



# Cooperation and Methods Between Enterprises in the Industrial Technology Industry

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**Abstract.** Strategic cooperation between enterprises promotes changes in enterprises to a certain extent. Among Midea Group's many strategic partners, TTIUM promotes Midea's smart transportation industry. The analysis of case studies and related models in this study shows that TTIUM can adopt some methods to cope with the problems, including repositioning, servitization and communication strategies.

**Keywords:** positioning, servitization, communication elements, strategic cooperation

## 1 Introduction

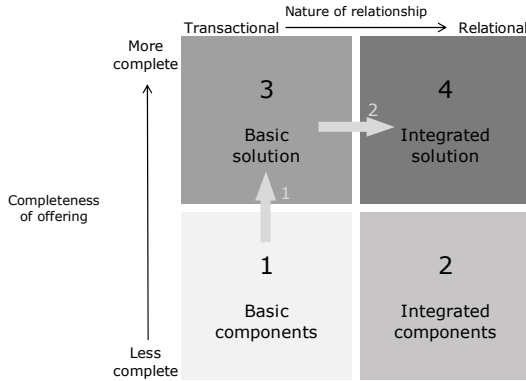
In recent years, strategic cooperation between enterprises of different sizes has promoted the development of enterprises. The strategic cooperation between Midea and TTIUM marks the official entry of Midea's industrial technology into the new energy field of two-wheelers. The expansion of Midea Group's commercial footprint will also have a broad impact on TTIUM. It is important to analyze and discuss TTIUM's brand and positioning, servitization stages, and communication strategy. This study will deeply explore the relevant content of business to business marketing through case study and other methods.

## 2 Literature Review

In complex and changeable situations, brand behavioral characteristics can play a moderating role in the transformation from brand trust to brand love [6]. Brand behavior characteristics include brand empathy, brand ethics, brand agility, brand expertise and brand innovativeness [6]. However, companies enhance the uniqueness of products and services to customers through positioning, so that the products generate a certain degree of value-added in customer awareness.

As an important method of strategic positioning, repositioning changes customers' views on the organization [3]. Product manufacturers need to re-evaluate their competitive position in the face of changes in the relationship between companies and

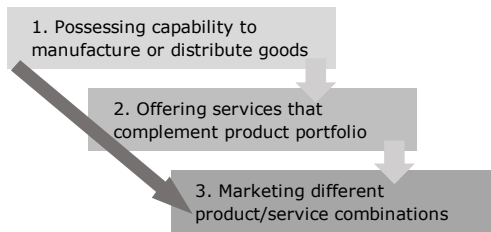
customer needs, so the two-by-two matrix can be used to check positioning <sup>[10]</sup>, as represented in Figure 1.



**Fig. 1.** – Repositioning Source: Ellis, 2011

As servitization is the key to improving the survival and competitiveness of enterprises, manufacturing enterprises can take advantage of the dynamic capabilities and servitization in the current environment to improve the survival and competitiveness of enterprises <sup>[17]</sup>. However, the enhancement of enterprise product research and development intensity will promote the enhancement of enterprise servitization to a certain extent, thus enhancing the market position of enterprises <sup>[18]</sup>.

Companies implementing the strategy of combining products and services need to go through three stages <sup>[3]</sup>, as represented in Figure 2. However, the usage of the product-service strategy can vary for reasons of potential value, strategic importance and service provision <sup>[3]</sup>.



**Fig. 2.** - Stages of servitization Source: Ellis, 2011

The basis of value exchange, creation and management among enterprises includes the exchange relationship and collaboration mode among enterprises <sup>[1]</sup>. However, customer engagement plays an important role in the strategies of enterprises <sup>[4]</sup>. With the development of globalization, technology, and platforms, the involvement of interconnected members can change the outcome of strategies <sup>[1]</sup>. In a business-to-business environment, the strategic tools of online customer communities help enhance collaboration among customers about a company's products and services <sup>[11]</sup>.

While improving transparency, social media will affect the attractiveness of enterprises <sup>[14]</sup>. However, more detailed reference information and word-of-mouth recommendations still make enterprises attractive to small medium enterprise customers from the initial stage <sup>[13]</sup>. In addition, customer relationship management (CRM) is used in business-to-business environment to record business customer information and enterprise data in detail. It helps improve the trust and commitment of enterprises to reduce customer churn and marketing costs <sup>[12]</sup>.

The tactical elements of the communication mix (Figure 3) are ranked in descending order of their impact on the interaction between the company and the customer <sup>[3]</sup>. This facilitates communication and cooperation in the marketing process of businesses and enterprises.



**Fig. 3.** - The elements of the communications mix Source: Ellis, 2011

### 3 Methodology

Qualitative research design includes case study methods, phenomenology, grounded theory, narrative research and ethnography <sup>[9]</sup>. Case study can effectively answer research questions through rich data <sup>[5]</sup>. However, internal validity can be enhanced through triangulation and multiple data sources <sup>[9]</sup>. Case study benefit from triangulation of descriptions and explanations through multiple data sources to gain credibility <sup>[2]</sup>.

### 4 Case Description

As a leading enterprise in the industrial technology industry, Midea Group's business covers research and development, manufacturing and sales of smart homes, home appliances, smart logistics and components <sup>[7]</sup>. Midea adopts a consumer-centric and problem-solving approach to provide solutions <sup>[7]</sup>. Midea Group is committed to developing and manufacturing more advanced products to create smart life <sup>[8]</sup>. Midea has 34 production centers worldwide, more than 150,000 employees, 28 innovation centers, and more than 62,000 granted patents <sup>[7]</sup>. In order to create a diversified strategic model and implement the strategy of smart manufacturing and smart home, Midea Group acquired a manufacturing enterprise located in southern China.

TTIUM attracted the attention of the industry by participating in the European Bicycle Trade Fair (EUROBIKE 2022) and the Shanghai International Bicycle Show, showcasing several new electric motors including Welling and Motinova, the VOLANS and PEGASI series, and the outstanding riding experience <sup>[16]</sup>. As an innovative technology company supporting the transformation of the Electric bicycle (e-bike) industry, TTIUM owns more innovative and high-quality e-bike components, and more than 30 domestic and foreign invention patents and software Copyrights <sup>[16]</sup>. In addition, the company is committed to manufacturing hybrid bicycle power assistance systems and electromechanical devices <sup>[15]</sup>.

Midea's rich research resources, cutting-edge electrical technology solutions, research and development capabilities, and advantages in sharing products, promoting technological innovation and common technologies will help to further enhance TTIUM's product competitiveness and quality control system <sup>[16]</sup>. TTIUM still needs to face many difficulties and find new growth points in the process of operation. Together with Midea, TTIUM will further enhance its core capabilities in two-wheeled mobility and intelligent transportation to provide a more complete electric propulsion system solution <sup>[16]</sup>. Under the fierce competition situation in the intelligent industry, Midea needs a comprehensive marketing plan to increase its market share and competitiveness. In order to improve firm strength and position in the industry, it is important to analyze the status of TTIUM using theories related to business to business marketing.

This study focuses on the following issues:

1. How does TTIUM combine its own characteristics with Midea's resources to position itself ?
2. How does TTIUM use Midea's service model to improve the stage of servitization?
3. How does TTIUM use Midea's communication channels to enrich communication methods?

## 5 Case Analysis

### 5.1 The Business of TTIUM

Midea Group's emotional and personal customization helps enhance customers' understanding and trust in the brand. In addition, higher regulatory programs and research and development investment enable Midea Group to provide more comprehensive services to partners and customers. This partly increases the quality and reliability of the product, thus providing an overall solution for existing and potential customers and important partners.

Following the acquisition, there have been a number of changes in TTIUM's position and condition. In addition, the state of the macro environment will also pose challenges to the company. The development of e-commerce has supported TTIUM, although environmental protection policies and regulations have posed challenges. In Appendix 1, Appendix 2 and Appendix 3, the market and industry conditions in which TTIUM is located are analyzed. Although TTIUM is outstanding in the production and sales of

drive systems, it lacks the cooperation and close relationship between partners and suppliers in business-to-business. This leads to a lack of long-term relationships in the marketing and interaction process of the company in the business market. In addition, TTIUM's product range is relatively simple, which makes it difficult to maintain a high market share in highly competitive industrial markets.

The main business of TTIUM is distributed in two parts in Figure 1:

CELL 1: The company offers retail products to small stores that sell industrial equipment. The retail of mechanical and electrical equipment, accessories and electronic products adopts the trading method.

CELL 3: The company provides products and services to wholesalers and large shopping malls in the industrial sector. The company provides some technical support and services for customers' problems in the daily operation process.

## 5.2 The Servitization Stage of TTIUM

As shown in Figure 2, TTIUM offers a product (the first stage) and a limited service (stage 2) to commercial customers. TTIUM still needs to adopt different marketing mix for different customers to improve the degree of servitization. Midea has a larger customer management system, can provide business customers with perfect technical guidance. In addition, multiple types of marketing strategies are conducive to strengthening customer loyalty and connection. Midea has profound industrial technology reserves and focuses on product technology innovation. This will give TTIUM technical support in product innovation.

## 5.3 Communication Mix Elements of TTIUM

TTIUM has used direct marketing, promotions and trade shows to maintain communication with customers, as shown in dark gray in Figure 3. In addition, telemarketing and Internet marketing are the direct marketing methods used by TTIUM. This reduces to some extent the personnel and time costs incurred by the company in the process of introducing products and receiving orders.

TTIUM can use Midea's communication methods and channels to increase the scope of marketing. Midea displays information about research teams and marketing activities on the company's website to increase differentiation between products and competitors. In addition, Midea designed a media room on the company's website that included the company's press and promotional materials. This provides a guarantee for the communication of corporate culture and corporate image and the management of public relations. Midea can facilitate more effective two-way communication between sales staff and customers by providing TTIUM with a management team and professional marketing staff. In addition, TTIUM's participation in some exhibitions has helped the company gain new market information and potential customers.

## 6 Recommendations

### 6.1 Repositioning TTIUM

To secure a more stable revenue stream, TTIUM needs to reposition itself. This is shown by the gray arrow in Figure 1.

Move 1: TTIUM already has the ability to retail and offer products, but the degree of business linkages and information exchange is relatively low. Midea's existing research and development resources and cutting-edge electric motor solutions can provide technical support for TTIUM to develop new products and related services. This helps TTIUM achieve more effective results in product development. Product innovation can provide greater appeal to business customers.

Move 2: At the same time, Midea's established supply chain and manufacturing system can provide TTIUM with rich communication channels, industry experience and customer resources. This will enable TTIUM to establish closer information exchange and business relationship with customers. As a result, TTIUM's positioning can shift toward a comprehensive product and relationship type.

### 6.2 Servitization of TTIUM

TTIUM can use Midea's business services model to provide a portfolio of services to customers. Shift from the existing stage of making and selling goods to the direction of the dark gray arrow, as represented in Figure 2. TTIUM's new products, including Welling and Motinova, and VOLANS and PEGASI, could offer consumers more variety. Highlight the differences between the series or match different series and products with unique services to meet the needs of different business customers.

### 6.3 Communication of TTIUM

TTIUM needs to continue to use the existing elements of the communication mix, as shown in dark gray in Figure 3. In addition, TTIUM can use other communication tools and method of positioning to facilitate customer interaction, as represented in Table 1.

**Table 1.** - TTIUM's method of positioning, tactics and communication tools

Method of positioning	Tactics	Communication tools
Brand and product feature	<ul style="list-style-type: none"> <li>- Highlight product uniqueness. Differentiate from competitors.</li> <li>- Two collections of TTIUM's Motinova brand: VOLANS series: Stable, quiet and easy to operate. Suitable for urban traffic and suburbs</li> </ul>	<ul style="list-style-type: none"> <li>- Company newsletter</li> <li>- Company website. Provide interactive and consulting functions to business customers.</li> <li>- The industry news section of the magazine. Present new products, drive information and after-sales service to potential investors and customers.</li> </ul>

	<p>PEGASI series: Quiet, light, sensitive response speed. Suitable for rough terrain.</p> <ul style="list-style-type: none"> <li>- Green and low-carbon. Cycling can reduce environmental pollution.</li> </ul>	<ul style="list-style-type: none"> <li>- Newspapers. Advertise the company. Strengthen relationships with information technology suppliers.</li> <li>- Posters, billboards and short videos.</li> <li>- Exhibition activities.</li> <li>- Packaging of products. Reprint and design.</li> <li>- Enhance communication with applications for customer relationship management.</li> </ul>
Price and quality	<ul style="list-style-type: none"> <li>- Raise prices.</li> <li>- Improve product performance. Make the drive system smoother, lighter and quieter. Use Midea Group Industrial technology solutions to enhance research and development capabilities.</li> <li>- System solutions and services.</li> <li>- Two-way communication of information technology. Enhance product and service quality through interaction and collaboration with Midea Group.</li> <li>- Platform for the aftermarket. Monitor products.</li> <li>- Service Center</li> <li>- Supply chain security and supply stability</li> <li>- The quality is more in line with international standards.</li> </ul>	<ul style="list-style-type: none"> <li>- Change of contract</li> <li>- Customer relationship management applications</li> <li>- Personal selling, Mail</li> </ul>
Existing users and reputation	<ul style="list-style-type: none"> <li>- The Partnership Program. Reward long-term customers.</li> <li>- Green, sustainable and smart products and technology solutions.</li> <li>- Add Midea Group logo.</li> </ul>	<ul style="list-style-type: none"> <li>- Press release on the company's website.</li> <li>- Telemarketing, direct marketing and personal marketing.</li> <li>- Gifts and Rewards</li> <li>- Description of international standards</li> </ul>

## 7 Conclusions

This study provides an in-depth analysis of the development direction of TTIUM by exploring models and theories such as enterprise positioning, servitization and communication elements. Strategic cooperation between companies can be explored through relevant methods. The strategies of firms in other industries can be further explored in future practice and research.

### Appendix

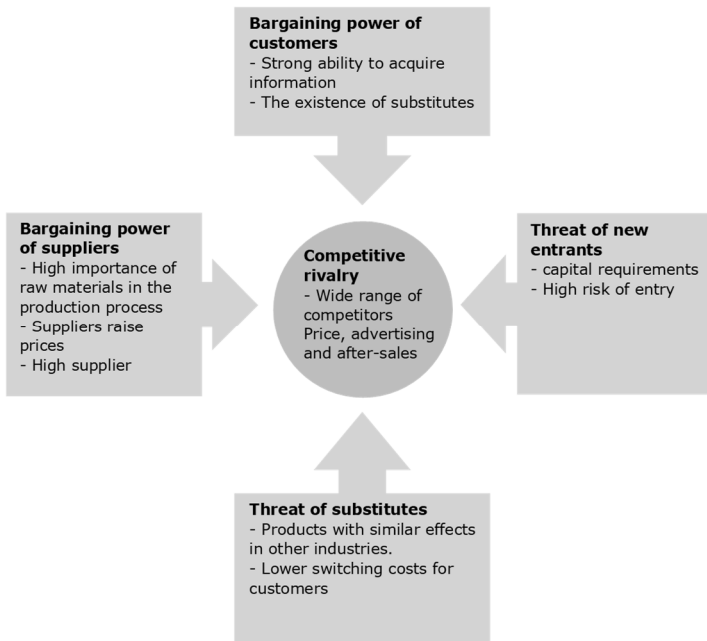
Appendix 1 - TTIUM's SWOT analysis

	<b>Before the acquisition</b>	<b>Post-acquisition</b>
<b>S</b> <b>Strengths</b>	<ul style="list-style-type: none"> <li>- Lower relationship management costs</li> <li>- drives technology: motor design, motor control, structural and industrial design, and sensor technology</li> <li>- Low prices and relationship management costs</li> </ul>	<ul style="list-style-type: none"> <li>- More comprehensive product range</li> <li>- Research and development resources and financial support</li> <li>- A stronger supply chain</li> <li>- The number of customers increased.</li> <li>- Economies of scale arising from linkages between multiple business segments of Midea Group</li> </ul>
<b>W</b> <b>Weaknesses</b>	<ul style="list-style-type: none"> <li>- Less product variety</li> <li>- Customer relationship management</li> <li>- Communication mode and degree of servitization</li> <li>- Funds needed for research and development</li> </ul>	<ul style="list-style-type: none"> <li>- Increased relationship management costs</li> <li>- Longer decision-making process</li> </ul>
<b>O</b> <b>Opportunities</b>	<ul style="list-style-type: none"> <li>- Green and low-carbon lifestyle</li> <li>- Concept of sustainable development</li> <li>- Market development potential of electric moped</li> <li>- Commercial market demand</li> </ul>	<ul style="list-style-type: none"> <li>- The needs of the global business market</li> <li>- Opportunities for product export</li> <li>- The driving effect of sustainable policies and ideas</li> </ul>
<b>T</b> <b>Threats</b>	<ul style="list-style-type: none"> <li>- Global competitors in related industries</li> <li>- Competition among enterprises</li> <li>- Similar products</li> </ul>	<ul style="list-style-type: none"> <li>- Strict quality standards</li> <li>- Fierce competition</li> </ul>



Appendix 2 - Macro environment of China

<b>P</b> Political	<ul style="list-style-type: none"> <li>- Measures to encourage and support the development of enterprises</li> <li>- Stronger regulation of online transactions</li> </ul>
<b>E</b> Economic	<ul style="list-style-type: none"> <li>- Economic growth and supply chain repair</li> <li>- Inflation</li> <li>- GDP growth</li> </ul>
<b>S</b> Sociocultural	<ul style="list-style-type: none"> <li>- Smart travel and green transportation</li> <li>- Pay attention to health and sports</li> <li>- Trust and favor famous brands</li> <li>- low-carbon transportation</li> </ul>
<b>T</b> Technological	<ul style="list-style-type: none"> <li>- Digitalization and e-commerce have made transportation more efficient</li> <li>- Development of logistics and transportation industry</li> <li>- Big data</li> </ul>
<b>E</b> Environmental	<ul style="list-style-type: none"> <li>- Energy conservation and emission reduction measures</li> <li>- Reduce carbon emissions</li> </ul>
<b>L</b> Legal	<ul style="list-style-type: none"> <li>- System of transportation</li> <li>- System of the Company</li> <li>- Laws on environmental protection</li> </ul>



Appendix 3 - The five forces of the industrial technology industry

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