



DEVELOPMENT AND COMMERCIALIZATION OF CHINA'S BEIDOU
TECHNOLOGY LOCATORS

BY
YONGFA LUO

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF
BUSINESS ADMINISTRATION (INTERNATIONAL PROGRAM)
SOUTHEAST ASIA UNIVERSITY
ACADEMIC YEAR 2022
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Independent Study Title Development and commercialization of China's Beidou technology locators

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Program Master of Business Administration (International Program)

Advisor(s) Poramet Eamurai, Ph.D.

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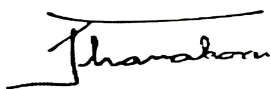


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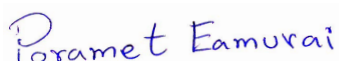
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Abstract

The objective of this research aims to study on commercialization of China's Beidou technology locators focus on Qiankun Location Business. This study was qualitative methodology via in-depth interview, and content analysis. The study found that: 1) Market segmentation were elderly and children's market, children aged 0 to 14 and elderly people aged 65, pet owners in China, vehicle anti-theft for cars, motorcycles, electric two-wheelers, bicycles and other two-wheeled vehicles. Target market focused on the domestic civilian market in China. It is mainly due to the following points. Positioning provide high speed and service quality to ordinary families, white-collar workers and students as our target customers, 2) Management plan with strong technical sales and R&D team work, Production plan by constantly update and improve the APP function, on the one hand, the upper computer system in the hands of users can automatically complete the upgrade and achieve the relevant functions through the Internet, operation plan develop Qiankun tracker gives full play to the advantages of "Internet+" and realizes the background control of the tracker through the upper computer. 3) Financial 5-year projection, first initial investment 3.2 million Yuan, ROI average per year = 37.56 %, NPV = 6,058,220 – 3,200,000 = 2,858.220 Yuan, IRR = 19.87% and Breakeven point or Payback Period = 3 years respectively.

Keywords: Qiankun technology, location business

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Yongfa Luo

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Section 1

Introduction

1.1 Company Profile

1.1.1 Positioning tracker industry has a bright development prospect.

According to the "2019-2024 China Tracker Industry Key Enterprise Development Analysis and Investment Prospect Feasibility Assessment Report" released by China Report Hall, it is concluded that: with the continuous improvement of urban residents' living and consumption levels, the government's support for Beidou technology has also stimulated the rapid advancement of positioning trackers based on Beidou technology, providing a broad development space for China's positioning tracker market. 2019 May On May 15, Yu Xiancheng, president of the China Satellite Navigation and Positioning Association, announced the official release of the "White Paper on the Development of China's Satellite Navigation and Positioning Services Industry (2019)". The white paper shows that the overall output value of China's satellite navigation and location services industry reached 301.6 billion Yuan in 2018, an increase of 18.3% over 2017, of which the core output value of the industry directly related to the development and application of satellite navigation technology, including chips, devices, algorithms, software, navigation data, terminal equipment, infrastructure, etc., reached 106.9 billion yuan, accounting for 35.44% of the total output value, and Beidou The contribution of Beidou to the core output value of the industry reaches 80%, and the associated output value formed by satellite navigation derivatives reaches 194.7 billion yuan. Thus, the next ten years will be a great opportunity for the booming development of China's positioning tracker industry.



Fig. 1 BeiDou navigation system publicity pictures

1.1.2 The positioning tracker based on Beidou technology is the inevitable trend of future positioning tracker development

As China's independently developed and independently operated BeiDou satellite navigation system, the localization rate of chips is high because foreign enterprises are prohibited from entering the BeiDou chip field. In the past two years, with the arrival of the 5G era, "Beidou + 5G" is expected to be widely used in vehicle monitoring, unmanned driving, LBS services, smart logistics and other fields, which will further promote the popularization and diversification of Beidou value-added services. Since 2017, Beidou navigation pan-precision technology has achieved a breakthrough from "0" to "1". Driven by technological innovation, the era of 20 to 60 cm positioning accuracy for the general public has come to the door, and the demand for derivatives has emerged. At present, the more common positioning trackers on the market in China use GPS technology, which is known to originate from the United States. Chinese industry experts analyze, "With the global coverage of Beidou system services in 2020 and the construction of a more ubiquitous, integrated and intelligent integrated space-time system in 2035, China's satellite navigation and location service industry will usher in the upgrading changes brought about by both technological integration and innovation and industrial integration and development." It is believed that with the

increasing demand for space-time information services from Chinese public users, the BeiDou application market will definitely show a vigorous development and maintain a stable growth. Therefore, multi-functional positioning trackers based on BeiDou technology are bound to have a good prospect and a wide market and will become an inevitable trend in the future development of positioning trackers.

1.1.3 Mission of Qiankun Technology

Positioning tracker has great potential in the civil market. Our research found that there are four major practical problems.

1. The increasing seriousness of vehicle theft.
2. Pet owners pay more and more attention to the problem of pet loss, but lack of good anti-loss instruments.
3. Anti-loss problems of the elderly and children.
4. Poor signal of communication equipment for outdoor explorers, unable to carry out danger alerts.

For the above five objective problems, combined with the current development trend of the positioning tracker industry in the background of the "Internet +" era, the multi-functional positioning tracker based on Beidou technology came into being. Since its inception, the project has been developing and improving towards comprehensive functions, accurate positioning and humanized services, and advancing with the times. Let Qiankun Technology become a veritable "personal butler" for users, and realize the goal of controlling Qiankun between square inches.

1.2 Feasibility analysis

1.2.1 Product Function Introduction

The product launched by Shenzhen Qiankun Technology Co., Ltd. is a multi-functional positioning tracker based on Beidou technology, so it is called Qiankun tracker. The function of Qiankun tracker is very mature, and the use is more suitable for the needs of consumers, so it has good market application prospects.

1.2.2 Qiankun tracker has four main features

Advanced technology and material. BeiDou satellite navigation system is a more mature positioning system in China, and its comprehensive technical strength

can compete with the U.S. GPS. the upper computer uses satellite real-time map display, through the upper computer can realize the background control of QianKun tracker. The lower computer data through the application processor module to connect the sensor and communication module, receive and complete the analysis and processing of all data. The STM32F103 mid-range processor from STMicroelectronics is selected for this processor module to control the whole lower computer system and coordinate the work of each module, and the STM32F103 node is the core of the whole hardware system. The combination and application of these technologies is a first in the history of technology in China and abroad.

Rich in innovation. Qiankun Tracker is the only multi-functional positioning tracker based on BeiDou technology in China and abroad at present. It combines real-time tracking, anti-theft alarm, remote control, communication and other functions in one to meet the different needs of a variety of people.

Thoughtful and humanized service. Qiankun tracker can be controlled remotely, and query history track can be easily checked through the binding of WeChat public number. Anti-theft function of the warning message double send, the user can not only receive SMS alerts, in WeChat can be synchronized to receive alerts to prevent important information missed.

Small design style and high-end quality. Qiankun tracker is based on the design style of "compact and portable". The entire tracker is compact and does not need to be charged, the internal mechanical structure is solid, and the space is reasonably arranged through close calculation and design, which scientifically enhances the space utilization rate and has the characteristics of simple structure and strong hierarchy. At the same time, its external minimalist style greatly increases the concealment of the tracker. This complements the intelligent concept elements.

1.2.3 Qiankun has achieved the function

1.Real-time tracking

Users can set the location upload time of Beidou according to their needs. Longitude and latitude. Alarm] to the server, the user can query the current location of the monitoring object and alarm information after logging into the host computer, but also can query the route previously passed (track replay).

2. Anti-theft function

After connecting the car immobilizer, in the case of car anti-theft set alarm, car door open alarm, illegal start alarm, rear trunk alarm, alarm information will be sent to the user set cell phone and server through SMS and WeChat or APP reminder, so that the monitoring personnel know that the monitored equipment has been alarmed.

3. Alarm function

1. Fence alarm: support specific area range tracking and alarming beyond the range.

2. illegal wire-cutting alarm: such as illegal wire-cutting power failure. The center will receive a power failure alarm.

4. Remote control and personalized settings

The user can set the terminal remotely by logging into the host computer, and the setting content includes positioning position information report time interval, activity range, and server address.

5. Communication function

1. Use 4G to send alarm and real-time tracking data or receive remote control commands

2. Use SMS to send alarm information or receive remote control SMS

6. Upper computer interface

The upper computer adopts satellite real-time map display, and the user logs into the upper computer with user name and password.

1. Real-time display of the current location of the monitored terminal equipment (or the last valid GPS location)

2. Real-time display of alarm information

3. Realize the track playback function, which can query and display the previously passed path

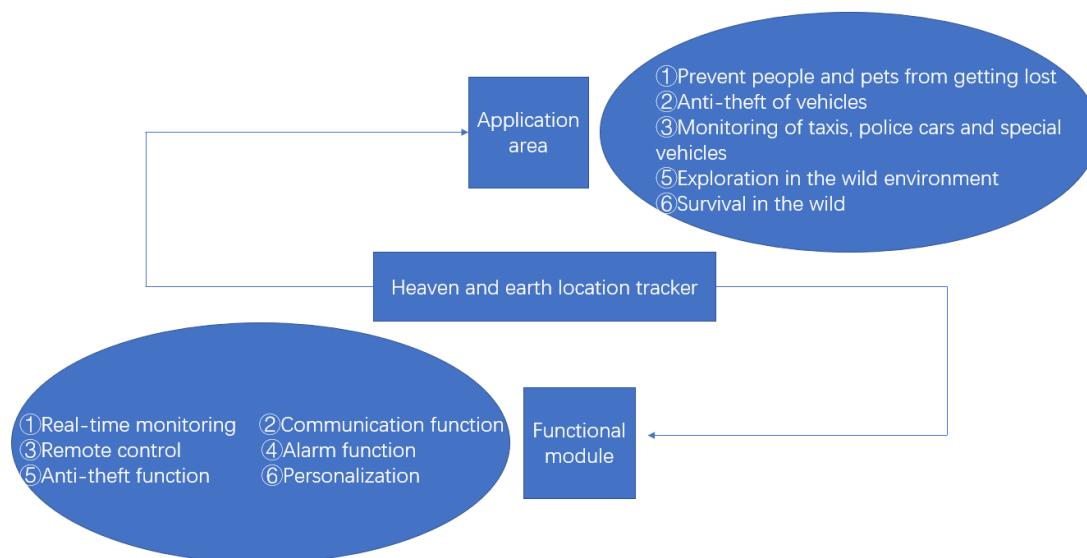


Fig. 2 Product function introduction

1.3 Introduction of the project company

1.3.1 Introduction of the company

Shenzhen Qiankun Technology Co., Ltd. was established in 2022, is a technology enterprise specialized in the research, production and sales of Beidou positioning tracker, not only has a number of independent intellectual property rights, but also our products have passed the quality certification of many parties, maintaining the technological leadership in the industry.

The company's R & D team is experienced and has a high level of professionalism, the team of creative engineers has been engaged in the research and development of Beidou positioning tracker since 2016, adhering to the entrepreneurial philosophy of "let love not be lost", to create the "Qiankun" positioning tracker, hoping to We hope to make a small contribution to solving the social difficulties such as lost property and lost people.

Under the guidance of our business philosophy of "making products down-to-earth and doing services in a practical way", and with the principle of creating characteristics and win-win situation, the company has won the trust and praise of our customers and has been at the forefront of the positioning tracker field through the consistent and unremitting efforts of all employees.

1.3.2 Introduction of the company LOGO

The company logo chooses blue as the basic color, which represents our corporate culture of "calm, rational and innovative"; the content of the logo consists of three elements: the earth, the seven stars of the Big Dipper and the Big Dipper satellite, presenting the basic information that our company develops trackers based on the Big Dipper system, and also expressing our trust in the Chinese Big Dipper system and our desire for the global positioning system market. desire for the global positioning system market.



Fig. 3 Company logo icon

1.4 Description of the company's organizational structure

1.4.1 Organizational structure

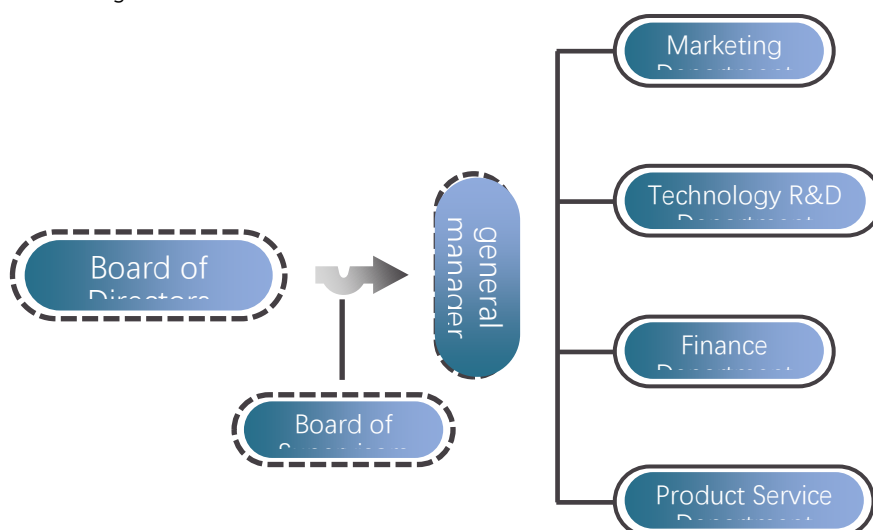


Fig. 4 Organizational chart of the company

1.4.2 Corporate tax forms

Factors	Proprietorship	Partnership	Corporation
<i>Management control</i>	Proprietor makes all decisions and can act immediately.	All general partners have equal control and majority rules. Limited partners have limited control. Can vary in an LLP.	Majority stockholder(s) have most control from legal point of view. Day-to-day control in hands of management who may or may not be major stockholders.
<i>Distribution of profits and losses</i>	Proprietor responsible and receives all profits and losses.	Depends on partnership agreement and investment by partners.	Shareholders can share in profits by receipt of dividends.
<i>Attractiveness for raising capital</i>	Depends on capability of proprietor and success of business.	Depends on capability of partners and success of business.	With limited liability for owners, more attractive as an investment opportunity.

Fig. 3 Forms of corporate ownership

1.4.3 Institutional settings

(1) Authority

【Board of Directors】

The Board of Directors is mainly responsible for major decisions on the Company's management, approval of the Company's system and employment of senior management.

【Supervisory Board】

The Supervisory Board is responsible to the General Meeting of Shareholders. It supervises the company's finance and the legality of the directors, chairman, chief financial officer and secretary of the board of directors in performing their duties, and safeguards the legitimate rights and interests of the company and its shareholders.

(2) Department Setting

【Marketing Department】

The Marketing Department is an important part of the marketing organization structure of the Company, with strong market research functions and capabilities, responsible for the formulation of the Company's annual marketing target plan, the establishment and improvement of marketing information collection, processing, communication and confidentiality systems, and the investigation of consumer purchasing psychology and behavior, the collection, collation and analysis of the performance, price and promotion methods of competing brand products.

【Technology R&D Department】

The Technology R&D Department is responsible for the overall strategic planning and annual business objectives of the company, and the annual product development plan of each product of the company around the product plan

formulated by the commodity department; communicating with the marketing department for the existing products of the company and sales tracking; improving the design and adjusting the unsatisfactory factors in a timely manner according to the market feedback information to make the products adapt to the market demand and increase the competitiveness; responsible for organizing The company is responsible for organizing the design review, technical verification and technical confirmation of the product design process.

【Finance Department】

The Finance Department is responsible for the company's daily financial accounting, participate in the company's business management, and need to be based on the company's capital operation, reasonable deployment of funds to ensure the normal operation of the company's funds. It is responsible for the annual financial accounts of the company, review and prepare the relevant financial statements of the superiors, and conduct comprehensive analysis.

【Product Service Department】

Responsible for the management of the company's after-sales service, including the determination and implementation of relevant after-sales service standards, and the formulation and modification of standardized policies. Responsible for collecting users' and customers' opinions, collating and analyzing the data and information fed back in product after-sales service, and forwarding them to the company's marketing department respectively.

1.5 Current Situation Analysis

1.5.1 Prospect analysis

1.5.1.1 The locator is an inevitable trend for the future development of personal navigation and location services

In recent years, the scale of China's satellite navigation and location services industry has continued to expand, and the output value has steadily increased, maintaining a good development trend. the overall output value of China's satellite navigation and location services industry reached 301.6 billion yuan in 2018, an increase of 18.3% over 2017. As far as the current situation is concerned, personal locators are the trend of navigation and location services development in the future.

1.5.1.2 Qiankun Technology has more functions and higher cost performance than similar products at home and abroad in China, with strong market competitiveness

At present, most of the locators at home and abroad adopt GPS satellite positioning, while our locator adopts BeiDou satellite system, which has higher accuracy, stronger anti-interference ability and smaller size, and has obvious advantages over the existing locators in the market.

Summary: The core innovation point of Qiankun Technology is the adoption of BeiDou navigation system to realize the positioning function. We have reason to believe that with the high accuracy and anti-interference function, it has enough advantages to go to the forefront of the locator industry with broad market prospect in the relatively blank market in China and the slightly weaker function market abroad.

1.5.2 Macro market analysis

We use the PEST model to scan the macro environment in which the personal locator is located.

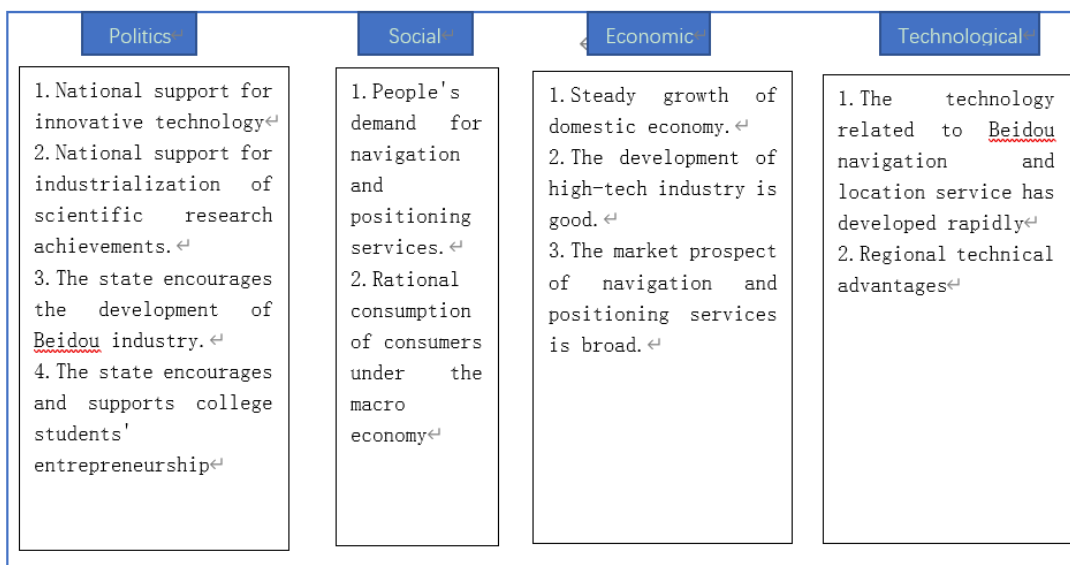


Fig. 4 PEST model analysis

1.5.2.1 National policy environment analysis

① The country vigorously develops BeiDou navigation and location industry
 The BeiDou navigation satellite system has entered a period of intensive industrial policies, and national ministries and commissions as well as various provinces and municipalities on the ground have issued BeiDou industrial development plans or

industry application promotion action plans, and vigorously supported the industry in three aspects: policy documents, special demonstration projects, and special funds for industrialization. since 2017, relevant national departments have successively issued a series of policies, such as the "Opinions on Encouraging and Regulating the Development of Internet Rental Bicycles Guiding Opinions", "Action Plan for the Development of Intelligent Health and Aging Industry (2017-2020)" and a series of other policies, which have promoted the use of locators in the mass market. Under the policy escort, the industry ushered in a period of rapid development.

② The state encourages college students to start their own business

In recent years, in order to support college students' entrepreneurship, the state and governments at all levels have introduced many preferential policies involving finance, taxation, entrepreneurial training, entrepreneurial guidance and other aspects. For college students who intend to start their own business, it is important to understand these policies in order to take the first step of starting a business.

1.5.2.2 Economic Environment Analysis

① Stable growth of China's domestic economy

In 2022, the overall output value of China's satellite navigation and location services industry reached 301.6 billion yuan, up 18.3% from 2021, of which the core output value of the industry directly related to the development and application of satellite navigation technology, including chips, devices, algorithms, software, navigation data, terminal equipment, infrastructure, etc., reached 106.9 billion yuan, accounting for 35.44% of the total output value.

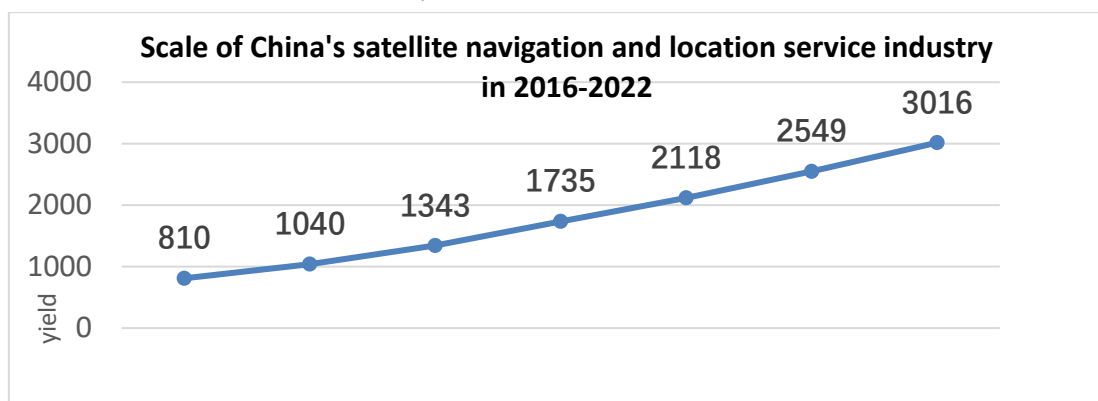


Fig. 5 Scale of China's satellite navigation and location services industry, 2012-2018

② BeiDou's high contribution rate to the core output value of the industry

By 2022, the contribution rate of BeiDou to the core output value of the industry has reached 80%. As a key technology for time and space information sensing and collection, BeiDou and mobile communication, mobile Internet, Internet of Things, big data and other technologies will accelerate integration and innovation. Navigation and positioning timing service products with the space-time information provided by BeiDou as the core will be more widely used in e-commerce, mobile intelligent terminals, intelligent networked cars, and Internet location services, and enter into industry applications, mass consumption, sharing economy and livelihood services on a large scale, influencing and changing people's production and lifestyle.

1.5.2.3 Social Environment Analysis

① People's demand for navigation and positioning services

With the increasing economic strength of the country and the increase of disposable income of families, more and more people pay attention to the demand of navigation and got service, the use of locator will become more and more common in the future, and its application will become more and more extensive with the continuous improvement of positioning accuracy.

② Consumer rational consumption in the macro economy

The change of economic environment and the change of trend may make people feel confused. Consumers have a very vague understanding of the brand of emerging products and a more emotional understanding of the products, and they are more concerned about the price of the products and hope to buy cost-effective products.

1.5.2.4 Technical Environment Analysis

① Breakthroughs in related technologies

In 2021, China successfully launched the first four BeiDou-3 satellites, which are also the 24th, 25th, 26th and 27th satellites of BeiDou satellite navigation system, marking the full opening of the new era of global network of BeiDou satellite navigation system. Beidou-3 satellites have greatly improved in performance and reliability. For the first time, an inter-satellite link has been configured to solve the problem of monitoring threats outside the country; for the first time, the threat in-

orbit autonomous intactness monitoring function has been realized, which is of great practical value to users.

② Area technology advantage

The mature locator in the market currently uses the U.S. GPS system, which has the problem of poor accuracy for some areas within China, while China's self-developed BeiDou navigation system has certain advantages for China's regional navigation and positioning services.

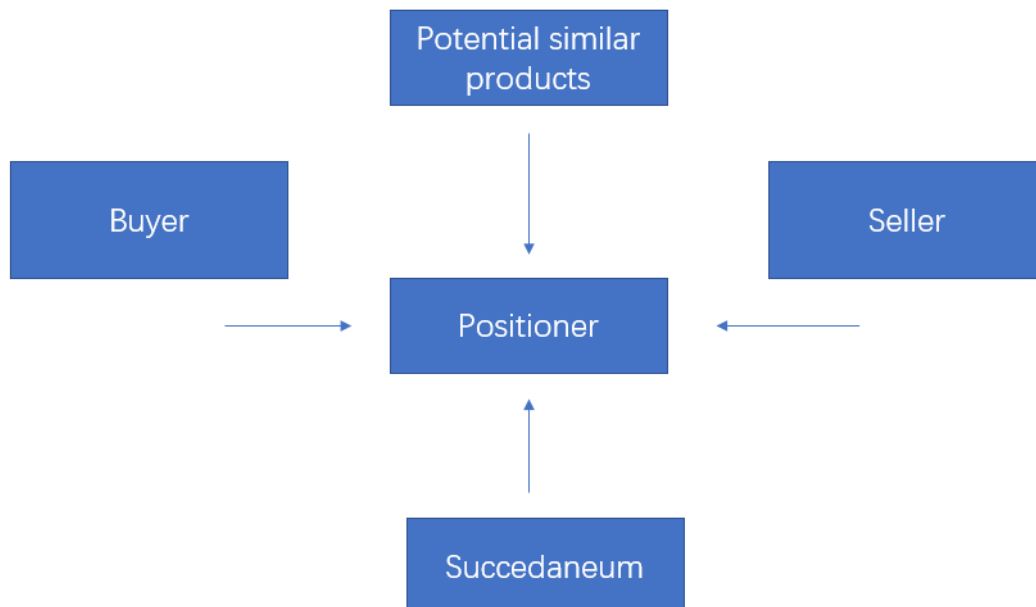
Difference	Beidou positioning system	US GPS system
Coverage	Global coverage	Global coverage
Positioning principle	Active two-way ranging two-dimensional navigation The ground center control system solves for the user's three-dimensional positioning data	Passive PN code one-way ranging QR code navigation The user equipment independently solves its own 3D positioning data
Positioning accuracy	Horizontal 10m, elevation 10m (95% confidence)	GPS system level 20 meters, elevation 20 meters (90% confidence)
Speed measurement accuracy	0.2 meters per second (95% confidence)	0.4 meters per second (90% confidence)
Timing accuracy	Beidou system 20 nanoseconds (95% confidence)	GPS system 30 nanoseconds (90% confidence) Better than 90%
System service availability	Better than 95%	Better than 90%

Fig. 5 Comparison of BeiDou Navigation System and GPS System

1.5.3 Industry Environment Analysis

At present in China, the positioner is in the early stage of rapid growth. The production and technical services of positioners are uneven and there is no unified industry standard yet.

The following Porter's Five Forces model is used to analyze the positioner industry in order to understand the competitive environment of the industry and the position of the Company in the industry.



The following is the composition of the industrial chain formed by Qiankun Technology locators.

Raw material suppliers - chip suppliers - locator manufacturing and service providers - target customers

As a locator manufacturing and service provider, Qiankun Technology is in the middle and lower reaches of the industry chain, assembling the shells provided by the upstream parts suppliers and the core chips produced by itself, and then selling them directly to the target customers.

1.5.3.1 Bargaining power of suppliers

As a locator manufacturer, the main suppliers of Shenzhen Qiankun Technology Co., Ltd. are the suppliers of raw materials required for production and the suppliers of improving Beidou chips. The following will focus on the bargaining power of suppliers in terms of their industry situation, the difficulty of finding substitutes, the position of buyers relative to suppliers, and the importance of supplied products relative to the overall production process.

① Bargaining industry of suppliers

The raw materials used by Shenzhen Qiankun Technology Co., Ltd. are a variety of common materials, and the industry supply and demand are stable.

The shells used by Shenzhen Qiankun Technology Co., Ltd. are designed by the company itself, and are only outsourced to suppliers for production, so there is

no price pressure, and only suppliers are required to provide production equipment for the market shells.

② Substitutes to find

Qiankun science and technology production of raw materials can not simply replace, which increases the difficulty of finding substitutes, but for the same raw material can come in this mature industry for different manufacturers to choose, the raw material market supply is sufficient, the price is more stable. Overall, the bargaining power of suppliers is medium.

③ Buyers are important customers for suppliers

Qiankun Technology's large demand for materials makes it will be an important customer for the supplier, which causes the transaction process, the bargaining power of the supplier is not strong.

Summary: Combining all the factors, the bargaining power of the main suppliers is not high, and the core of the product is manufactured independently. Therefore, our suppliers have little threat to us in terms of bargaining power.

1.5.3.2 Customer bargaining power

According to the current market demand situation, the customers of the locator are mainly ordinary families, white-collar workers and college students, etc.

① The scale of current customers, the scale of potential customers, and the concentration of purchase

At present, China's domestic locator market is still in the budding stage, and the target group and potential customers are large in scale.

② Product requirements

With the improvement of people's living standards, customers' demand for navigation and positioning services is gradually increasing, but the price of products that can meet customers' requirements for positioning service accuracy is generally high.

③ Whether the product is urgent for customers

For the current customers, there is a certain demand for positioning of pet anti-loss, vehicle anti-theft, elderly and children anti-loss.

④ The customer's sensitivity to price

The locator industry is a new industry, customers do not know much about the industry, but will be more sensitive to the price of these products.

Summary: A combination of factors, the customer's bargaining power is strong. However, our company has a competitive advantage because of its low price, which is easily accepted by customers, based on the concept of customer first.

1.5.3.3 Threat of potential entrants

The threat of potential entrants depends mainly on the barriers to entry and the counterattacks that may be encountered from existing companies in the industry.

① Technology Barrier

Technological barriers refer to the ease of access to this technology by entrants. Our products have obvious technological advantages over similar products on the market, and these technological advantages are supported by patents. However, with the country vigorously promoting the development of BeiDou navigation and location services, this technology will become more common in the future, so the technological barriers in this industry are average.

② Economies of scale

This industry is a new industry in China and is expanding. The scale of enterprises is not large, so the economy of scale effect is not obvious. The initial investment is mainly the construction period cost and production period cost.

③ Brand loyalty

There is no national brand in this industry yet, but once the brand is established and accepted by consumers, it will produce a certain brand effect.

④ Counterattack of existing enterprises

The current market concentration of the industry is not high, the market space is large, and the direct competitiveness between new entrants and the production of the original enterprises is not large.

Barriers to entry	Evaluate
Technology barrier	commonly
Scale economy	commonly
Brand loyalty	higher
Existing enterprises fight back	commonly
Potential entrant threat	commonly

Fig. 6 Evaluation analysis of entry barrier factors

1.5.3.4 Threat of substitutes

The substitutes of our products are mainly locators with the same positioning function. According to the survey, there are no substitutes in the market for the time being.

1.5.3.5 Threat of Industry Competitors

At present, Qiankun products are temporarily in the stage of developing service resources to enhance industrial innovation in the domestic market. From the perspective of the current market and foreseeable future competitors, the company's products will face the impact of.

① Companies that have released product information

At present, there are many GPS-based multifunctional positioning trackers on the market, and the famous ones are: Tuoqiang, Red General and other companies. Such companies have been in the market for a certain period of time, and have accumulated a certain number of customers, occupying a certain market share.

② GPS system stable position

③ New type of start-up companies

This category has certain technical barriers to enter the market and does not constitute a competitive relationship with our industry.

Conclusion: The intensity of competition in the industry is medium. Qiankun Technology should give full play to its technical advantages at the early stage of establishment to seize the niche market as a way to initially expand the market.

1.5.3.6 Industry Environment Summary

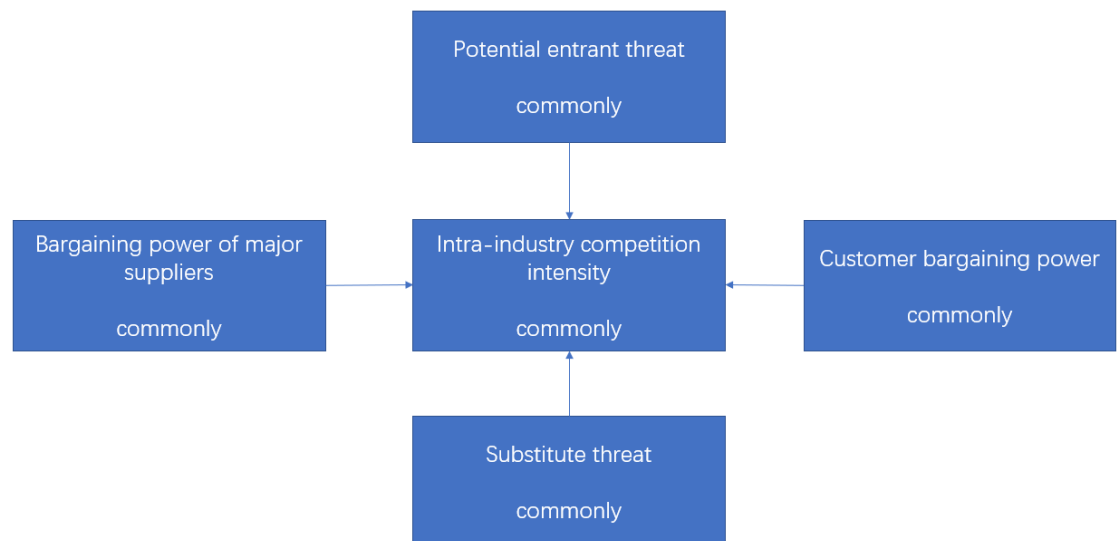


Fig. 6 Summary analysis of the industry environment

1.6 SWOT analysis

① Strangeness S

S1. Insist on innovation and continuous progress, the company has excellent technical personnel

S2. Insist on service first, and accumulate customer reputation by doing so

S3. A wide range of functions: one machine with multiple uses (to prevent theft, car rental, children from getting lost, car scraped, real-time monitoring systems for cabs, police cars, special vehicles, etc., wilderness expeditions, wilderness survival, etc.), to get rid of the defects of the traditional locator with a single function.

② Weaknesses W

W1. Lack of brand advantages: business start-ups, compared to the low visibility of large enterprises, it is more difficult to be accepted by consumers and familiar with the initial, need some time to form a brand effect

W2. Small company scale: As this enterprise is a start-up company, the scale is still small compared to the big companies in the market, and in order to have its own place in the market, it still needs to rely on its own R&D capability and keep developing products with competitive advantages.

③ Opportunities O

O1. Favorable policies: In recent years, the country has introduced

corresponding policies to support the development of Beidou industry

O2. Broad market: In recent years, the navigation and location service industry has been booming, and the market share of BeiDou navigation and location service has been increasing year by year

④ Threats T

T1. Talent monopoly: High-tech talents are attracted by large enterprises

T2. More competitors in the market, the impact of the same type of products

T3. Competitive pressure: large market share means more new companies will enter this field in the future, and competitive pressure will increase year by year

T4. Technology monopoly: Large enterprises have a greater advantage in developing new technologies by virtue of their talent advantage, technology advantage and huge capital advantage, and the distance between them and small and medium-sized enterprises is increasing in the long run

Summary: From the SWOT analysis, the external environment provides a good opportunity for the development of the company, and the strong support of the state brings a good opportunity for the development of our company, we should take this opportunity to continue to grow their own strength. At the same time, we cannot ignore the existence of external threats, on the contrary, we should take this opportunity to see our own shortcomings and deficiencies, in order to survive in the face of adversity. Make full use of our own strengths and opportunities, so that we can make up for our weaknesses.

	Advantage S	Disadvantage W
	Internal capabilities	innovate
Clear strategic objectives		Insufficient market experts
National policy support		Insufficient flexibility in organization, budget, expenses, etc
Excellent technical talents		At this stage, the market popularity is not high and the market share is relatively low
Excellent marketing ability		In the early stage of entrepreneurship, they lack operation and management experience
Quality customer service		Inadequate understanding of the market, there is a certain difference between reality and expectation
External factors		Strong team
	Continuous R&D capability	/
opportunities	SO	WO
No leader in market segment	Focus on building a leading brand of "smart travel"	Enrich the product structure, use diversified product strategies to meet the different needs of consumers, and quickly occupy the market
Strong policy support	With the support of national policies, quickly occupy the market, build a localized multi-function tracker, and then expand the market to the whole country	Enrich the product structure, use diversified product strategies to meet the different needs of consumers, and quickly occupy the market
Broad market	Attract customers and constantly expand the market	Adopt positive marketing strategy
Threats	TS	TW
High market share of GPS	Give full play to policy advantages, and fight against competitors with resources in a hurry	Avoid areas and ways of competition that are not good at
High market share of GPS	In order to ensure corporate customers, establish a positive market strategy	Understand consumers' demands in real time, so as to continuously improve the company's products

Fig. 7 SWOT analysis

1.6 Research objective

1. To study on commercialization of China's Beidou technology locators
2. To Development and commercialization of China's Beidou technology locators

Section 2

Marketing Plan and Strategy

2.1 Market Analysis

2.1.1 Market capacity analysis

① Elderly and children's market

According to the data published by the National Bureau of Statistics, at the end of 2017, the national population was 1.39 billion, of which the urban population was about 813 million, accounting for 58.5% of the total population, of which the proportion of children aged 0 to 14 was about 16.7% and the proportion of elderly people aged 65 and above was about 11.3%; the per capita disposable income of urban residents in 2017 was 25,974 Yuan, the per capita consumption of urban residents 24,445 Yuan, of which 11.4% was spent on entertainment, education and cultural services, and the average household consumption expenditure for children was 17,000 to 25,500 Yuan, with children's education expenditure accounting for 20% of total household consumption expenditure. In urban areas, 92% of the elderly enjoy pension insurance, and the average monthly expenditure on household consumption accounts for 45% of income. The current scale of China's elderly-related industries exceeds 2.8 trillion yuan, and the market for elderly products and services is expected to grow rapidly in the future, with the overall market scale reaching 2.7 trillion yuan in 2021.

Measurement of the scale of China's large consumer market for children

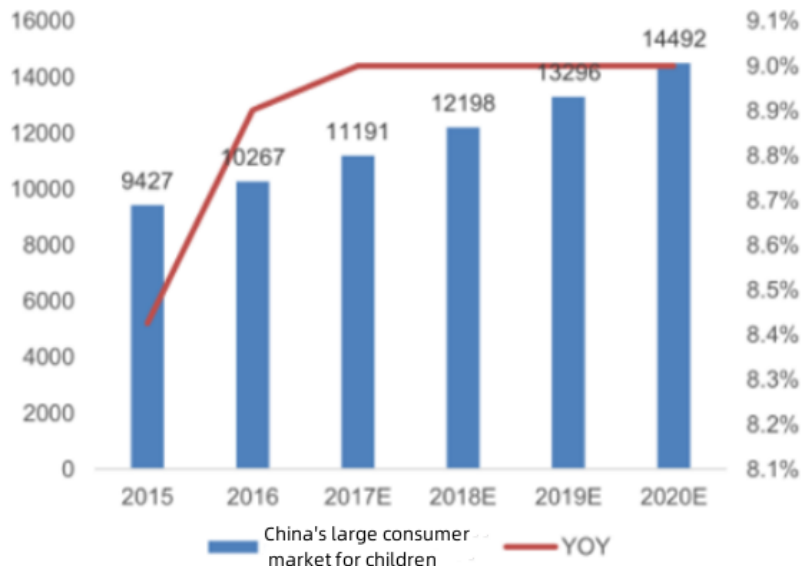


Fig. 8 Forecast of China's large consumer market for children

Overall size of the elderly market (Unit: 100 million yuan)

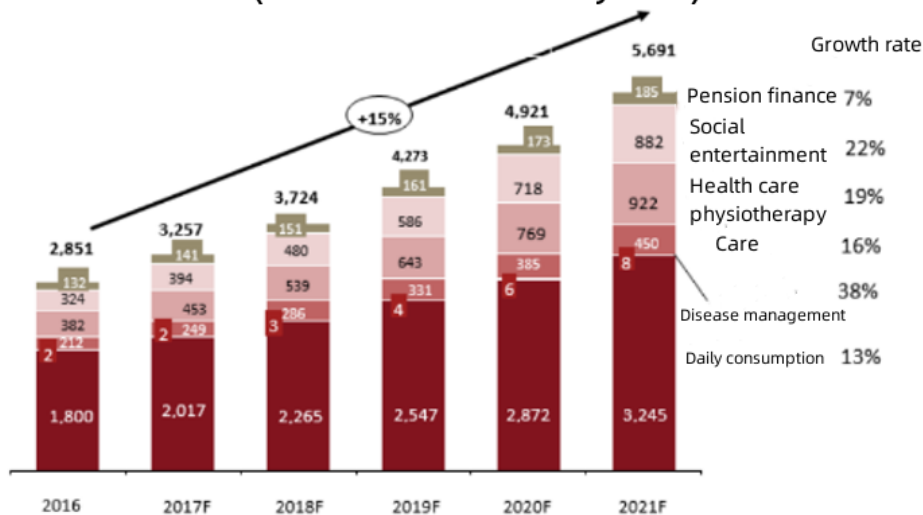


Fig. 9 Senior market size

② Pet anti-loss market

In recent years, pet ownership has become a trend, and the number of pet owners in China continues to rise, and the per capita income level continues to grow, driving the pet market to develop. The growth in per capita GDP and disposable income has laid an important economic foundation for the explosion of the pet

market, which will provide the impetus for long-term pet market growth. For the Chinese pet market, in terms of longitudinal comparisons, historical data from China in recent years show that China's GDP per capita and the size of the pet industry show a significant positive correlation, with the size of the pet industry growing with the increase in GDP per capita. In terms of horizontal comparison, Shanghai, Beijing, Guangdong, Zhejiang, Jiangsu and other provinces in 2017, China's GDP per capita in the top 10 geographic distribution of pet users have a significant proportion of overlap. According to the National Bureau of Statistics, China's GDP per capita reached 59,660 Yuan in 2017, the pet market will explode into the wind.



Fig. 10 China's pet industry market size and growth rate in recent years

④ Vehicle Anti-theft Market

With the increasing number of privately owned cars, vehicle theft has become an increasingly serious social problem. Not only cars, motorcycles, electric two-wheelers, bicycles and other two-wheeled vehicles are also very prone to theft accidents due to the short time of theft and quick escape and sale of stolen goods, and the current trend of theft cases is more frequent.

2.1.2 Market trend forecast

① Market for the elderly and children

According to China's current urban population of 813 million, the proportion of children aged 0~14 years old is 16.7%, and the proportion of elderly people over 65 years old is 11.3%, the number of elderly people and children (aged 5~14 years old)

who can use personal locators in urban areas is 93 million and 88 million respectively. 13.2 million, and the new user groups are 740,000 and 700,000 respectively every year. Even if we calculate conservatively, considering only the elderly and children in prefecture-level and above cities, the market retention capacity still reaches 7.52 million and 7.21 million respectively, and the new user groups still reach 400,000 and 380,000 respectively. According to the current personal locator market average 2~3 years of complete renewal, the annual market capacity of personal locator for the elderly and children reaches 4.65~6.97 million units and 4.4~6.6 million units respectively, which is a huge market segment and a worthy market segment.

② Pet anti-loss market

According to the 2018 China Pet Industry White Paper, the number of pet owners in China reached 46.1% in 2018, and there were 91.49 million cats and dogs pets in cities and towns nationwide, including 50.85 million dogs, with 1.5 dogs per capita; 40.64 million cats, with 1.8 cats per capita, and the market size (dogs and cats) reached 170.8 billion, with a single annual consumption amount of 5016 yuan per capita for cat and dog consumers, up from 15% growth in 2017.

Based on the current number of 91.49 million urban dogs and cats pets for estimation, with a 15% ownership rate, the market retention capacity of pet (dogs and cats) locators is 13.72 million, and it is expected that 1.5 million new users will be added each year. As owners pay more attention to their pets, the pet locator market has a very broad prospect.

④ Vehicle Anti-theft Market

China is the world's largest producer and seller of electric bicycles, with a current social ownership of about 200 million units and an annual production of about 30 million units. As of 2017, China's private car ownership reached 180 million units, an increase of 10.9%. According to the statistical analysis of the China Association of Automobile Manufacturers, the Chinese motorcycle industry produced and sold 17,145,700 complete vehicles and 17,134,900 units in 2017, up 1.93% and 1.99% year-on-year compared with 16,820,800 units produced and 16,800,300 units sold in 2016.

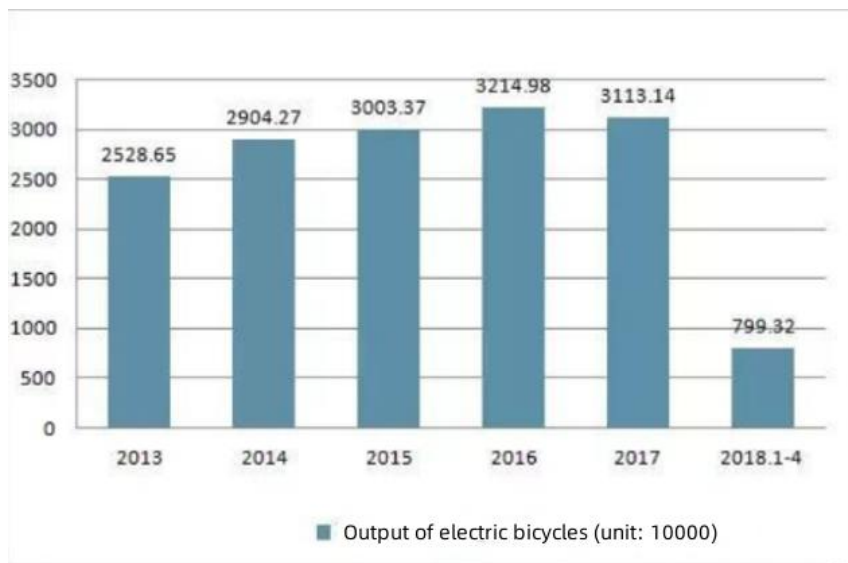


Fig. 11 China Electric Bicycle Production Trend 2013-2018

China's motorcycle sales and year-on-year growth in the first eight months of 2013-2017
(unit: 10000 units,%)

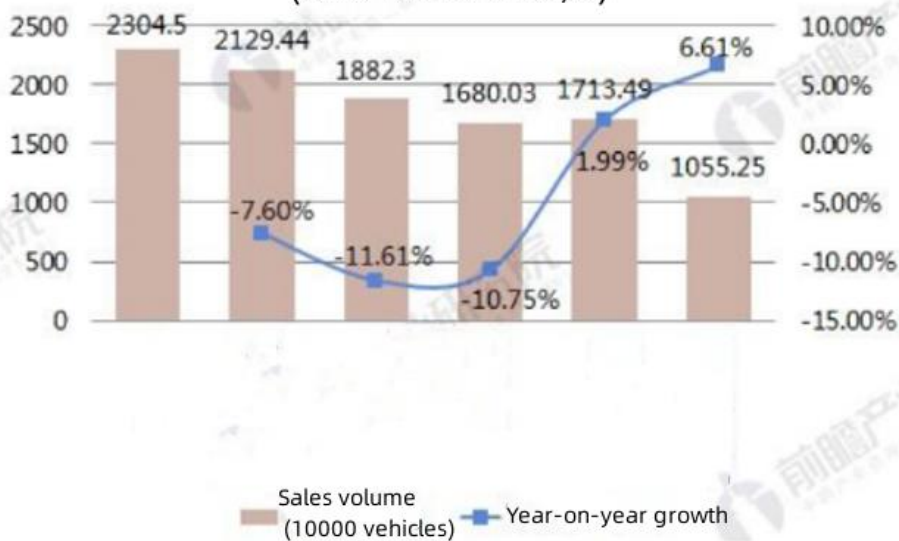


Fig. 16 China Motorcycle Sales and Year-on-Year Growth, 2013-2017

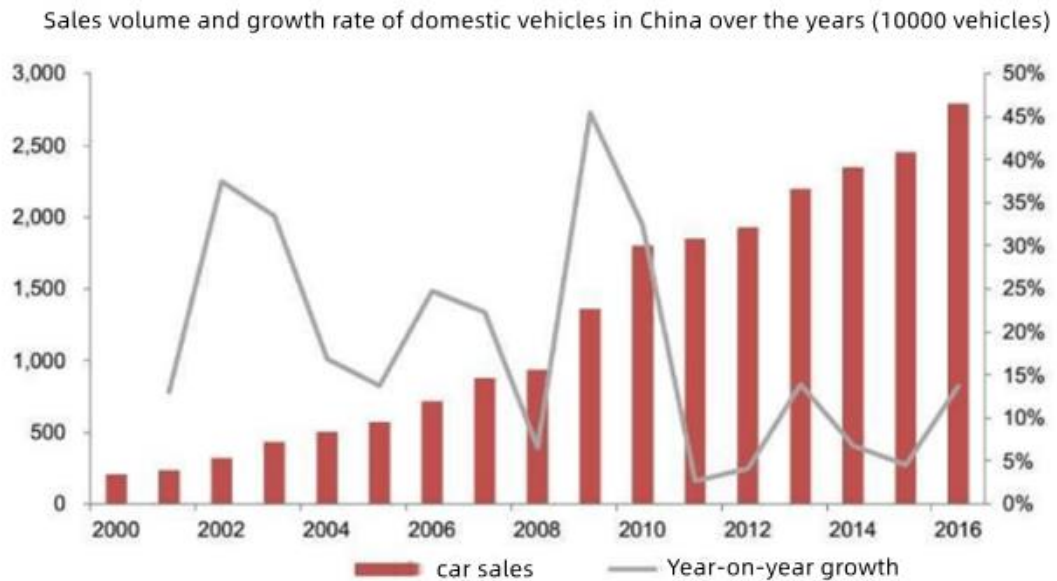


Fig. 12 China's domestic automobile sales volume and growth rate in previous years

2.2 Target market positioning

2.2.1 Market segmentation

At present, China's domestic locator market is mainly divided into civilian market and military market. With the development of science and technology, the living standard of residents is improving, and more and more attention is paid to navigation and location services. The military market is mainly used for military detection and other aspects, while the civilian market for the elderly, children to prevent lost, pets lost, vehicle anti-theft and other areas, the market potential is huge, so we will be the main target market locked in the civilian market, the following table for a detailed analysis of the civilian market.

Subdivision variable	Concrete content	Reason for segmentation
Geographic variables	China is a first-tier and second-tier city with general communication conditions.	At present, the company is still in the early stage of development. In view of the brand popularity of GPS positioning tracking products in the United States, our team decided not to enter the international market for the time being. Located in the first-tier and second-tier cities, people have universal consumption capacity for "safe travel". The extraordinary performance of the Beidou system and the 4G network also makes the use of "Heaven and Earth" not limited to areas with developed communication conditions.
Demographic variables	The population density is high, the population is 2 years old children to 80 years old, and the occupation is not limited.	Our product market grows with the growth of population density; Normal people have completely independent sports ability when they are 2 years old. At this time, the safety issues such as preventing the baby from being abducted and lost are the most concerned matters of parents. In recent years, the continuous increase in the number of Alzheimer's patients in China has also brought huge market demand for our "safe travel". Today, people from all walks of life have a common feature: travel, then there will inevitably be a demand for "navigation".
Psychological variables	Pursue cost-effectiveness and support domestic products.	Compared with the same type of location tracker that already exists in the market, we have the following advantages: 1. Good quality. Our product R&D team began to research and develop products in 2016. After three years of technological breakthroughs, the quality of products has been ahead of the same type of products. 2. High safety performance. The function of "Qiankun" multi-function tracker is realized by China's Beidou system. Beidou system is in the international leading position in terms of both safety and performance. Naturally, our products have a stable guarantee in terms of safety.
Behavioral variable	High travel frequency, trust in national quality and high loyalty.	The "Heaven and Earth" multi-function tracker can provide a variety of services for travelers. People with high travel frequency have a strong demand for our products; Under the quality assurance of the Beidou system, "Qiankun" can provide users with the same experience as the GPS system series products in the United States. At the same time, in the near future, "Qiankun" will win a number of brand followers with its high quality and low price.

2.2.2 Target Market Selection

Qiankun Technology initially focused on the domestic civilian market in China. It is mainly due to the following points.

The locator market is characterized by: the current market share is relatively low, and the market is brand is also very few, but also foreshadows the locator industry prospects are extremely promising.

In recent years, the scale of China's satellite navigation and location services industry has continued to expand, and the output value has steadily increased, maintaining a good development trend. the overall value of China's satellite navigation and location services industry reached 255 billion Yuan in 2017, an increase of 20.4% over 2016.

2.2.3 Market Positioning

Shenzhen Qiankun Technology Co., Ltd provide high speed and service quality to ordinary families, white-collar workers and students as our target customers, and in the actual operation of selecting customers, our company must conduct a rigorous market analysis, weigh the interests of both sides, and further screen our customers to ensure the successful development of the market of Qiankun Technology locator.

Conclusion: Through the research of potential customers and the synthesis of

various factors inside and outside Shenzhen Qiankun Technology Co., Ltd, we make ordinary families, white-collar workers and students as our target customers, and in the actual operation of selecting customers, our company must conduct a rigorous market analysis, weigh the interests of both sides, and further screen our customers to ensure the successful development of the market of Qiankun Technology locator.

2.3 Marketing Strategy

2.3.1 Company development strategy

Modern navigation technology has experienced a century of development, and with the rapid development of computer technology, mobile communication technology, equipment intelligence technology and Internet of Things technology, the width and breadth of the use of spatial information resources has been greatly expanded. The huge market application demand has promoted the rapid development of China's navigation and positioning industry and enterprises, but due to the special value in military, European and American countries have taken embargo and embargo measures on some products and technologies, constrained by the accumulation of R&D and investment, China still lags behind European and American countries in the core technology and devices of navigation and positioning.

Shenzhen Qiankun Technology Co., Ltd. has always taken the responsibility of promoting the progress of modern navigation technology and focused on promoting the development and utilization of spatial information resources. The company's overall development strategy can be summarized as follows: "insist on innovation and continuous progress" The company adheres to the tenet of serving customers and developing the quality of goods. With the competitive advantages in R&D team, core technology and series products, we focus on the R&D and production of navigation and positioning products, and are committed to building a comprehensive enterprise with core technology advantages and coordinated development of "device - product - system - service", and aspire to become a leader in the field of navigation and positioning and a famous brand in China and abroad. The company is committed to building a comprehensive enterprise with core technology advantages and "device - product - system - service" coordinated development, and aspires to become a leader in the field of navigation and positioning and a well-known brand in China and abroad.

2.3.2 General Strategy Overview

Shenzhen Qiankun Technology Co., Ltd. mainly focuses on online sales, supplemented by offline factory direct sales. In order to expand the market, we will continue to promote our brand, firstly, the brand positioning, positioning our products as high technology content. Secondly, under the premise of setting the brand positioning, we will gradually broaden the intermediate distributors, and rely on the Internet platform, big data and other modern technology means to precisely position our customer groups and realize the precision of users. According to the company's existing resources and capabilities, combined with the current market and technological development trends, the company has put forward the strategic intention of "insisting on innovation" to launch products for different user groups, so as to capture different market segments. At the same time, in order to quickly respond to market demand, the company has developed an integration and acquisition strategy to strengthen its own strength. The company will continue to strengthen its own conditions and launch products to meet consumer groups in order to achieve the overall goal of "business performance, business safety, business characteristics and overall stability" year-on-year.

2.4 Competitive Strategy - Technology Leadership Strategy, Service Diversification Strategy

2.4.1 Value chain analysis

Qiankun 1.0 is the first generation product of Shenzhen Qiankun Technology Co., Ltd. which aims to open the market quickly and establish the brand image. We will focus on the following points to meet the needs of users.

① Technology research and development: Our company will conduct regular professional training for existing talents, and also arrange organizations to observe and learn from other companies to continuously improve the professional knowledge and innovation ability of our R&D staff. Our company also attaches great importance to the research and development of new products, and we invest a lot in the research and development of new products every year. In the development of new products, our company strengthens the communication and cooperation with domestic research institutes according to the development of science and technology and

market demand, and transforms the scientific research achievements into productivity as soon as possible through the introduction of technology and cooperative development, so as to create benefits for the enterprise.

② Service diversification

1. Specialized services

To travel to the company's in-depth analysis of various industries, research the needs of the characteristics of the navigation instruments they need, classification, and targeted to different customers to provide the corresponding professional services.

2. Humanized service

Based on the traditional services, we provide more services to customers, such as installation and maintenance of equipment for customers; parts combination distribution; and more valuable information for customers.

3. Efficient service

We should provide timely solutions to the problems arising from consumers and accumulate customer reputation.

4. Operating concept: Customer satisfaction and success are the most important yardstick to measure our work performance. Product and service quality is the lifeline of the company's development. The cornerstone policy of cutting business activities High-tech, professional, group, international slogan, innovation and seeking.

5. Marketing: Because our products are based on BeiDou satellite navigators, we need to make publicity at the consumer level in order to seek visibility in the industry. Advertising plays an indispensable role in promoting products, raising product awareness, building brands, and so on. So the company can't do without the role of advertising to quickly enhance product awareness. Network promotion relies on the powerful Internet as a carrier, for hundreds of millions of Internet users to promote, with low cost, high returns, fast results and other advantages, in the promotion of products really has a great effect. Companies in the promotion of products to enhance product awareness, you may wish to choose the network promotion of this effective way of promotion. The use of the network to promote products and enhance product awareness is mainly to publish information to the network of major

platforms and the realization of the website as the core of the promotion of the two ways to carry out.

2.4.2 Competitive strategy analysis

From the SWOT analysis, we can see that although the company has great opportunities, it also faces great challenges. Firstly, as a start-up company, our company is less known and has a smaller consumer base; secondly, all navigation instruments in the existing market are based on GPS, and consumers know little about BeiDou navigation instruments, which makes it more difficult to promote our company's products in the early stage. However, due to the policy support, our products have enough competitiveness. On the other hand, due to the low cost, we can quickly occupy the market and build our brand advantage in the early stage.

Therefore, based on the innovation of technology, quality assurance and diversification of services, Qiankun Technology will continue to develop new markets and build good customer reputation under the premise of occupying part of the market, in order to achieve the goal of high revenue and high market share as well as higher customer recognition, in order to win in the competition.

2.5 Overview of marketing objectives

The company will initially focus on the domestic market in China, with the main sales channel being e-commerce sales. The target consumer groups are initially located in the civilian market such as the elderly and children. In the medium term, the company will cooperate with the transportation industry, the government and other non-civilian markets to expand the consumer groups. The company's long-term goal is to diversify the development of products and services, and gradually improve the emerging market of the precise and convenient functions of Qiankun locator, and gradually enter the international market.

Initial period: find partners, based on the complete upstream, midstream and downstream industry chain, and open the market with new products.

Mid-term: establish brand and stabilize market share, improve user experience, and provide high-value industrial services.

Late stage: Improve services and enter the international market.

2.6 Product Strategy Description

The root of a company's brand is the quality of its products, and the quality of its products is the most important foundation of a company's operation. Only quality products and services can be better developed.

2.6.1 Product innovation

(1) One machine for multiple uses, to avoid trouble. Prevent theft, car rental, children from getting lost, car scraped, cabs, police cars, special vehicles and other real-time monitoring systems, field expeditions, wilderness survival, etc.

(2) Small volume, big role. Easy to place, fast positioning, accurate positioning, no sound, no light, no vibration.

(3) Remote switch, one key intelligent control. Adopt Chinese Beidou satellite accurate positioning, can reach XX street XX number.

(4) History track, record playback.

2.6.2 Product appearance

As a technology product appearance is not only outstanding for the influence of the buyer, but also has a very important role in the reflection of the company's brand image. Therefore, the company will strive to highlight the professional image in the packaging design, reflecting the concept of beautiful and convenient products. At the same time, we will improve the quality of all products, as well as the use of more beautiful patterns, colors and features, so as to meet the needs of different people. The different appearance will make it easier for consumers to distinguish our different product series, thus laying the market for our brand.

2.6.3 Product services

(1) Product technical service

Users can set the GPS location upload time according to their own needs can be positioned once in 5-6 seconds, the system automatically uploads the location information to the server in real time, the user can query the current location of the monitoring object and alarm information after logging into the host computer, you can also query the route previously passed (track playback), and with the alarm function, support a specific area range tracking, beyond the scope of the alarm, illegal Cut the line to cut the power, the center will receive a power failure alarm. Users can

remotely control and personalize the settings by logging into the host computer to remotely set the terminal, the settings include positioning location information report time interval, activity range, server address. Use SMS, app, WeChat public number and other multi-channels to send alarm information.

(2) After-sales service

Establish information exchange feedback channels, including feedback in sales channels, free consultation hotline phone feedback, new media channels feedback, etc. Do a good job product quality, service feedback. After the consumer purchases the product. If there are problems with the product, consumers can give customers a complete repair method through app customer personnel consultation to achieve the purpose of saving customer time and improve efficiency And provide a three-year warranty package return service

(3) APP supporting services

As the terminal app of Qiankun Technology, the company will be committed to creating perfect supporting services for customers to meet different customer experience needs at one time. Strengthen the management of customers' personal account password and personal information security. In this way, we establish a perfect personal information database. And provide software update service, regular consultation advice update.

2.7 Price strategy details (price in 4P, pricing strategy and specific price)

There are many factors affecting product pricing. Here, Qiankun Technology uses the 3c model that affects the pricing of the company, namely Costs (Cost), Competitors (Competitors) and Customers (Consumers).

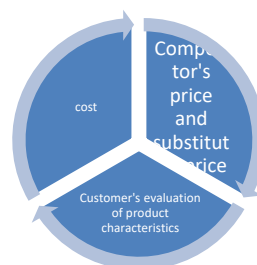


Fig. 13 Schematic diagram of 3c model

The company will need to focus on the cost of the product, as well as the price of competitors and substitutes. On the cost side, besides the cost of the product

itself, it also needs to consider the additional cost of the product, such as service cost, public relations cost, promotion cost, etc. On the competition side, the price of the product also depends on the main competitive products and prices in the market. At the same time, the company takes into account its own corporate positioning, i.e. the role of a newcomer in the market, to set the appropriate price level, so that the company can be more competitive in the market competition, and will also make price adjustments when necessary.

2.7.1 Cost analysis

The cost of the product will be one of the important bases for the company's pricing. With the expansion of the company's scale, this cost will change slightly within a certain extent. The product cost is mainly determined by USR-LTE-7S4 (4G module), BeiDou module, BeiDou enhancer, stm32 microcontroller, etc.

2.7.2 Pricing principle

Pricing is based on reasonable gross margin and the situation of competitive products and competitors. For different target groups, market conditions in different regions, different prices are set according to different customers, different times and different series.

2.7.3 Marginal cost pricing

The company adds the expected profit to the unit cost of the product as the selling price of the product, and the difference between the selling price and the cost is the profit.

The hardware costs of our products are as follows.

Equipment terminal	Price (Yuan)
Power supply module (6V)	8
Vibration sensor (SW-420)	1.2
Stm32 single chip computer	24
Buzzer	1.85
4G antenna (Huawei 4G antenna B315s-936)	23
Beidou module (ATGM332D-5N-3X)	47
Beidou intensifier	28
USR-LTE-7S4 (4G module)	160
Total	293.05

Weighing the BOM cost in the product development process, the purchasing power of consumers and the cost of product development pre-investment promotion expenditure. The final price will be positioned at around 500 RMB, considering that in the product promotion stage, in order to open the market as soon as possible, we will adopt a limited time discount in a small area, with a limited time discount price of around 450 RMB.

2.7.4 Scale Pricing Adjustment

With the increasing production volume, the long-term average total cost of the product keeps decreasing. When the production scale of the product reaches 10,000 sets, we enter the economy of scale. At this point we will have more profit margin that can be used to adjust the product price and attract more potential customers who are more price sensitive.

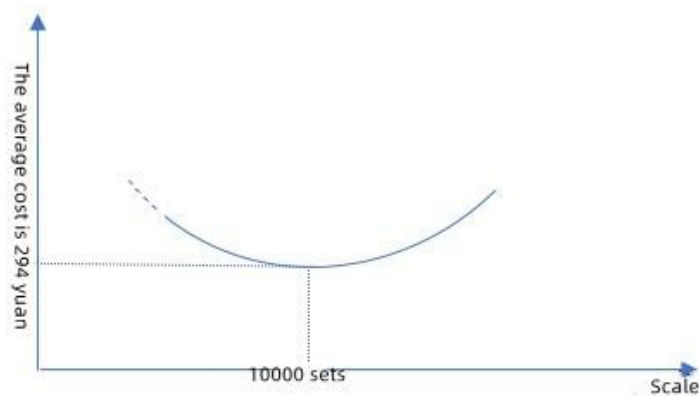


Fig. 14 Volume and price model schematic diagram

2.7.5 Temporal and Spatial Factor Pricing Adjustments

In addition to adjusting prices based on changes in production volume, we will adjust our pricing over time and with changes in spatial location. Specific influencing factors include: changes in market conditions, raw material prices, labor costs, production process levels, corporate capacity, etc.

2.8 Sales channel strategy details (place in 4P, offline channel and online channel)

Combined direct sales and distribution channel model. On the one hand, through distributors and publicity in the relevant markets, such as relevant professional magazines, new media on the Internet, exhibitions and so on to expand the contact channels. Make it faster and better known to the buyers and increase the

product awareness. On the other hand, marketing directly to key target customers.

The main sales channels of multi-functional trackers in this market: intermediate distributors' sales, e-commerce channels, direct sales by manufacturers, and new media marketing.

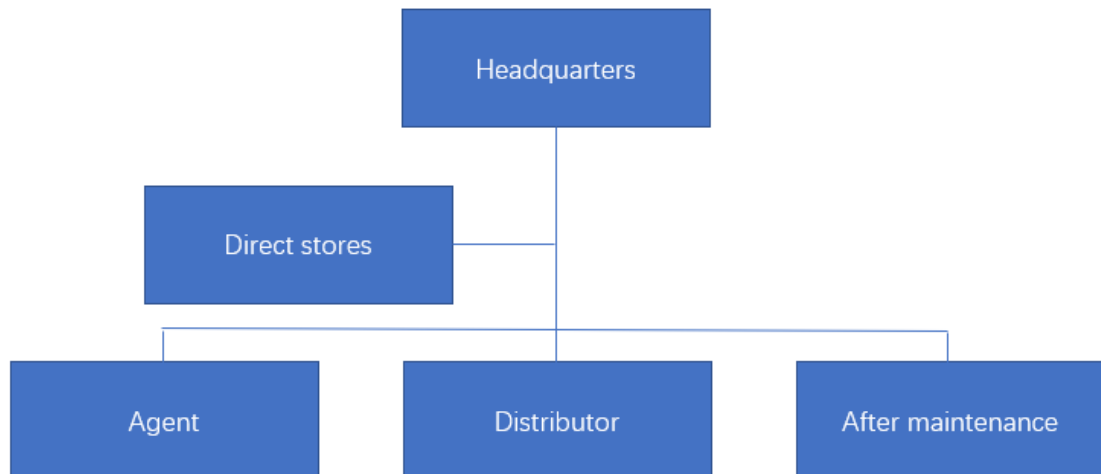


Fig. 15 Schematic diagram of distribution model

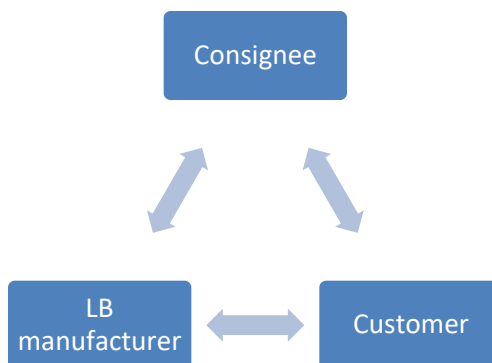
(1) Intermediary distributor reselling (mainly).

The advantage of this sales channel is that the market scope is greatly expanded, which is conducive to opening the market as soon as possible. But its disadvantage is that there are more buying links and lower profits.

According to the current analysis of China's channel strategy model, most companies adopt a national channel structure with a general distributor a provincial distributor a local/provincial distributors in several regions under them respectively. Qiankun tracker in the early stage of business will be a comprehensive consideration of the allocation of resources after the development of cooperation programs, and cooperation with major dealers, the formation of complementary products, quickly open the market to get promotion, access to the market, to achieve mutual benefit and win-win. For example: cooperation with 4s, pet stores, nurseries, homes for the elderly and stores selling outdoor survival tools, etc.

After the company's development has stabilized and established its own brand effect, it can choose the objects that can continue to cooperate and expand according to the profitability of the previous cooperation. For this type of sellers with high

demand can be long-term cooperation. In addition, then in the original region / province on the basis of the general agent to the lower level of the opening of the second and third agents to increase sales outlets and expand the scale of sales.



(2) E-commerce sales: Costs and expenses are easier to control, and the return of capital is more rapid. With the development of the Internet, traditional channels are being impacted and e-commerce channels are becoming more and more popular. By developing e-commerce channels together with traditional channels, more consumers can be retained. The company grasps the advantages of the Internet and maximizes the scope of sales.

(3) Direct sales by manufacturers: direct sales on enterprises and individuals, which is conducive to cost reduction and face-to-face communication with customers, and timely grasp of various information and feedback.

(4) New media sales: micro-business as the representative of the gradual rise of new media sales, the way convenient and simple, not subject to the constraints of time and place, can provide customers with a more brief pre-sales service.

2.9 Promotion strategy details (4P in promotion, advertising and promotion methods)

2.9.1 Personnel Promotion

Personnel promotion is a key point of marketing work of Qiankun Technology Co., Ltd. The company will organize a high quality marketing team to promote our target customers. The main focus is on the formation of the team, training and collecting target customer information and establishing a customer resource database.

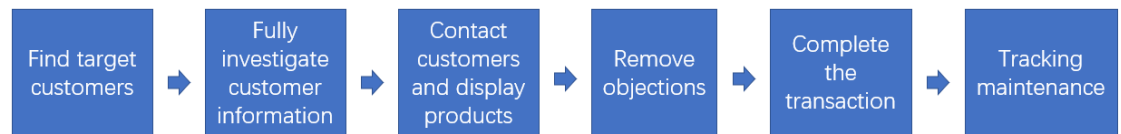


Fig. 21 Flowchart of personnel sales model

2.9.2 Advertising Promotion

Through precise advertising to further enhance the product awareness and expand the market.

The specific placement can be door-to-door promotional advertising and focused type advertising. Door-to-door promotional advertising is not advertising in mass media and stores, but promoters bring the products directly to the doorstep of users and make product promotion to users in person with certain additional benefits to users. This kind of promotional advertising can answer customers' questions in a timely manner, lifting the customer's uniform direct marketing products; and centralized advertising promotion is always the use of large-scale celebrations, sponsorship of public service exhibitions, order meetings, recreational activities of the crowd concentration of occasions for advertising. Such as to some special people protection association sponsorship, can improve corporate awareness.

2.9.3 Exhibition marketing

Exhibition marketing is through the exhibition form, to customers and the same industry to show their latest products and achievements. On the one hand, it can increase the company's performance, and on the other hand, it is to improve the company's brand influence. Marketing is a common concern for MICE companies when they are operating MICE projects. Participating in trade shows is also a way to find new markets and expand the potential customer base. According to the nature of multifunctional tracker, choosing professional janxiang to participate will get better results.

2.10 Strategic Planning

2.10.1 Market expansion plan

Development plan for the next three years

First year.

Trial marketing: cooperate with government public welfare, targeting those elderly people with dementia and children in orphanages, and give them to use this

software to prepare for the preliminary promotion. In addition, there can be co-branding cooperation with some famous outdoor brands, which can be a win-win cooperation and expand the popularity.

Year 2.

(1) Training team: for technical staff, professional technical training according to the needs of the company and the technical division of the product; for marketing staff, training in sales skills and business negotiations.

(2) Expansion of personnel: introduce new technical and sales personnel to enhance the internal competitiveness of the company.

(3) Iterate products: expand the product usage target, add to the original customer base, and upgrade and improve the product in a gradual manner based on user feedback.

(4) Organize business model: Adjust business model according to market changes.

Third year.

(1) expand the market, increase turnover: our company's overall strategy is to "use first to drive later". AnYuTek plans to take a bigger discount policy in Fujian at the beginning of the product so that more people can go to buy and use our products. Then we will follow up the user experience of the product, make modifications and optimization to better suit the users. At the same time, we will promote the product in other provinces, such as Zhejiang, Shanghai, Guangdong and other surrounding areas, so as to continuously increase the market share and market coverage.

(2) Increase staff: If the enterprise grows rapidly and there are not enough staff in each department, we will expand the staff and increase the scale of the enterprise. Strengthen management quality and improve internal mechanism. Shape the corporate culture and enhance the core competitiveness and sustainable development ability.

Publicize the brand: solidify the foundation of development, develop a publicity strategy, and expand the publicity on the Internet. Maintain and improve the quality of products and services, and promote the company brand through the strength of the enterprise.

Section 3

Management and Operation Plan

3.1 Organizational structure and responsibilities of the company

① Shareholders' meeting

Determine the company's business policies and investment plans; Elect and replace the directors and supervisors who are not staff representatives, and decide on the remuneration of the directors and supervisors; Review and approve the report of the Board of Directors; Review and approve the report of the board of supervisors or supervisors; Review and approve the company's annual financial budget plan and final account plan; Review and approve the company's profit distribution plan and loss recovery plan; Make resolutions on the increase or decrease of the registered capital of the Company; Make resolutions on the issuance of corporate bonds; Make resolutions on the merger, division, dissolution, liquidation or change of corporate form of the Company; Amend the Articles of Association; Other functions and powers specified in the Articles of Association.

② Board of Directors

Convene the shareholders' meeting and report to the shareholders' meeting; Implement the resolutions of the shareholders' meeting; Determine the company's business plan and investment plan; Formulate the company's annual financial budget plan and final account plan; Formulate the company's profit distribution plan and loss recovery plan; Formulate plans for increasing or reducing the registered capital and issuing corporate bonds of the Company; Formulate plans for the merger, division, dissolution or change of corporate form of the Company; Determine the establishment of the company's internal management organization; Decide on the appointment or dismissal of the company's manager and his/her remuneration, and decide on the appointment or dismissal of the company's deputy manager and financial director and their remuneration according to the manager's nomination; Formulate the basic management system of the company; Other powers stipulated in the Articles of Association

③ CEO

Preside over the production, operation and management of the company, and organize the implementation of the resolutions of the board of directors; Organize the implementation of the company's annual business plan and investment plan; Draw up the company's internal management organization setting plan; Draft the basic management system of the company; Formulate specific rules and regulations of the company; Propose the appointment or dismissal of the company's deputy manager and financial director; Decide on the appointment or dismissal of management personnel other than those who shall be appointed or dismissed by the Board of Directors; Other powers granted by the Board of Directors.

④ Finance Department

Responsible for a series of financial work of the company, including the company's financing decision, investment decision, capital structure determination, profit distribution principle determination, etc. Lead the Ministry of Finance to manage the company's daily accounting and tax work.

⑤ Production Department

Be responsible for the company's production planning, including the company's annual production quantity, production line changes, and production transfer suggestions.

⑥ Sales Department

Responsible for the formulation and implementation of the company's development and customer planning plans, and the guidance and management of advertising creativity and production; Long-term planning and promotion of the company's product brand; Maintenance of company image system.

⑦ Product R&D Department

Responsible for the improvement of core technology, research and development of new products and product testing. The research institute constantly carries out technical innovation, and the quality inspection department carries out finished product testing, providing technical impetus and guarantee for the company's long-term strategic development.

3.2 Human resources management

To meet the needs of the company's development, realize the establishment of marketing network and technological upgrading, the company will recruit some marketing, marketing and other talents, increase the training of employees, strengthen the company's organizational construction, establish a good corporate image of the company, and establish a unified and standardized company expansion system.

Post	Main responsibilities	Operation responsibilities
CEO	<ul style="list-style-type: none"> - Decide whether to do everything or not 	<ul style="list-style-type: none"> - Organize annual planning and budget work
Sha Yanjing	<ul style="list-style-type: none"> - Be responsible for the decision-making of everything and the overall operation 	<ul style="list-style-type: none"> - Follow the steps in the operation manual step by step
CFO	<ul style="list-style-type: none"> - Develop financial budget - Control cash flow - Develop financing strategy 	<ul style="list-style-type: none"> - Complete cash flow forecast calculation - Pay various financial expenses - Pay various investments
Zou Ying	<ul style="list-style-type: none"> - Conduct financial analysis - Provide necessary financial information for CEO's decision 	<ul style="list-style-type: none"> - Manage loan borrowing and repayment - Manage accounts receivable and accounts payable - Preparation of annual financial statements
CSO	<ul style="list-style-type: none"> - Thorough market analysis 	<ul style="list-style-type: none"> - Develop advertising plans
Jin	<ul style="list-style-type: none"> - Learn about 	<ul style="list-style-type: none"> - Participate in

Liyang	competitors <ul style="list-style-type: none"> - Research market entry strategy - Research product R&D strategy - Research advertising investment strategy - Understand capacity and product resources - Provide necessary market information for CEO's decision 	bidding for sales orders <ul style="list-style-type: none"> - Assist COO to organize production according to the order - Sell according to the order - Assist CFO in calculating sales and direct costs - Assist CFO in receivables management
OO Liu Mengran	<ul style="list-style-type: none"> - Forecast the breakeven of R&D products - Calculate production capacity - Forecast procurement strategy - Develop equipment and plant investment plan - Control inventory and reduce the risk of capital occupation - Provide necessary production information for CEO's decision 	<ul style="list-style-type: none"> - Develop a comprehensive production plan according to the sales plan - Scheduled raw materials - Perform raw material procurement - Execute production plan - Implement product R&D plan - Purchase/sale of production lines - Purchase/sale of plant
Fina ncial	Assist CFO in cost management	<ul style="list-style-type: none"> - Statistical financial data

Assistant Yu Tiexiang		- Assist in the preparation of statements
Corporate espionage Wu Jiayi	<ul style="list-style-type: none"> - Assist CSO in market analysis - Understand the operation status of other groups - Provide necessary business intelligence for CEO's decision 	

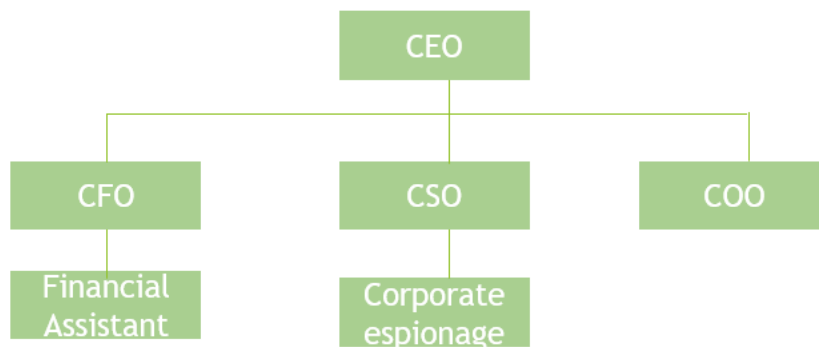


Fig. 22 Company organization chart

3. Main technical specifications of the product

3.3.1 Lower computer design

The data in the lower computer positioning system includes the current position information collected by the Compass positioning module, unlimited transmission by the 4G module, communication data frames between modules and serial port pushing different modules to build TCP protocol data. The processing of many different types of data frames increases the workload between independent modules, so the lower computer data is connected to sensors and communication modules through an application processor module to receive and complete the

analysis and processing of all data. The STM32F103 mid-range processor from STMicroelectronics is selected to control the entire lower computer system and coordinate the work of each module, and it can be said that the STM32F103 node is the core of the entire hardware system.

3.3.2 4G module

WH-LTE-7S4 V2 is a compact and feature-rich M2M 4G product, applicable to mobile, Unicom, Telecom 4G and mobile, Unicom 3G and 2G network standards. With "pass-through" as the core function, it is highly easy to use. The module software is fully functional and covers most of the common application scenarios, enabling transparent bi-directional data transmission from serial port to network. It also supports custom registration packets, heartbeat packets, 2-way socket connection, httpd, UDC and other protocol communication. It has the characteristics of high speed and low latency.

3.3.3 Upper computer development

Qiankun positioning tracker gives full play to the advantages of "Internet+" and realizes the background control of the tracker through the upper computer. The tracker contains real-time tracking map, communication function, historical track record, fence alarm, vibration alarm and demolition alarm in one, and also realizes real-time feedback of Beidou+GPS positioning function with vivid and simple picture. Later, Shenzhen Qiankun technology team will constantly update and improve the APP function, on the one hand, the upper computer system in the hands of users can automatically complete the upgrade and achieve the relevant functions through the Internet; on the other hand, in the after-sales service, through the upper computer system for automatic inspection and repair, after consumers buy the goods, if the goods have problems, consumers can consult with customer service through the upper computer system, technical staff through the customer. The technical personnel will scan the product remotely by the product serial number provided by the customer combined with the product symptoms described by the customer, and give the customer a complete repair method.

3.3.4 Positioning technology

Qiankun positioning tracker adopts GPS+Beidou to realize positioning function.

The tracker has built-in ATGM332D-5N-3X positioning chip. Through the tracker, SIM card and Google map interaction of the upper computer, it realizes the fourfold anti-loss functions of positioning navigation, track tracking, real-time listening and fence alarm. Through the map interface of the upper computer, we can find the location and track of the tracker in real time, and can listen to the sound happening around the tracker, and when the vehicle leaves the owner 50 meters away will automatically fence the alarm and send alarm information to the cell phone to protect the safety of the vehicle.

3.3.5 Mechanical design technology

For the design of Qiankun positioning tracker, we are unique and perfect. The whole tracker is small in size and does not need to be charged, the internal mechanical structure is solid, and the space is reasonably arranged through strict calculation and design, and the space utilization rate is scientifically enhanced, with the characteristics of simple structure and strong hierarchy. At the same time, its external minimalist style greatly increases the concealment of the tracker.

3.4 Product-related parameters

3.4.1 Core components

Core components	Parameter information	Characteristic
Beidou module	Support single system positioning of BDS/GPS satellite navigation system, and multi-system joint positioning with arbitrary combination	Small size, high positioning accuracy, high tracking sensitivity, low power consumption, built-in antenna detection and antenna short circuit protection function
4G module	Support five-mode thirteen frequency, FOTA differential upgrade; 5-16V wide voltage; Hardware watchdog protection	he M2MM 4G product with compact size and rich functions is characterized by high speed, low latency and low power consumption

STM32F103	Cortex of ARM™- M3 core and embedded flash memory and SRAM, three low-power modes	Low-cost platform, reduced number of pins, reduced system power consumption, while providing excellent computing performance and advanced interrupt system response
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3.4.2 Product parameters

Product name	Heaven and earth location tracker	
Model	1	
Wireless standard	TDD-LTE	
	FDD-LTE	
	WCDMA	
	TD-SCDMA	
	GSM/GPRS/EDGE	
Standard frequency band	TDD-LTE	Band 38/39/40/41
	FDD-LTE	Band 1/3
	WCDMA	Band 1/8
	TD-SCDMA	Band 34/39
	GSM/GPRS/EDGE	Band 3/8
Positioning time	Cold start 30sec (open sky)	
	Warm start 29sec (open sky)	
	Hot start 5sec (open sky)	
Positioning accuracy	2.5 meters (open sky)	
Support vehicle voltage	36V-72V/DC	
Operating temperature	-20°C~+70°C	

Operating humidity	5%~95%RH
Color	black
Weight	392g
Box size	21.2*15*5cm , 392g

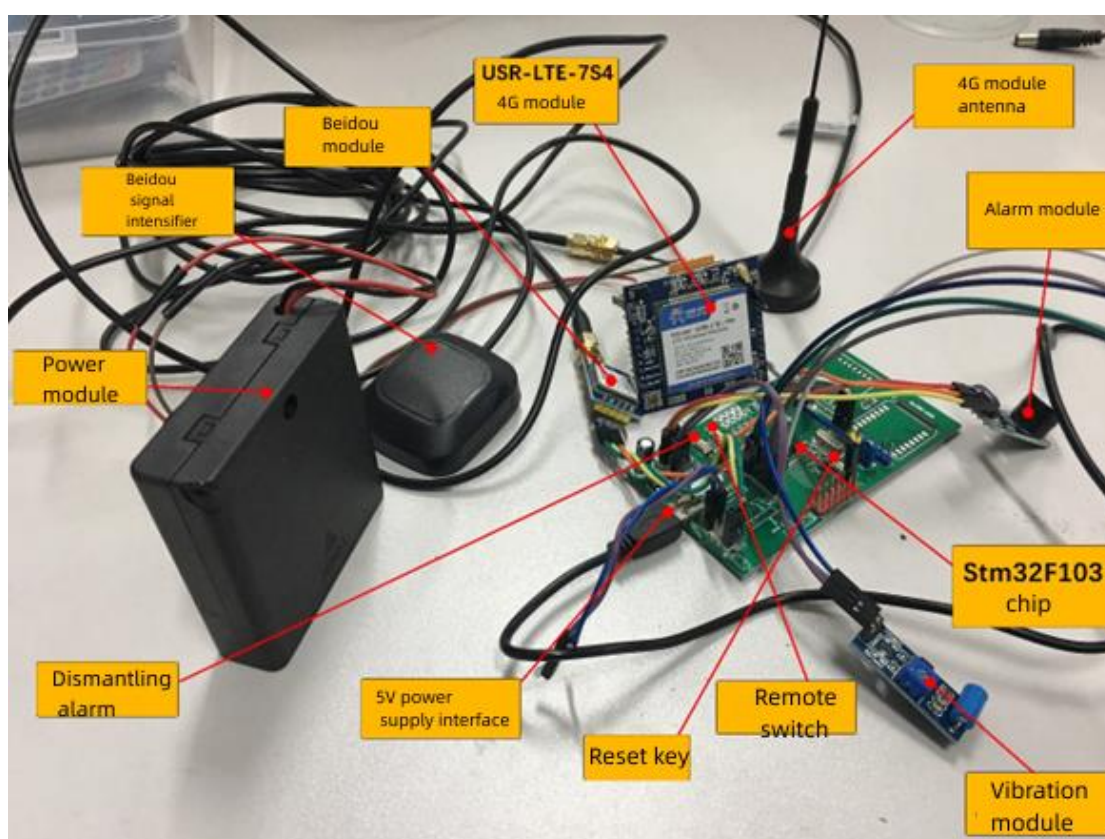


Fig. 22 Experimental products

Section 4

Financial Projections

4.1 Basic Financial Assumptions

In order to achieve the financial budget for the later period, we have first made assumptions about the relevant basic financial information. These include a financial budget for the period from July 1, 2019 to June 30, 2021, with accounts receivable from sales and purchases assumed to be calculated at 20% of the year in which they occur and accounts payable assumed to be calculated at 30% of the year in which they occur and to be collected or paid in full in the following year. In addition to this, provisions are made for related fixed assets and intangible assets.

Start time	From January 1, 2020
Forecast time	January 1, 2020 - December 31, 2022
Accounts receivable	Calculated by 20% of the current year's sales, the accounts receivable of each year will be recovered in the next year
Accounts payable	Calculated by 30% of the purchase amount of the current year, the accounts payable of each year will be paid in the next year
Income tax rate	Calculated by 25%
Financing	Registered capital: some companies raise funds from family members and friends; Later financing: mainly borrowing from banks and other financial institutions, seeking angel investors and venture investors, and issuing bonds by companies
Depreciation of fixed assets	It is estimated that it will be purchased in December 2019 with a service life of 5 years, and the depreciation will be

	accrued using the average life method, with no residual value expected
Amortization of intangible assets	The technology is amortized for 5 years, and is expected to be amortized from December 2019, using the average life method, and is expected to have no residual value

4.2 Start-up Costs

Before a company can enter into production and operation, it must first form a certain office environment and business environment, thus forming the corresponding start-up costs, for our company start-up costs mainly include start-up costs and fixed assets, a total of \$111,590.

The company's existing premises consist of two parts, one is located in Shenzhen Internet Industrial Park, which is used for office space and production research; the other part is located in the school's innovation and entrepreneurship base, which is mainly used for product display. The rent of Shenzhen Internet Industrial Park is RMB1,800/150 sq.ft./month, and the school's innovation and entrepreneurship base is provided by the school for free use to encourage and support college students' innovation and entrepreneurship. Therefore, only RMB21,600/year is required to pay the rent of the industrial park.

Startup Cost Details (Yuan)				
	Name	Unit Price	Quantity	Total
Office	Office desks and chairs	400	3	1200
	Office computer	2100	6	12600
	Conference tables and chairs	3200	1	3200
	Print copy scanner	1100	1	1100
	Office telephone	80	3	240
	Fax all-in-one machine	250	1	250
	Low-value consumables	Different types		some
Total				20590
Workshop	Development tools and equipment	Different types	some	20000
	Test tools and equipment			15000

	Management tools and equipment			15000
	Low-value consumables			1000
Total				51000
Initial expenses	Test technology cost	Different types	some	15000
	Patent application fee			10000
	License fee			10000
	Technical expenses for website development			5000
Total				40000
Total				111,590

Table 1 Breakdown of start-up funds

List of office rent (unit: Yuan)			
Name	Site size	Monthly rent	Annual rent
Office	150 m ²	1,800	21,600
Total rent	21,600		

Table 2 Breakdown of office rent

4.3 Depreciation of Fixed Assets and Amortization of Intangible Assets

Based on the previous assumptions about the treatment of fixed assets and intangible assets, we need to calculate the depreciation and amortization of the book value of the corresponding fixed assets and intangible assets in the company, as shown in the table below.

Table 3 Depreciation and amortization details of Shenzhen Qiankun Technology Co., Ltd.

Depreciation and amortization details (Unit: Yuan)					
Fixed asset items		Original value of fixed assets	useful life of fixed assets	Monthly depreciation	Annual depreciation
office equipment	Office desks and chairs	1200	5	20	240
	Office computer	12600	5	210	2520

	Conference tables and chairs	3200	5	53	640
	Print copy scanner	1100	5	18	220
	Office telephone	240	5	4	48
	Fax all-in-one machine	250	5	4	50
	Low-value consumables	2000	5	33	400
Workshop equipment	Development tools and equipment	20000	5	333	4000
	Test tools and equipment	15000	5	250	3000
	Management tools and equipment	15000	5	250	3000
	Low-value consumables	1000	5	17	200
Accumulated depreciation		71590	-	1193	14318
Intangible assets		Original value	Amortization period	Monthly amortization	Annual amortization
Initial expenses	Test technology cost	15000	5	250	3000
	Patent application fee	10000	5	167	2000
	License fee	10000	5	167	2000
	Technical expenses for website development	5000	5	83	1000
Technology invested as capital stock		200000	5	3333	40000
Accumulated amortization		240000	-	4000	48000

4.4 Sales Budget

In order to ensure the efficiency of the integration of supply, production and sales, the company implements the management strategy of sales-based production, so the sales budget is the starting point for the preparation of the whole budget, in which we have taken quarterly as the budget unit and made reasonable budgets for the sales volume, unit price and sales revenue for different years from 2023 to 2027.

Table 4 Project sales budget transaction

Project sales budget transaction					
year	2023	2024	2025	2026	2027
Estimated sales volume	200	400	800	1200	2600
service after selling goods for a stated period (Preset about 1/6)	1.67	3.33	6.67	10.00	21.67
Sales volume	10.00	20.00	40.00	60.00	130.00
Total revenue	11.67	23.33	46.67	70.00	151.67
Opening accounts receivable	0.00	2.33	4.67	9.33	0.00
Current cash sales income	9.33	18.67	37.33	56.00	121.33
Current sales cash inflow	9.33	21.00	42.00	65.33	121.33
Accounts receivable at the end of the period	2.33	4.67	9.33	14.00	30.33

Table 5 Projection 5 year cash flow of Shenzhen Qiankun Technology Co., Ltd.

Year	2023 (Yuan)	2024 (Yuan)	2025 (Yuan)	2026 (Yuan)	2027 (Yuan)
Estimated sales volume	2,600	4,800	6,400	7,200	8,400
Sale amount (500 Yuan/one)	1,300,000	2,400,000	3,200,000	3,600,000	4,200,000
Total Cost (200 Yuan/one)	520,000	960,000	1,280,000	1,440,000	1,600,000
Revenue	780,000	1,440,000	1,920,000	2,160,000	2,600,000
(Discount rate PVIF 12%)	0.893	0.797	0.712	0.636	0.567
Revenue (PV)	695,540	1,147,680	1,367,040	1,373,760	1,474,200
Accumulate Revenue (PV)	695,540	1,843,220	3,210,260	4,584,020	6,058,220

From table 5

The initial investment = 3,200,000 Yuan

ROI per year = $6,058,220/5 = 1,211,644/3,200,000 \times 100 = 37.56\%$

NPV = $6,058,220 - 3,200,000 = 2,858.220$ Yuan

IRR = 19.87%

Payback Period = 3 years

Section 5

Conclusions and Recommendations

5.1 Conclusion

5.1.1 Entrepreneurial Opportunities

With the process of China's reform and opening up, the social economy has entered a take-off stage. However, the excessive economic development has also brought about many social problems. With the increasing seriousness of vehicle theft and the frequent occurrence of lost cases of the elderly and children, people have started to become more and more insecure and use some technological means to protect themselves, and the huge market demand has prompted the hot sale of multifunctional trackers. The advantages of the Beidou system are as follows: First, the AnYou locator takes the Beidou satellite positioning system, which has obvious advantages over the GPS positioning system used by the traditional locator industry. Second, a multi-purpose, full-featured (to prevent vehicle theft, the elderly and children to prevent lost, car scraped, police cars, special vehicles and other real-time monitoring systems, field expeditions, wilderness survival, etc.), get rid of the traditional locator function of a single defect. Third, policy preferences: In recent years, China has introduced corresponding policies to vigorously support the development of Beidou industry. The market of China's domestic positioning tracker combined with Beidou is basically blank, so Qiankun follows the trend of the times and comes into being with opportunities and challenges.

5.1.2 Creative novelty and uniqueness

The BeiDou navigation satellite system has entered a period of intensive industrial policies, and Chinese national ministries and commissions, as well as various provinces and cities on the ground, have issued industrial development plans or industrial application promotion action plans for BeiDou, and vigorously supported the industry in three aspects: policy documents, special demonstration projects, and special funds for industrialization. 2017 onwards, relevant national departments have successively issued the "Guidance on Encouraging and Regulating the Development of Internet Rental Bicycles The Guidance Opinions", "Action Plan for the Development

of Intelligent Healthy Aging Industry (2017-2020)" and a series of other policies have promoted the use of locators in the mass market. Under the policy escort, the industry ushered in a period of rapid development. This also indicates that with the advent of the "Internet+" era, the traditional positioning tracker has been impacted by market innovation, and the multi-functional positioning tracker based on BeiDou technology has emerged with a unique and novel idea to integrate into the competitive trend of the international market.

5.1.3 Strong market competitiveness

Although GPS has occupied the majority of the market, Beidou, as a latecomer in China, has technical, policy and regional advantages over GPS. With the improvement of the third generation of BeiDou and related infrastructures, it is expected that BeiDou will combine its advantages at the opportunity of "military to civilian and internal to external", and use its high barriers in building the augmentation system and acquiring the B2 and B3 signal frequencies to enter special and emerging markets, gaining incremental demand and increasing its market share accordingly.

Beidou technology can already compete with GPS technology in many aspects. For example, first, Beidou uses tri-band signals, while GPS uses dual-band signals, which is a late-stage advantage of Beidou. The triple-frequency signal can better eliminate the influence of higher-order ionospheric delay, improve positioning reliability, enhance data pre-processing capability, and greatly improve the efficiency of ambiguity fixation. Moreover, if there is a problem with one frequency signal, the traditional method can be used to position using the other two frequencies, improving the reliability of positioning and anti-jamming capability. Beidou is the first satellite navigation system in the world to provide triple-frequency signal services. Secondly, Beidou Generation uses active positioning. Active positioning technology can complete positioning with just two satellites, and then the data is supported by and involved in solving the DEM (Digital Elevation Model) database of the Information Center. It is retained in Beidou II, but not as the main positioning method. And Beidou-2 uses passive positioning, which is the same as GPS and does not need the information center to participate in the solution, but it has active positioning then as a complementary function. Therefore, when the quality of the observed satellites is

poor and the number of satellites is small, it is still possible to locate them. This function is very advantageous for emergency situations, such as in valleys where the observation conditions are very poor, and Beidou technology can be the first to determine the position better than GPS technology. Third, the short message communication service is an original feature of Chinese satellite navigation, and it is very practical. It is no surprise that this feature has been retained in the second generation. Based on this feature, not only can the user know where he or she is, but also let others know where he or she is. This feature is good for distress and is also not available in GPS technology. Fourth, the positioning accuracy of Beidou system has been improved from 25m horizontal and 30m elevation to 10m horizontal and 10m elevation, and the speed measurement accuracy has been improved from 0.4m per second to 0.2m, and the timing accuracy is better than 20ns. Beidou technology has just been put into use and its accuracy has already exceeded that of GPS technology, and there is still a lot of room for Beidou to further improve its accuracy. In addition, Qiankun tracker is more comprehensive, compact, multi-purpose, and closer to the needs of consumers. It is believed that in the next ten years, Qiankun tracker will come later and become the leader of positioning tracker industry.

5.2 Recommendation

From in-depth interview 5 key informants as follow :

As a newly established enterprise, Qiankun Technology Co., Ltd. is bound to face many risks in the process of business development. Therefore, through rigorous and objective risk analysis, we come up with countermeasures and take precautions against predictable risks, so as to minimize the adverse effects brought by risks.

5.2.1 Technical risk analysis and countermeasures

Technology risk refers to the risk that threatens people's production and life along with the development of science and technology and the change of production methods.

Risks.

So far, China's satellite navigation industry innovation and development pattern has basically formed, and the scale of industrial application and internationalization level have been greatly improved. However, the construction and development of

China's Beidou system still faces problems such as fewer related hardware and software products, lack of integrated planning for application development, incompetent team technology, shortcomings, and low policy support and inadequate regulations and standards.

Countermeasures.

First, our team members have been exposed to welding technology, circuit design and production, programming design, and project production. Strong team strength. Second, we seize the user's pain point (widowed elderly, left-behind children's safety problems are increasingly prominent, more parents care about the safety of children and the elderly at home. And a consumable point for car users to prevent their cars from being stolen, etc.), and develop suitable usage patterns for customers according to their needs. User experience activities can be provided to make more people affirm the technology and the desire to buy it.

5.2.2 Market risks and countermeasures

Risk one.

China's BeiDou satellite navigation system opened for operation at the end of 2012, and the application based on BeiDou as the landing point to play the system's functions will surely see explosive growth. Initially, it faces less competition in the same industry market, but there is a greater threat from potential competitors, and the platform ideas can be easily imitated or even copied. In order to avoid the entry of competitors in the future, which will lead to increased market competition and smaller market survival space, the company must adopt certain strategies.

Countermeasures.

Apply for patent protection to prevent copying by competitors.

Through the market user experience survey, constantly strengthen the platform service functions to meet the growing demand for anti-theft cars, children and the elderly lost, etc. and make corresponding adjustments in a timely manner based on feedback to be more applicable to customers.

Investigation and analysis of market demand, increase cooperation with the government and businesses, while the team also increase Internet marketing, and thus accelerate the pace of market expansion and seize market share.

Risk two.

More multifunctional positioning anti-loss trackers on the market is the use of GPS positioning technology, so the cost of multifunctional trackers based on the BeiDou navigation system is relatively higher. Customer acceptance of the initial stage may face the problem of low recognition.

Countermeasures.

Increase the promotion of the platform; strengthen its own characteristics and provide quality services. Initially, provide relatively large concessions, mark the price clearly and reasonably, and charge certain remuneration proportionally, so as to make more people willing to try and experience our products; establish a good brand image; broaden the business scope and increase the company's profitability channels.

5.2.3 Policy risk analysis and its countermeasures

Policy risk refers to the risk to investors caused by significant changes in government policies or the introduction of important initiatives or regulations that cause market fluctuations. Under the conditions of market economy, due to the influence of the law of value and competition mechanism, enterprises compete for market resources and want to obtain more freedom of activities, thus they may violate the relevant national policies, which are compulsory and binding on the behavior of enterprises.

Risks.

So far, the policy is not strong enough to support the software developed based on BeiDou satellite navigation, and the regulations and standards in this area are not sound enough.

Countermeasures

Under the guidance of national economic and industrial policies, the company will gather information from all parties, refine the best solution, unify command and dispatch, and reasonably determine the company's development goals and strategies; strengthen internal management, improve product quality, reduce operating costs, and strive to improve operational efficiency, so as to form the company's unique advantages and enhance its ability to resist policy risks.

5.2.4 Financial risk analysis and its countermeasures

Financial risk is caused by the debt financing of the company. The higher the gearing ratio and the higher the return on net assets, the higher the financial wind of the enterprise and the greater the financial risk.

Risks.

The company partly adopts its own financing and venture capital, and the financing risk is low due to its own financing and limited amount of financing. Most use equity financing, mainly to absorb investment. Absorption of investment has high cost of capital and tends to disperse the control of the enterprise.

Countermeasures.

Optimize the capital structure, strictly review the objects of venture capital, and sign a series of legal terms to reduce the cost of capital. Constantly focus on risk supervision in the process of capital integration to ensure that the main ownership and operation of the company is in the team itself to ensure the continuous operation and stable structure of the enterprise.

Suggestion

From content analysis and in-depth it can suggests that:

Qiankun Technology Co., Ltd. is bound to face many risks in the process of business development. So Qiankun Technology Co., Ltd should set a plan and emergency plan to countermeasures and take precautions against predictable risks and protect these risk :

1. Market risks
2. technical risk
3. Policy risk
4. Financial risk

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