operations in its three main production locations: Asia, North America, and Europe. Hon Hai is able to rapidly expand its production capacity as necessary in line with customers' requirements.</li> <li>3. Global shipment – Working in collaboration with HPQ, Hon Hai has developed a global ERP system that provides the company with accurate, real-time production data and effective production management functions.</li> </ol>	<ol style="list-style-type: none"> <li>1. BMW has developed the full potential of "daily demand measurement" – order placement is optimized in accordance with production scheduling, using the daily demand levels as the basis for placement of orders.</li> <li>2. Aggressive efforts to minimize the transportation costs resulting from low inventory levels – if a supplier receives orders from more than one BMW factory, it can use a single logistics service provider to ship the goods to a centralized transshipment point, from which they are sent on to the individual factories.</li> <li>3. Involving value chain partners in cost-cutting efforts – BMW seeks to keep its suppliers' delivery costs to a minimum through optimization of order placement in accordance with carefully devised cost equations. The aim is to ensure that suppliers' trucks and other transportation vehicles are always full, and that deliveries can be made on fixed schedules.</li> </ol>
Functions	<ol style="list-style-type: none"> <li>1. Simultaneous development of new products with customers makes it possible to bring new products to market more quickly.</li> <li>2. Hon Hai is able to handle rapid increases in customer demand.</li> <li>3. Hon Hai has the capability to ship "the right product, at the right time, with the right quality, in the right quantity" to the locations designated by customers.</li> </ol>	<ol style="list-style-type: none"> <li>1. BMW is able to provide suppliers with demand schedules covering the coming 10 months; suppliers can use these schedules as a basis for estimating the quantity and types of components that they will need to order from their own suppliers.</li> <li>2. Transportation costs can be kept to a minimum.</li> <li>3. Maximum efficiency can be achieved in the utilization of transportation vehicles and warehouse space.</li> </ol>

The significance of the above table lies in the fact that, to build effective communication with leading vendors, suppliers must be able to respond rapidly to changes in the needs of both distributors and end users, while striving to make the flow of information as rapid and as smooth as possible. When setting up an integrated marketing services arrangement, SMEs need to be able to coordinate their operations with the different types of systems and processes outlined above.

**Table 8-2-4 Comparison of the Supply Chain Models Adopted by WalMart and Carrefour**

Item	WalMart	Carrefour
Key Features	Rapid, efficient supply-chain management.	Implementing gradual adjustment of the business model to achieve improved inventory management and more efficient allocation of resources.
Scope	All information relating to suppliers and logistics.	Supplier and distributor inventory system management.
Information Utilization	Use of commercial satellites for global network operation. Bar-code scanning and satellite communications are used to provide suppliers with sales, shipping, and order information on a daily basis.	<ol style="list-style-type: none"> <li>1. Implementation of Efficient Consumer Response (ECR).</li> <li>2. Implementation of Vendor Managed Inventory (VMI).</li> <li>3. Establishment of appraisal tables.</li> </ol>
Supplier-manufacturer Interaction	<ol style="list-style-type: none"> <li>1. Ordering directly from manufacturers, rather than working through the manufacturers' agents.</li> <li>2. Encouraging manufacturers to cut costs and reduce prices.</li> <li>3. Establishment of new supply networks and data exchange systems.</li> <li>4. Helping manufacturers to undertake design themselves.</li> </ol>	<ol style="list-style-type: none"> <li>1. Careful appraisal of the potential for collaboration in terms of operational methods and systems.</li> <li>2. Ensuring full commitment and the establishment of effective teams among senior management.</li> <li>3. Close communication and establishment of flexible systems.</li> <li>4. Synchronization and automation of systems and processes.</li> </ol>
Common Features	Suppliers are given responsibility for inventory and logistics management. Electronic Data Interchange (EDI) technology is used to establish automated ordering systems that link the vendor to its suppliers. Advanced information technology is used to ensure smooth coordination of delivery and sales and to ensure that the vendors' transshipment centers can collaborate effectively with suppliers.	

### III Integrated Manufacturing Services

On the basis of the relevant theories (and practical experience), “integrated manufacturing services” can be defined as the vertical or horizontal integration of those links in the value chain that are related to manufacturing, including design, production, transportation, and supporting operations. The benefits resulting from the implementation of integrated manufacturing services can include lower production costs, a differentiation in one’s products from those of one’s competitors, and the ability to introduce innovative new business models.

#### 1. Integrated Manufacturing Services – Contents and Models

The four main areas covered by integrated manufacturing services are examined individually in the following section and in Table 8-3-1, focusing on the content of



integration and the integration models that can be used.

**Table 8-3-1 Integrated Manufacturing Services – Content and Models**

Value Chain Activity	Integrated Manufacturing Services		Benefits			
	Vertical Integration	Horizontal Integration	Differentiation	Cost-down	Greater Speed and Efficiency	Other
<b>Product Design and Development</b>						
Product Design and Product Development	Collaborative design Car design and development centers (car industry) Plan E for supply chain e-enablement (collaboration on design between upstream and downstream segments of the supply chain) Formation of joint development and design teams within the bicycle industry (A-Team)	Joint design and development platforms Collaborative development of key components (e.g. collaborative development of car engines)	⊙	⊙	⊙	
<b>Production</b>						
Production Integration Emphasizing Improvement of Production Technology and Processes	Integration and improvement of technology Center-satellite systems Technology guidance system (technology guidance advisory teams) Collaboration on the enhancement of production efficiency Plan B for supply chain e-enablement (collaboration on production between upstream and downstream segments of the supply chain)	Technology exchange and development platforms Technology development institutes such as the Taiwan Textile Research Institute and the Industrial Technology Research Institute Technology guidance system (technology guidance advisory teams) Specialized industrial parks (e.g. the Science-based Industrial Parks, the Tainan County Taiwan Orchid Biotechnology Park, etc.)	⊙	⊙	⊙	
Raw Materials	Collaborative development of applied materials	Collaborative development of applied materials Establishment of centralized purchasing platforms	⊙	⊙		
Product Quality	Quality certification	Quality and certification The Taiwan-made shoes logo The Taiwan Innovalue logo	⊙			

**Table 8-3-1 Integrated Manufacturing Services – Content and Models (continued)**

Value Chain Activity	Integrated Manufacturing Services		Benefits			
	Vertical Integration	Horizontal Integration	Differentiation	Cost-down	Greater Speed and Efficiency	Other
<b>Transportation</b>						
Logistics and Delivery	Collaborative logistics Plan D for supply chain e-enablement (collaborative logistics)	Specialist logistics providers Logistics operations for refrigerated and low-temperature products Radio Frequency Identification (RFID) technology utilization		⊙	⊙	
<b>Supporting Operations</b>						
Information	Information platforms E-enabled supply chains E-enabled supply chain planning	Information platforms E-enabled service platforms SME e-Enablement Service Team		⊙	⊙	⊙
Finance	Plan C for supply chain e-enablement (integration of money flow)	SME Finance Services Platform SME Financing Guidance System		⊙		⊙
Intellectual Property	Intellectual property integration and value development	Intellectual property management and protection platforms	⊙	⊙		⊙
Education and Training	Collaborative training programs Industry-specific manpower cultivation platforms	Shared training platforms		⊙		⊙

### (1) Integrated Services – Product Design and Development

Product design and product development are areas that are normally closely linked to an enterprise's core competitiveness. In the past, enterprises have generally preferred to undertake these activities in-house. However, as a result of the growing emphasis on risk sharing and cost sharing, companies are now beginning to implement product design and development on a collaborative basis. This is particularly true in the case of horizontal integration, where manufacturers can collaborate on the development of shared technologies and key components. Examples of this kind of collaboration include the development of car engines that can be used by more than one carmaker, or the development of DVD reader heads. The last few years have also seen the development of collaborative design and development under vertical integration - for

example, in the car industry and in the government's Plan E for the e-enablement of supply chains (which involves collaboration on product design between system manufacturers, their upstream suppliers, and their downstream customers). In some cases, the model adopted involves both vertical and horizontal integration, as with the "A-Team" plan in Taiwan's bicycle industry. The A-Team alliance, initiated by Giant and Merida, has brought together 11 Taiwanese bicycle component makers, whereby the emphasis in this alliance is on being demand-oriented, achieving differentiation, and designing and developing products that will stand out from the crowd.

As noted above, the need to spread risk, share costs, or respond to rapid changes in demand has encouraged the spread of integrated service models based on collaborative design or collaborative development. These needs are common to most SMEs, and it can therefore be anticipated that the establishment of integrated product design services or platforms will help Taiwan's SMEs to differentiate their products from those of competitors, reduce costs, and enhance the efficiency of design and development work. More important, the adoption of this type of business model can help SMEs to attune themselves better to market demand, taking design and development as an avenue for integration with the international market that can lead on to the integration of manufacturing and to that of the whole supply chain.

The A-Team constitutes an example of the successful adoption of the above strategy. The participants in the A-Team project have taken "consumers' future needs and the creation of value through innovation" as the basis for achieving differentiation. They have focused on supplying products of the highest possible quality to global markets in a timely manner, and on developing new products that feature innovative design, thereby enhancing the operational performance of their bicycle manufacturing operations and helping Taiwan to re-position itself as an innovative value-creator within the global bicycle industry.

Aside from developing integrated design and development capabilities, as a result of the integration process the A-Team members have succeeded in differentiating their brands within the international bicycle market. Their success points up the weaknesses that tended to characterize the integration models that Taiwanese companies adopted in the past: integration that did not go beyond the level of technology, failing to extend the process of integration to include branding,

certification, and the development of linkages with international markets.

## **(2) Integrated Services – Production Activities**

As regards to the value chain for production activities, companies here need to leverage their production technology, cost-down capability, and product quality to secure orders from international customers. This section therefore focuses on integrated services and platforms that emphasize this type of value creation.

Over the years, Taiwanese business enterprises have developed a wide range of integration models and service platforms with respect to production technology, process improvement, materials development, and the enhancement of product quality. In the case of vertical integration, center-satellite systems are able to implement integration and improvement in the areas of technology, production processes, and quality. The government's Plan B for supply chain e-enablement aimed to integrate the e-enabled supply chains of system manufacturers and their upstream Taiwanese component suppliers, helping them to work together to build up e-enabled operational capabilities that would enable them to respond rapidly to changes in market demand, thereby making it possible to achieve a dramatic improvement in the production efficiency of the supply chain as a whole. Horizontal integration platforms include those created by the government's technology guidance system (the technology guidance teams), and technology research institutes such as the Taiwan Textile Research Institute and the Industrial Technology Research Institute. These platforms provide enterprises with assistance in the areas of production technology, process technology, new materials development, and the improvement of product quality.

In many cases, unfortunately, these long-established integration models and service platforms have failed to extend their value integration to include branding and marketing. In the field of production management, one strategy that Taiwanese enterprises could adopt is leveraging ISO certification more effectively, given that ISO certification constitutes a "shared brand" with significant marketing potential. Similarly, if Taiwan's technical service platforms could strengthen their certification function (including both international and domestic certification), focusing on the needs of marketing, then those enterprises that have received guidance would be able to leverage their technology or product certification to differentiate themselves from

their competitors and build up shared brands (these technology or quality-based brands would constitute a guarantee of the technology of the products themselves). Examples of the use of certification for marketing purposes to achieve differentiation include the “Taiwan Innovalue” logo and the recently introduced “Taiwan-made Shoes” logo. The first of these represents quality-based certification; the second merely constitutes a certificate of origin. Within a vertical integration model, the central manufacturer in a center-satellite system or a trading company can build up a certification system within the value chain, or make use of an existing, external certification system, so as to create value through differentiation.

The establishment of specialized industrial parks also constitutes a form of manufacturing activity integration, with geographical integration helping to produce an industry cluster effect. Examples of this type of integration include the Tainan County Taiwan Orchid Biotechnology Park and the Nankang Software Park. If specialist industrial parks of this kind can provide those companies located in the park with technology exchange and development platforms, while also developing their own technology or product certification brands, then this will help those enterprises located in the park to build value by differentiating themselves. Given that specialized industrial parks are normally home to a concentration of companies in the same industry, there is also significant potential for developing integration through centralized materials purchasing platforms, joint training platforms, centralized order receipt platforms, etc. All of these can help companies to cut costs, and they can lead towards the emergence of innovative new integration models.

### **(3) Integrated Services – Transportation**

In the field of transportation-related activities – including logistics and delivery – value can be created from three areas: cost-down, efficiency (speed), and quality. Within supply chain management, the integration of logistics and information flow to achieve effective management of inventory (cost-down) and ensure rapid delivery (enhanced speed and efficiency) is one of the most important means for creating value. One example here is the government’s Plan D for supply chain e-enablement, which focuses on developing effective collaboration between Taiwanese system manufacturers and logistics service providers. One of the main foci of competition between Taiwanese enterprises today is the creation of value by integrating up-, mid-,

and downstream companies through order tracking and transportation planning. Aside from the use of e-enablement to provide integrated services, the development of dedicated logistics services platforms is another horizontal integration strategy that is worth exploring. Specialist logistics and distribution systems that are designed to meet the specific needs of particular industries or products can be used to expand the scale of transportation, enable multiple enterprises to share costs, and improve the quality of transportation service. This type of platform can be particularly useful in the food industry, where there is a need for refrigerated and low-temperature transportation. Making effective use of new technologies such as Radio Frequency Identification (RFID) can also help enterprises to improve the efficiency and quality of logistics management.

Looking ahead to the future, assuming that direct trade, transportation, and communication links can be established between Taiwan and mainland China, there is the potential for a significant breakthrough in Taiwan's efforts to establish itself as a leading Asia Pacific logistics center. Taiwan's SMEs will be able to leverage highly efficient, highly-integrated transportation services and platforms to create value and strengthen their competitiveness, developing international business opportunities in the areas of transshipment, distribution, and processing trade. This in turn would help to stimulate growth in related industries, both upstream and downstream.

#### **(4) Integrated Services – Supporting Operations**

Supporting operations are those that help business enterprises to implement key value activities, particularly the production and marketing of products and services. The discussion in this section focuses on how enterprises can upgrade the level of integration in supporting operations so as to promote the development of key value activities, rather than positioning supporting operations as a strategic tool for target market development. As the scope of supporting operations is extremely broad, the discussion below confines itself to the four major activities in which SMEs tend to be particularly weak: information, financing, intellectual property management, and training.

As regards to information, the advances in digital technology have made it much easier for SMEs to access information from the Internet. Reducing the “digital divide”

as it affects SMEs and raising SMEs' level of e-enablement are thus issues of key importance. The Small and Medium Enterprise Administration (SMEA) of the Ministry of Economic Affairs (MOEA) has established an SME E-Enablement Service Team and a Computerization Diagnostics and Guidance Platform to provide supporting services to all of Taiwan's SMEs. While the E-Enablement Technology Services Platform provides the basic infrastructure needed for e-adoption, other platforms – including industry-specific information platforms, e-catalogs, online marketplaces, etc. – are gradually coming online. Alas, in most cases these individual platforms have not been brought together to create large-scale information platforms that could integrate information with transactions and enable SMEs to gain maximum benefit from the Internet. This is an area where more effort needs to be done. The best examples of vertical integration of supporting operations are the government's Plans A, B, C, D, and E for supply chain e-enablement. The aim of these plans is to facilitate the establishment of an e-enabled business transaction and collaboration environment covering every link in the supply chain. In other words, they are intended to help enterprises set up a comprehensive supply chain e-enablement platform that would extend the integration of information flows to cover order receipt, design, production, shipment, and receipts and expenses. In this way, the supply chain as a whole can be more closely linked together and can be made to operate more efficiently, while giving rise to the emergence of new business models.

On the financing side, the SMEA has established an SME Financing Guidance System to serve as a service platform for SMEs. In the past, however, this system has only been able to provide advisory, referral, and financing guidance services. The key factors determining whether or not SMEs were able to secure financing were their ability to provide collateral, the attitude taken by the banks, and the operation of credit guarantee mechanisms. Hence, the significance of Plan C for supply chain e-enablement – the money flow integration plan – should be noted. The mechanisms covered by this plan include: electronic payment, on-line financing, integration of fund management and other services, order financing and provision of credit guarantees by the center manufacturers in center-satellite systems, the provision of SME credit guarantees, etc. Through the implementation of these mechanisms, the flow of funds within the supply chain can be made as smooth as possible. If Plan C can be expanded so that it creates an e-enabled money flow service platform that is

available to the majority of SMEs (through collaboration with credit rating agencies, credit guarantee mechanisms, online security specialists, etc.), then the functionality and effectiveness of the financing services platform can be significantly enhanced.

Within the supporting service field, information and financing services were among the earliest to emerge and have reached the highest level of development. One area with still a great deal to be done is intellectual property. The management and protection of intellectual property and the use of intellectual property to create value constitute an emerging activity area. Owing to their small size, SMEs often find it difficult to allocate sufficient manpower and resources to the management and protection of intellectual property. If horizontal integration methods can be used to build an intellectual property management and protection platform for the use of SMEs, then SMEs will be able to leverage specialist, centralized management (and the greater economies of scale that this will create) in order to reduce costs. SMEs will also enjoy better service at lower cost to themselves. Within a vertically-integrated model, the emphasis is on the integrated utilization of intellectual property rights and on value creation. As this relates to innovation and various highly-specialized fields, there is a clear need for assistance from specialist research institutes and for the establishment of licensing and transaction platforms that would help to enhance the value of SMEs' intellectual property.

Training is another important area within the field of supporting operations. Whether one is considering the needs of global supply chain management or the establishment of industry-specific manpower cultivation platforms, the provision and integration of education and training services can help in the upgrading of manpower quality and the reduction of manpower cultivation costs. Supply chains' existing training mechanisms can be expanded to create training platforms for entire industries, while at the same time, manpower cultivation content that is common to several industries can be used to establish cross-industry manpower cultivation platforms. Both vertical and horizontal integration models can be employed to help SMEs to upgrade their human resources and to use them more effectively.

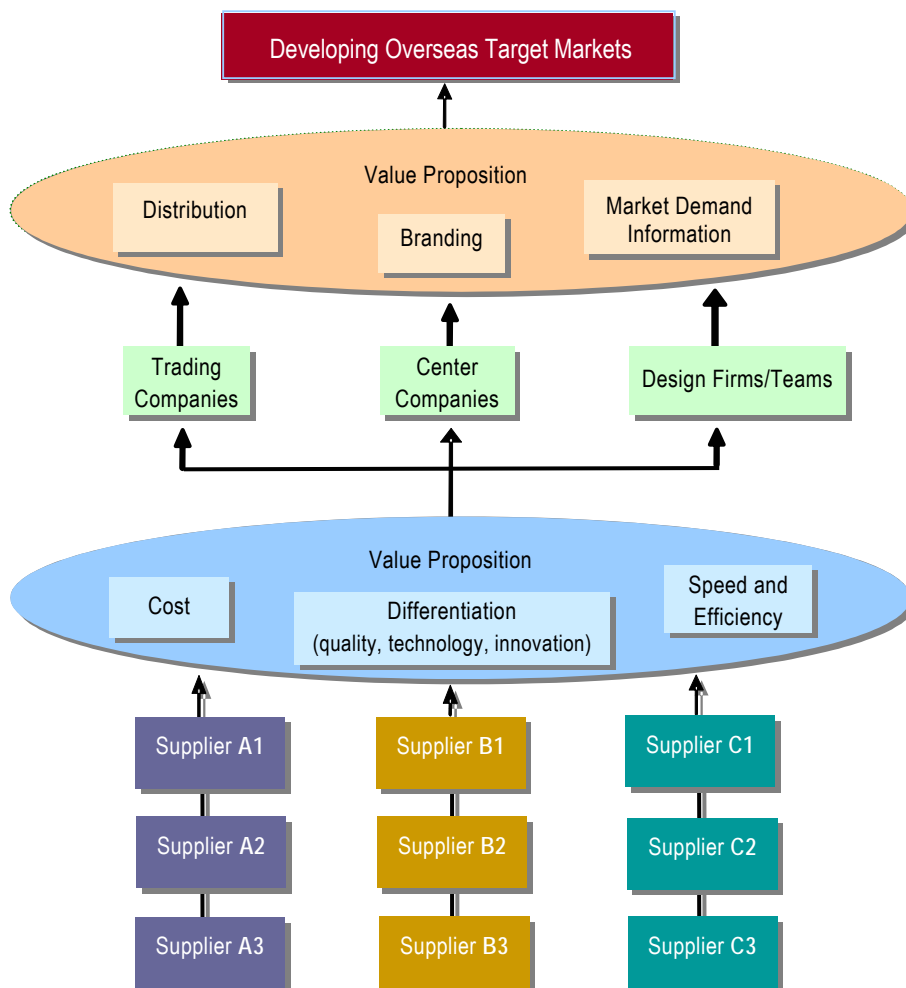
## **2. Strategy Models for Integrated Manufacturing Services**

On the basis of the above analysis, it can be seen that, in order to help SME supply



chains to develop their target markets, there is a need for greater emphasis on value creation on the part of both individual enterprises and entire industries. As shown in Figure 8-3-1, at the production/manufacturing stage (including R&D and design), value derives mainly from cost-down, differentiation, and increases in speed and efficiency. Differentiation may relate to innovation, quality or technical capabilities.

**Figure 8-3-1 Relationship between the Supply Chain and the Value Chain**



When the supply chain as a whole is linked to international markets by trading

companies, center companies in center-satellite systems (or manufacturers), and design firms (or design teams), then there is a clear need to create value in the areas of distribution, brand management, and access to market information at the marketing stage. Production activities and marketing activities are closely related and impact on one another. Brand value may be supported by value created through differentiation, cost-down, speed, or efficiency. At the same time, the way in which products and services are presented to the customer must conform to market needs.

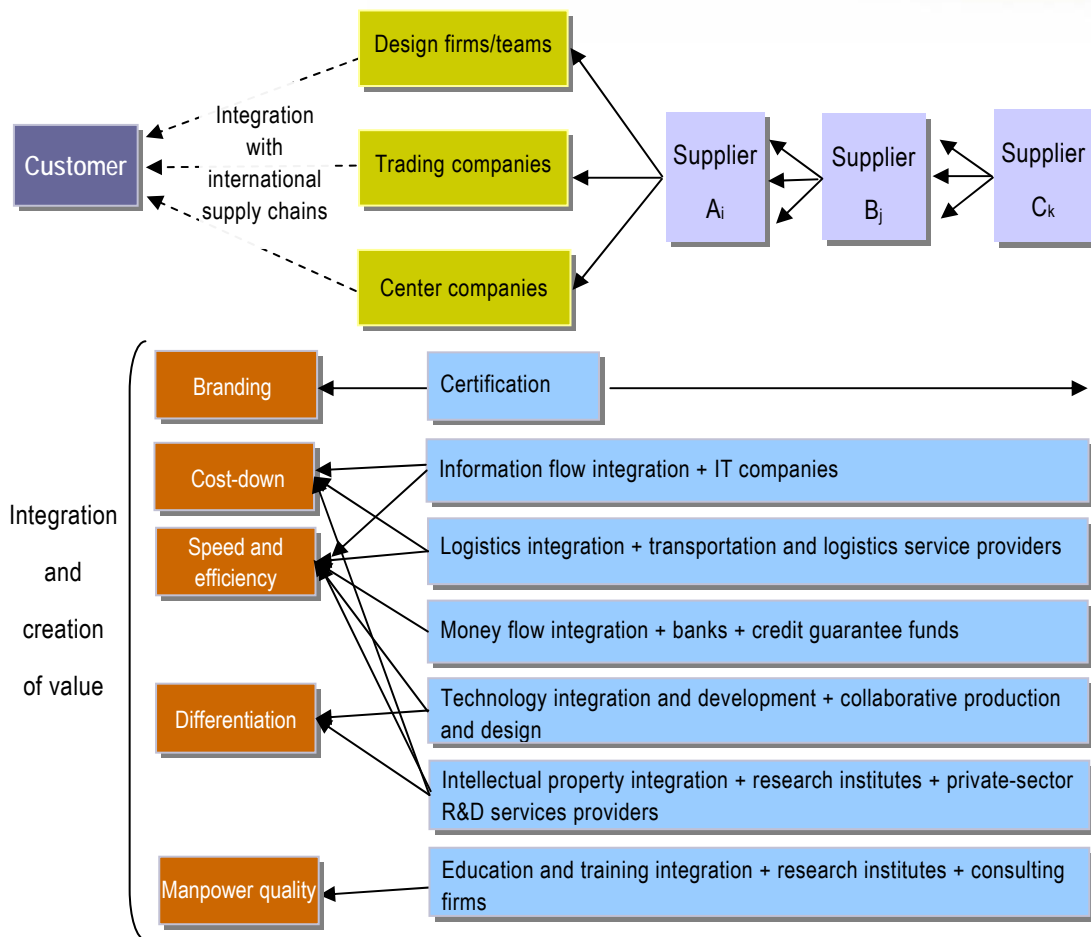
The following strategic models (based on different integrated manufacturing services models) are proposed to facilitate the creation of different types of value within the overall value chain:

### **(1) Strategic Model for Supply Chain Integration**

Supply chains can currently leverage the government's Plans A, B, C, D, and E to integrate additional types of value, including certification, technology integration, collaborative product development, integration of intellectual property, licensing and value creation, education and training, etc. As shown in Figure 8-3-2, there is the potential for further upgrading of value creation that can serve as a basis for development of the target market. The strategic model also incorporates the integration of various peripheral systems, including IT companies, transportation and logistics service providers, banks, credit guarantee funds, research institutes, R&D service providers, consulting firms, etc.

### **(2) Strategic Model for Industry-specific Platforms**

Strategic models for supply chain integration generally apply only to one particular supply chain (such as a center-satellite system based around a single center company). A model of this kind can be expanded to create a platform that can be used by all enterprises within a particular industry, or several existing supply chains can be integrated to form such a platform (such as an industry-specific distribution platform, receipts and payments platform, or intellectual property transaction platform). As all the companies involved are in the same industry, as there is the potential for further integration through joint purchasing, thereby creating value through cost reduction.

**Figure 8-3-2 Strategic Model for Supply Chain Integration**

### (3) Strategic Model for Cross-industry Platforms

Taiwan has already developed several cross-industry service platforms, such as the e-enablement service teams, financing guidance mechanisms and the various research institutes, supporting systems, etc. The supporting relationship between these service platforms and Taiwan's SMEs is a relatively loose one, and in the past there has been no serious attempt to extend the platforms to boost the creation of value through marketing activities. In the future, it should be possible to make use of existing platforms to strengthen the integration of services into the supply chain, or to gradually expand the scope of supply chain integrated services to build a

cross-industry joint service platform.

## IV Integrated Manufacturing and Marketing Services Strategy

This section seeks to explore the ways in which Taiwanese SMEs can rebuild competitive advantage by keeping their finger on the pulse of change in the global business environment. On the basis of the analysis in the previous sections, the following strategies are proposed for the development of integrated manufacturing and marketing services.

### 1. Enhancing the Value that Existing Supply Chain Models Can Create Through Integration

The government's Plans A, B, C, D, and E (implementation of which is already underway) should be expanded to include the integration of additional value activities, including certification, intellectual property rights, education and training, etc. Some of the concrete measures that could be adopted include the following.

- (1) Technology exchange and certification plans: Trading companies, center companies (in center-satellite systems), and design firms would work to promote technology exchange, establishing or adopting certification systems and quality measurement standards. The process of integration would embrace all companies within the supply chain, with the aim at maintaining the creation of value through quality. Assistance could be provided by institutions, such as certification bodies, the Industrial Technology Research Institute, etc.
- (2) Intellectual property integration and value development plans: The aim here would be to achieve integration between companies in the upstream and downstream segments of the supply chain, encouraging them to collaborate on intellectual property development, licensing, transfer, management, protection, etc. Assistance could be provided by R&D service providers and intellectual property rights service providers.
- (3) Education and training integration plans: With this category of plan, the emphasis

is on integrating manpower cultivation between upstream and downstream companies. Assistance could be provided by education and training institutions. Supply chains could collaborate with universities and colleges through the establishment of alliances.

## **2. Introduction of Bottom-up Supply Chain Integration Concepts to Facilitate the Integration of Relevant Services and Institutions into the Supply Chain**

Before marketing activity can go ahead, there are various related activities that must be implemented, including market surveys and forecasting, image design, advertisement production, media buying, etc. Integration thus needs to involve marketing research companies, advertising agencies, firms of marketing consultants, and other agencies and service providers. Expanding the supply chain integration concept to cover the integration of these activities helps to strengthen the marketing capabilities of trading companies, center companies, design teams, and other market participants.

One point worth considering is that Plans A, B, C, D, and E represent a top-down supply chain integration model (based on the integration of leading international vendors' needs through Plan A). Under this architecture, suppliers are in competition with one another, and the rapid transmission of information through digital technology ensures that price disparities are soon discovered, eventually leading to a fall in profit margins for suppliers. To avoid this situation from developing, it is proposed that, in addition to the existing Plans A, B, C, D, and E, an additional, bottom-up integration model could be established. The emphasis in this additional model would be on the development of joint branding and marketing, and joint distribution. The key implementation plans would be as follows.

- (1) Joint brand promotion plans: These would integrate upstream and downstream companies, either through horizontal integration or a mix of horizontal and vertical integration. By focusing on product image, joint brands could be developed for exportation.
- (2) Joint distribution and development plans: These plans would involve the cultivation of specialist trading companies and conference organizers, along with

the development of chain and franchise businesses, with the aim at building up joint distribution activities. Specialist trading companies could serve as joint order receipt centers. Conference organizers could assist in the integration of SME supply chains by helping SMEs to participate in trade shows, both in Taiwan and overseas, thereby facilitating the work of distribution channel development and brand promotion. With regard to chain stores and franchise operations, regardless of size, as the number of outlets expands they will gradually build up their brand and their distribution capability. The overseas operations of Taiwanese chain stores have been growing rapidly, particularly in mainland China. SMEs could form strategic alliances with these chains, leveraging their distribution channels (both within Taiwan and overseas) to market the SMEs' products. Franchise chains can be thought of as constituting a separate type of supply chain integration model, due to the mutually supporting nature of the operation with respect to products, facilities, and materials. In the early stages, the government could provide guidance for selected pilot projects that would help to strengthen other SMEs' confidence in their ability to develop target markets successfully.

- (3) Market information integration plans: The most basic prerequisite for developing a target market is access to up-to-date information regarding customer preferences, local specifications, etc. There is thus a need for the establishment of market information databases by industry, universities, and research institutes. The information contained in these databases can be transmitted through the use of digital technology to give companies (both upstream and downstream) timely access to the market information that they need so as to adjust their marketing strategies.

### **3. Leveraging Supply Chain Integration to Develop International Markets**

A discussion of supply chains in Taiwan generally ignores marketing and sales activities. In the case of Plans A, B, C, D, and E for supply chain e-enablement, although Plan A covers integration with the international purchasing operations of leading international vendors, the treatment of supply chain integration models does not extend to the establishment of links with new customers (i.e. data transmission), entry into, and the development of new markets, etc. This points to the importance of

establishing a bottom-up supply chain integration model. The following methods could be used to promote the adoption of proactive marketing.

- (1) Encouraging the development of the conference organizing industry, to help members of SME supply chains participate in important domestic and overseas activities and exhibitions, thereby facilitating distribution channel development and the building of brand image.
- (2) Making effective use of the chain store and franchise integration model to build distribution channels.
- (3) Utilizing online marketing and establishing online marketplaces.
- (4) Building shared overseas distribution channels, such as shared product display facilities, marketing offices, and distribution centers.
- (5) Strategic alliances: SMEs should explore the potential for alliances with overseas trading companies, distributors, purchasing companies, and companies in other industries that possess valuable customer or distribution resources.
- (6) Developing contacts with the international purchasing offices (IPOs) of leading international corporations.

#### **4. Gradual Expansion of Service Platforms, Moving from Supply Chain and Industry-based Platforms to Functional, Horizontal Service Platforms**

- (1) Cultivation of system integration talent for e-business and e-enablement, focusing on specific manufacturing industries.
- (2) Strengthening collaboration on education and training between industry and universities through the establishment of alliances.
- (3) Developing integration strategies and related manpower cultivation for strategic service industries, particularly knowledge-intensive industries.
- (4) Integrating manufacturing and marketing services. This involves the formulation of concrete targets, focusing on innovation, the creation of value-added and high

growth, and on boosting production value, job creation, industry linkages, and industry sensitivity.

## V Strengthening the Role of SMEs as Enablers within the Supply Chain

On the basis of the above analysis it can be seen that, in order to help SME supply chains develop their target markets, there is a need to integrate many different companies and institutions to provide assistance in different segments of the value chain. Table 8-5-1 lists the key categories of supporting companies and institutions and the roles they would be expected to play, breaking them down by the key business functions of design, manufacturing and marketing, and supporting functions such as transportation, provision and integration of information, payments, receipts and financing, intellectual property management, education and training, etc.

**Table 8-5-1 Helping SME Supply Chains Develop Their Target Markets – Key Supporting Companies/Institutions and the Roles They are Expected to Play**

Value activities and functions	Integrated design services – joint product development and image building	Integrated manufacturing services	Integrated marketing services
	<ul style="list-style-type: none"> <li>● R&amp;D services industry</li> <li>● Research institutes</li> <li>* R&amp;D support and integrated design support</li> <li>● Industrial design firms</li> <li>● International marketing firms</li> <li>* Industrial design and product image integration</li> </ul>	<ul style="list-style-type: none"> <li>● Research institutes</li> <li>● Other technology guidance systems</li> <li>* Production technology integration, improvement and consulting services</li> <li>● Center companies</li> <li>● Specialized industrial parks</li> <li>* Development of production activity integration and clustering, and establishment of integrated manufacturing services platforms</li> <li>● Surveying service providers</li> <li>● Certification agencies</li> <li>* Attestation and certification services</li> </ul>	<ul style="list-style-type: none"> <li>● International marketing firms</li> <li>● Marketing consultants</li> <li>● Advertising agencies</li> <li>* Brand image building, marketing design, marketing planning, and marketing guidance</li> <li>● Conference organizers</li> <li>● Trading companies</li> <li>● Chain and franchise store operations</li> <li>* Distribution channel development</li> <li>● Market research firms</li> <li>* Market data collection and consumer behavior survey firms</li> <li>● Industry associations</li> <li>* Assistance with business negotiations services</li> </ul>



**Table 8-5-1 Helping SME Supply Chains Develop Their Target Markets – Key Supporting Companies/Institutions and the Roles They are Expected to Play (continued)**

Value activities and functions	Integrated design services – joint product development and image building	Integrated manufacturing services	Integrated marketing services
Information provision and integration services	<ul style="list-style-type: none"> <li>● IT firms</li> <li>* E-Enablement of the entire supply chain, in order to facilitate vertical and horizontal integration of information relating to all value activities</li> <li>● Marketing agencies</li> <li>● Research institutes</li> <li>● Online marketplaces</li> <li>* Establishment of information platforms to provide market information, production and sales information, technical information, information on standards and specifications, transaction data, etc.</li> </ul>		
Transportation and logistics services	<ul style="list-style-type: none"> <li>● Transportation and logistics service providers</li> <li>* Linking production to the consumer through efficient delivery services, including both regular logistics services and linkage with information flow to provide integrated logistics services</li> <li>● Research institutes</li> <li>* Development of new logistics-related technologies (such as RFID, advanced refrigerated and low-temperature transportation technologies, etc.)</li> </ul>		
Payments and receipts, and financing	<ul style="list-style-type: none"> <li>● Banks, SME credit guarantee funds, other financial institutions, IT firms</li> <li>* Establishment of e-enabled money flow service systems (covering online payment, online financing, fund management, etc.) in line with new developments in digital transaction technology</li> <li>● Intangible asset appraisal, transaction and financing mechanisms</li> <li>* Establishment of money flow systems for intangible asset transactions in line with the development of the knowledge economy</li> <li>● Venture capital firms</li> <li>* Help SMEs to secure long-term equity financing that can help them to expand their markets</li> </ul>		
Intellectual property	<ul style="list-style-type: none"> <li>● Specialist intellectual property management agencies</li> <li>● Law firms</li> <li>● Accountant firms</li> <li>● Research institutes</li> <li>● R&amp;D service providers</li> <li>* Intellectual property management, protection, integration, and value-added services</li> </ul>		
Education and training	<ul style="list-style-type: none"> <li>● Industry associations</li> <li>● Management consulting firms</li> <li>● Research institutes</li> <li>● Universities and colleges</li> <li>* General and specialist manpower cultivation</li> </ul>		

Note: ● represents supporting agencies/companies; \* represents the functions that support agencies/companies are expected to provide.

In the past, Taiwan has focused heavily on the integration and division of labor within production activities. The emphasis in this area now needs to be placed on the

development of inspection and certification services. Integrated design, production innovation and image building, and integrated marketing are all areas where Taiwanese SMEs tend to be relatively weak. The government could help by fostering the development of related service industries to support SMEs' efforts to upgrade their capabilities in these segments of the value chain. Supporting activities continue to display many areas of weakness, particularly with regard to the provision of market information, payment and financing services, intellectual property rights management, etc. In these areas, SMEs need assistance from the government to build up an environment conducive to the development of these activities.