

Strategic Value Chain Analysis in the Asia-Pacific Industrial Printing Services Sector: A Resource-Based View Perspective

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Abstract: China is in an important stage of digital transformation and upgrading of traditional industries, industrial B2B industry is facing the historical opportunity of development path upgrading, the huge development potential of China's industrial B2B market is constantly released, industrial B2B platform needs to increase the layout of digital capabilities, category management, offline logistics infrastructure network building and offline service team building. This paper analyzes the marketing value realization strategy of AnshiAPAC customized industrial printing service.

Keywords: marketing value; Industrial products; 3D printing

1. Research background

3D printing began to appear in the 1990s. The first 3D printing device was made in 1986 by the US company 3DSystem. 3D printing technology refers to the rapid printing of materials through digital models. Traditional machining technology is to reduce the material, so that the product molding, but 3D printing technology belongs to the "additive manufacturing" 3D printing technology integrates a variety of technologies, to achieve the product from model to entity transformation. At present, the technology can use a variety of materials, according to different fields can be applied to different materials. As an intelligent manufacturing technology that integrates the research results of many fields, 3D printing technology has been widely used in various fields. From the "3D Printing Technology Industry Development Action Plan" to the "three-year Action Plan to enhance the Core competitiveness of the Manufacturing industry" and other policies, all reflect the country's attention to 3D printing technology.

Domestic 3D printing service marketing to direct mode. The sales model is traditional and single, mostly relying on wechat group chat, circle of friends and other publicity products. The influence factor of the portal websites of several major domestic simulation leading enterprises is low, and the communication influence is much lower than the offline promotion of relationship marketing. The utilization rate of Internet digital platform is low, the influence of communication power is low, and the portal construction degree is low^[1]. Single channel, insufficient outward expansion. Failure to establish a comprehensive and efficient relationship between suppliers and demand manufacturers. This year, the state continues to strengthen efforts to promote the combination of digital economy and traditional industries. During the "14th Five-Year Plan" period, the application of industrial Internet platform will be continuously deepened. China is in an important stage of digital transformation and upgrading of traditional industries, and the B2B industry of industrial products faces a historical opportunity of development path upgrading^[2]. The great development potential of China's industrial B2B market is constantly released, and industrial B2B platforms need to increase the layout of digital capabilities, category management, offline logistics infrastructure network building and offline service team building. How to effectively integrate information resources, broaden new media channels, and form the whole layout of digital intelligent industry is a problem worth exploring^[3].

Domestic 3D printing head enterprise technology development degree is similar, enterprises use standard intelligent digital production, the same type of products in the quality are at the same level, the product price difference is small. Therefore, how to do a good job in the marketing of products in order to ensure the competitiveness of enterprises is particularly important^[4].

This paper takes the customized printing service provided by Anshi Asia Pacific Technology Co., Ltd. as an example to study the relevant value strategies of industrial marketing.

2. General situation and marketing strategy of ANshi Asia Pacific Technology Co., LTD

2.1 Company overview

With 25 years of experience in R&D informatization industry software development and service, and 8 years of experience in advanced design and additive manufacturing of industrial products, AnshiAPAC is the leader in the field of industrial enterprise R&D informatization, the developer of new industrial products, the founder of enterprise simulation system and lean R&D system, and in the leading position in PLM, virtual simulation and advanced design in China. In 2015, the Ministry of Industry and Information Technology approved the establishment of "National Institute of Industrial Software and Advanced Design", integrating the technological advantages of Hangzhou Dedi Intelligent, Chongqing Andruiyuan and other subsidiaries, focusing on building a digital development system based on forward design. In the future, the company will continue to be committed to industrial software development, additive manufacturing system and industrial interconnection system research, and create a digital business form of virtual and real intelligence, resource integration, technology transformation and ecological construction with a global vision and pattern, and strive to build the company into an ecological platform enterprise.

The company adheres to the strategic thought of international cooperation and collaborative development, actively cooperates with domestic and foreign enterprises, research institutes, universities, think tanks and more than 50 well-known experts including academicians, and establishes a wide range of industrial alliances. The cooperation has achieved fruitful technical and market results, and has been rated as the global elite partner and value-added service provider of ANSYS for many consecutive years. It has established upstream and downstream industry alliances with dozens of domestic and foreign enterprises such as CADFEM, IBM, China Power Internet, Sugon, Sadi Group, National Supercomputer Center, AVIC, CRRC Group, FAW Group, Academy of Military Science, Ali Cloud, Huawei Cloud and so on. At present, it has established R&D centers in Beijing, Hangzhou, Shanghai, Chongqing, Taipei, Boston, Cincinnati and other places, and is preparing to build R&D centers in Japan, Germany, Canada and other places.

It has more than ten common models, including special type, proofing type, production type, desktop type and other equipment, including metal printer, nylon and other non-metal printer. In high-precision plastic printing, OAM open printing, three-dimensional food printing, industrial metal printing has a number of core technologies and declared more than 20 invention patents; At the same time, the company has independent industrial control software research and development ability, developed advanced medical special software, three-dimensional modeling and independent control terminal.

We have carried out in-depth research and development in special materials, new materials and customized materials, and are committed to breaking through the bottleneck of additive manufacturing industry and promoting its development. It mainly includes high-purity spherical metal powders such as high temperature alloys, titanium alloys, refractory metals, aluminum alloys and stainless steel, as well as universal resin materials for light curing printing equipment with low viscosity and low shrinkage.

2.2 3D printing services

Combined with the technical advantages of AnshiAPAC, Hangzhou Dedi, Chongqing Andruiyuan and Chongqing Andlun respectively in the fields of design simulation, 3D printing equipment, 3D printing manufacturing process and 3D printing materials, we provide users with advanced design and intelligent manufacturing services based on additive thinking.

At present, the company has an additive manufacturing service center with an area of 3,000 square meters, and is committed to building the whole process chain of industrial additive manufacturing. At present, it has more than 100 sets of additive manufacturing equipment, mainly composed of independent research and development of professional metal and non-metal additive equipment, while introducing HP, EOS, Stratasys, SolidScape, Creaform, Ultimaker, Liantai, Huashu high-tech and other brands of excellent models.

In order to create the perfect product, we complement additive manufacturing with other processes and establish a complete post-processing studio to ensure that the work provided meets the requirements of the user. In the appearance part, we provide shot peening, vibration polishing, fluid

polishing, painting, powder spraying, sealing, electroplating, 3D+ surface printing and other solutions. In the performance part, we are committed to heat treatment and hot isostatic pressing technology. In the precision part, we provide CNC, high precision die, electric spark and other processing solutions.

2.3 Current marketing strategy of Anshi Asia Pacific

2.3.1 Current situation of product strategy

3D printing technology has been widely used and involved in electronic industry, structural parts, medical field, personalized design of daily necessities, construction industry, cultural relics restoration, aerospace, education and teaching and many other fields[5]. Andruiyuan, a subsidiary located in Chongqing Province, is the largest printing service center in southwest China. The products mainly focus on customized equipment components, medical appliances, aerospace parts, art sculpture and other products. After years of development, they are recognized and accepted by local customers, and have accumulated certain market resources and brand influence in this market field. However, as more and more 3D printing enterprises enter the market, Andry source's market share has been eroded, and its revenue has been declining. In 2021, the enterprise has entered a state of loss. According to the company's internal integration of competitive products in the southwest market in 2020, Andruiyuan's printing services in the southwest market share bureau of the top two, Weibu three-dimensional, first Lin three-dimensional, Zhongnui, flash casting and other national well-known brands to produce customized parts as the main competitive products. But AnshiAPAC has independent research and development of front-end control system, and more than 80 percent of the printing of self-made materials, relative to the did not play their cost advantage. Therefore, under the current sales situation, in order to get rid of the existing sales bottleneck, the company urgently needs to innovate marketing strategies to meet the market demand and achieve sales growth

2.3.2 Current situation of price strategy

Customized printing service product marketing belongs to the category of industrial product marketing, with narrow product channels and strong regional sales^[6]. Therefore, the pricing of products is mainly based on product categories, target customer groups and sales regions^[7].

2.3.3 Current situation of channel strategy

Anshiapac's customers are highly professional and its products are standardized. Therefore, in terms of channels, direct sales are mainly adopted, and channels are supplemented. It is understood that Anshi Asia Pacific channel layout to subsidiary agents and direct sales channels. At the same time, due to the backward marketing ideas of the company, there is still no complete online channel layout, which results in the product sales scope of the company can basically only rely on the company's existing partners, and the customer development is seriously insufficient.

2.3.4 Current situation of promotion strategy

Anshiapac's products and services are industrial products, so only for the relevant needs of the professional field and customers. As a result, the promotion method of Anshi Asia Pacific is relatively simple, not only the price elasticity is small, but also the promotion method mainly promotes the sales by providing discounts and additional services to the old customers. Therefore, the promotion lags behind, but also stays in the traditional "seller's market", and there is a big gap with the well-known 3D printing enterprises such as Weibu 3D, Xianlin 3D and Zhonrui.

3. Analysis of THE COMPETITIVE ENVIRONMENT of ANSHIAPAC.

3.1 Analysis of political environment

In 2015, the National Additive Manufacturing (3D Printing) Industry Development Promotion Plan (2015-2016) was first released by the Ministry of Industry and Information Technology, which proposed to accelerate the healthy and orderly development of the additive manufacturing industry, take technological innovation as the driving force, and focus on solving the basic problems in the independent research and development of key materials and equipment. The explicit inclusion of 3D printing in the national strategic level is the first time that the Chinese government has elevated 3D printing to the national strategic level in the 30 years since the birth of 3D printing in 1986.

In March 2021, China released the 14th Five-Year Plan of the People's Republic of China for

National Economic and Social Development and the Outline of the Long-term Goals for 2035, which clearly proposed to promote the digital transformation of industries, promote the deep integration of digital technology with the real economy, enable the transformation and upgrading of traditional industries, and create new advantages of the digital economy^[8].

3.2 Analysis of economic environment

In recent years, the application degree of 3D printing market in China has been deepening, and it has been more and more widely used in aerospace, automobile, shipbuilding, nuclear industry, mold and other fields. 3D printing technology has become an important technical means for the repair and remanufacturing of direct manufacturing machines in aerospace and other fields. It has become an important way to realize product design and rapid prototyping in automobile, shipbuilding, nuclear industry, mold and other fields^[9].

From 2017 to 2020, the scale of China's 3D printing industry increased year by year, and the growth rate was slightly faster than the overall growth rate of the world, so that the proportion of China's 3D industry in the world was increasing. According to the "2019 Global and China 3D Printing Industry Data" released by CCID Consultants in March 2020, the scale of China's 3D printing industry in 2019 was 15.75 billion yuan, an increase of 31.1% over the previous year.

It is expected that from 2020 to 2022, 3D printing equipment will still occupy the largest share, with the proportion decreasing slightly year by year. In 2022, the industry scale will be 15.4 billion yuan, accounting for 43%.

4. Anshi Asia Pacific Technology Co., Ltd.: Optimization of Marketing Strategy

4.1 Innovative products and brand building strategies

4.1.1 Product development

As the company's product technology and services enter the mature stage, the company's product strategy should focus on the improvement of product performance and the research and development of new equipment. In the future, the company will layout the small-scale customization business of the factory, so the company should improve the cognition and grasp of the customer needs of the small-scale customization market by combining policy research and market research. In the engineering business, if the company can provide Party A with printing raw materials, printing equipment and whole-process technical services, Party A can choose a package procurement mode, which reduces the explicit and implicit costs of procurement and increases the leverage of the enterprise in winning the bid of the engineering project.

4.1.2 Customer service

At present, the customer service of ANshiAPAC is relatively simple, mainly providing basic quality guarantee service for the products sold, and lacking personalized service before and during the sale. Therefore, AnshiAPAC should focus on improving customer satisfaction, and provide customers with accurate and efficient one-stop solutions through professional talent team while providing printing services.

Enterprises through the cultivation of Internet thinking, efficient use of the Internet to achieve online and offline linkage, through the mall, service points, websites and other forms to provide customers with the most convenient service experience, make full use of the industrial B2B platform, to provide downstream buyers with cost reduction and efficiency solutions, from search, single inquiry price comparison to order procurement, online performance and even logistics distribution. Relying on big data, cloud computing, blockchain, Internet of Things and other technologies, it provides buyers with transparent procurement information, customized product and service recommendation, online signing process and reliable traceability information, and enables enterprises through the penetration of scientific and technological advantages in important procurement links.

Smart logistics services deconstruct and reconstruct the logistics management process of industrial product supply chain, help traditional industries improve logistics management efficiency and reduce logistics management costs. Through technology empowerment, the whole process of logistics service system can be opened up, logistics resources can be digitized, logistics process can be visualized, logistics decision-making can be intelligent, warehousing link "right confirmation" can be realized

efficiently and at low cost, transportation link goods can be controlled in the whole process, and logistics can be helped to reduce cost and increase efficiency and accurate delivery.

4.1.3 Brand strategy

China is the world's second largest market for customized industrial components, but due to the lack of core technology and brand awareness, the competitiveness of Chinese 3D printing brands is weak. For Chinese manufacturing enterprises, technological innovation and brand building are indispensable. As a leading enterprise in domestic policy, AnshiAPAC currently has certain brand advantages, which can continuously explore the value of the enterprise in marketing.

4.2 Diversified pricing strategy

At present, the printing service price strategy of Anshi Asia Pacific Company is relatively single. Due to logistics and other reasons, the price is 10% higher than that of similar products of other domestic brands. And the firm's price system is inelastic. In the future development, in order to enhance the market competitiveness and create a one-stop personalized solution of "drawing design + printing structure optimization + distribution" to shape the core competitiveness, we should appropriately increase the flexibility of the price strategy, and develop flexible price strategy for low, medium and high printing materials, so as to attract more customers with demand to choose AnshiAPAC. Anshiapac shall strictly follow the following principles in setting prices:

The price must reflect the real value of the products; Second, the pricing must adapt to the market demand; Third, pricing must have some flexibility; prices should be relatively stable; prices should be subject to the needs of national policies. ANSHIAPAC should analyze the supply and demand of products in detail, and make clear the demand, cost and profit, so as to formulate a price strategy that can both have a certain price competitiveness and make the enterprise profitable.

4.2.1 Product Portfolio Pricing Strategy

In engineering business, AnshiAPAC can adopt preferential policies for long-term cooperation with high-quality customers and customers with good reputation and strong purchasing power. Preferential discounts can be reflected by "package" product and service combination. For old customers to purchase new products, especially to upgrade old products, ANSHAPAC can give competitive preferential quota.

4.2.2 Trial Pricing

AnshiAPAC will develop functions and services to meet different application scenarios around engineering business and small-scale customization. Since the FDM printing service of AnshiAPAC is currently in the mature stage of the product life cycle, in the future, in the early stage of some newly developed material printing into the market, the price of the same type of products should be investigated first before pricing, and the price of the new products should be slightly lower than the price of the mature competitive products.

4.3 Increasing promotion methods and strategies

At present, the promotion method of printing service of Anshi Asia Pacific Company is relatively single, and it mainly promotes sales by providing discounts and additional services to old customers. Therefore, it lags behind in promotion and stays in the traditional "seller's market", and there is a big gap with the leading brands in the industry. Therefore, the promotion strategy can be transformed and upgraded through the following aspects:

4.3.1 Promotion strategy

FDM, DLMS, DHP, rapid prototyping light curing and other printers as high-tech equipment, so to expand customized printing business, enterprises must focus on promotion through professional activities, such as well-known simulation promotion meetings at home and abroad, exhibition, various exchange meetings, enterprises will use these activities as a platform to display new products, new technology, attract potential customers.

4.3.2 Advertising strategy

Anshi Asia Pacific advertising volume is very small. The next step is to combine the new positioning and attract enough attention in the advertising of the target market. Anshiapac wants to

carry out publicity activities through advertising, the core is to grasp the state of the target audience. At present, for different potential customers in the industry, the advertising content to attract them is naturally different. Therefore, according to the needs of different market segments, enterprises should provide accurate advertising content that can cut into customers' pain points by stating product advantages through simple-cut copy.

4.4. Strategies for expanding promotion channels

The sales model of ANshiAPAC should adopt the two-wheel drive model of "retail + engineering". Due to the strong bargaining power of government departments and large enterprises, enterprises should also open up small customized printing channels to reverse losses. Small customization relies on distribution channels, and engineering customer bidding relies on direct sales channels. The mutual improvement between the two can win greater initiative for enterprises in the market.

4.4.1 Carry out reasonable online layout

In the process of large-scale development, ANshiAPAC needs to achieve differentiated marketing, enrich product and service categories, and meet the needs of customers in engineering business and small printing business. Therefore, according to the target market and positioning, ANshiAPAC needs to coordinate resources and rationally distribute its development, and choose different types of service mode layout to integrate into the market environment of the southwest region, so as to achieve concept dissemination and reputation accumulation. And strengthen expansion with other cities and regions.

4.4.2 Strengthen the maintenance of key customers

For some long-term cooperative customers, ANshiAPAC adopts more direct marketing channels, through one-to-one sales staff to explain sales, which can effectively enhance customers' trust in the company, but also enable customers to more objectively understand the relevant products, to ensure that ANshiAPAC customized printing service sales more smooth.

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