



COMMUNITY INTELLIGENT ACCESS CONTROL SYSTEM

BY

XUERONG ZHANG

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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Author Xuerong Zhang
Program Master of Business Administration (International Program)
Advisor(s) Asst. Prof. Xiang Xiao, Ph.D.

Graduate School, Southeast Asia University, was approved as partial fulfillment of the requirements for the degree of Master of Business Administration. (International Program)

 Dean, Graduate School

(Puttithorn Jirayus, Ph.D.)


 Director, Master of Business Administration

(Assoc. Prof. Napaporn Khantanapha, Ph.D.) (International Program)

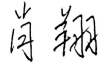
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(Assoc. Prof. Thanakorn Thanathanchuchot, Ph.D.)

 Committee

(Assoc. Prof. Napaporn Khantanapha, Ph.D.)

 Advisor

(Asst. Prof. Xiang Xiao, Ph.D.)

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Abstract

The epidemic outbreak in the past two years has led to strict epidemic control measures in various places and more prominent contradictions in community management. For this reason, our company decided to develop an intelligent access control system with relatively convenient functions. Our analysis of the industry's medium and long-term development trends found that intelligent access control systems are also essential facilities for community management in the construction of intelligent communities, and their market prospects are broad. Through industry analysis, market analysis and the development of marketing strategies and operational plans, the project will basically pay for itself after financial projections are calculated to develop 50 customers in the first year. The overall financial pressure on the company is not significant, and in subsequent years, the project is in a profitable state. If the project marketing plan is implemented as planned, the project will be profitable in the first year.

Keywords: Community, Intelligent, Access Control System

Acknowledgement

I have basically completed my graduate thesis and fulfilled my dream of studying MBA. Looking back on the nearly 2 years of studying MBA and the period of concentrating on writing my dissertation, I have deep feelings. To me, this experience is a rigorous training of academic and thinking, and it is also like a practice. I would like to express my most sincere gratitude to all my friends who have given me care and help!

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Section 1

Executive Summary

Our company is a high-tech enterprise in Zhong guan cun and a designated supplier for government procurement of central state organs, mainly engaged in providing system integration solutions and technical services for education, broadcasting and publishing systems, government, news media and other fields. In these two years of epidemic outbreaks, epidemic control measures around the strict, community management conflicts are more prominent. For this reason, our company found that the community access control system products market is relatively short, and a single function, the community access management challenges, some areas because vehicles can not quickly enter and exit the community caused by the surrounding road congestion. For this reason, our company decided to develop a set of intelligent access control system with relatively convenient functions.

In the product function mainly includes three major parts: personnel and personnel access management, vehicle and vehicle access management, community parking management.

The product function is mainly focused on the access identification management of the two largest management modules of community people and vehicles, which serves the community property management on the one hand and community residents on the other. We conducted a questionnaire survey on property managers and found that the percentage of community investment in epidemic prevention and control reached 27.1% and 44.86% respectively, while the control effect was poor. 18.69% of the property managers think that it is difficult to carry out the epidemic prevention and control work in their own communities. The intelligent access control developed by our company now can help the community to strengthen the management of people and vehicles, and the epidemic prevention and control work is convenient.

Our analysis of the medium and long-term development trend of the industry found that the intelligent access control system is also a necessary facility for community management in the construction of smart communities, and its market prospects are broad. Through SWOT analysis, it was determined that our company still has certain competitive ability in this industry.

After further study of the market, it was found that there are few product categories in the market, relatively few companies involved in the market, and not many competitors specializing in these products. The current market players offering related products are mainly large companies that tend to be complete solutions for smart communities, or small companies that offer a single simple product. None of them pay attention to the objective demand and customer value of the current community for access to community control issues. At the same time, we also analyzed the purchasing power of community properties for the product and their purchasing style to indeed match our design of the product. Through cost analysis and sales forecast, the pricing of the product is also more acceptable to the community based on solving the needs of the community and resolving the contradictions of property enterprise management.

In order to make the products more in line with market demand and meet the needs of customers, in the marketing strategy, we adopt a phased, customer type marketing products. We consider giving priority to developing new product markets based on our existing customer resources, improving product features and customer experience, and then vigorously promoting our products to quickly capture market share. In terms of product pricing, we also adopt pricing by customer type to improve the match between different customers' needs and products.

In order to reduce project risks, we adopted a conservative strategy in operation, focusing on the Beijing market, and the project started with our own capital, without using loans. In the first stage, we adopted the way of breaking in with mature customers to improve the product features and enhance the customer experience. In the second stage, with sufficient capital, we appropriately increase the market share without pursuing share and occupancy. In the third stage, after the

product features are mature and the experience is stable, speed up the market promotion in order to increase the profit of the whole project. The same strategy is adopted for personnel investment, and there is no rush to expand the implementation team in order to reduce personnel costs and financial pressure.

Through industry analysis, market analysis and the development of marketing strategies and operational plans, the project basically pays for itself after financial projections are calculated to develop 50 customers in the first year. The overall financial pressure on the company is not significant, and in subsequent years, the project is in a profitable state. If the project marketing plan is implemented according to the project, it is likely to achieve profitability in the first year.

Section 2

Company Description

2.1 Company Profile

Beijing Shengxin Computer Network Technology Co., Ltd. was established in Beijing in 2001, with a registered capital of 10 million RMB, legal representative is Ms. Xia Ke, the company is located in Zhong guan cun, a high technology park. 2012 was selected as a designated supplier for procurement by Beijing government authorities, 2015 was selected as a designated supplier for government procurement by the central state authorities. 2019 was selected as a national high-tech enterprise, 2020 Passed ISO9001 quality system certification.

The company's business license certificate and high-tech certificate are shown below:



2.2 Mission Statement

The company insists on "taking user needs as the guide and continuous innovation as the cornerstone", and devotes itself to providing users with safe, convenient and intelligent solutions and technical services.

2.3 Products and Services

Since its establishment 21 years ago, the company has been mainly engaged in providing system integration solutions and technical services for education, broadcasting and publishing systems, government, news media and other

fields, especially in the education industry with unique and comprehensive solutions and rich practical experience, which has been well received by many customers and enjoys a good reputation in the same industry.

Our company provides a 3-year system and technical warranty service for the hardware and software within the contract for community intelligent access control projects.

1.Our company can assist community users in troubleshooting and recovery.

2.Our system-level warranty service can be controlled by the company's backend service process to ensure that major failure diagnosis time does not exceed 2 hours and failure recovery time does not exceed 8 hours. In case of hardware failure, our company can coordinate and supervise the whole warranty process of the manufacturer to ensure the quality and time of the warranty.

3.During the maintenance period, if the project is changed or upgraded or system failure occurs due to our responsibility, which causes the purchaser to be unable to use the system normally, we promise that we can extend the corresponding warranty period to ensure the interests of the purchaser.

2.4 Current Status

Since its establishment, with the advantage of many technical talents and good cooperation with famous high-tech companies, the company has established close and good cooperation with high-tech enterprises such as IBM, HP, 360 Enterprise Security Group, Lenovo, H3C and other companies in terms of products and technologies, and its popularity in the industry has been increasing, with extensive customer development and a rapidly increasing trend of integration turnover. We have rich practical experience in software application, information security, communication network management and system integration. In the process of the company's development and growth, Shengxin has gathered a group of young scientific and managerial talents. At present, the company has 35 employees, 13 professional and technical personnel, 5 graduate students in computer application, and more than 68% of personnel with bachelor degree or above.

2.5 Legal Status and Ownership

The company has a separate legal personality and is liable for the company's debts with all of its property. The company belongs to the one-way legal entity ownership structure. This ownership structure has two advantages: one is to reduce investment risks and maximize economic benefits. Second, it is conducive to improving efficiency and enhancing the company's market competitiveness.

2.6 Choosing A Name for Your Business

The name of the company is: Beijing Shengxin Computer Network Technology Co. The word "Sheng" means to understand things, to be wise and holy, and also refers to the person who has reached the highest achievement in moral and academic knowledge. The word "new" means fresh, new vitality, new vitality. The combination of "Saint and New" together has the meaning of sacredness, stability and innovation, which means that the company will go to a new and prosperous world in the future, symbolizing that the company will have a better, bigger and broader development.

The company logo is as follows:



2.7 The Primary Consideration for The Name

The company name is crucial to the future development of an enterprise, because the company name is not only related to the influence of the enterprise in the industry, but also related to the recognition of the enterprise by consumers after the products of the enterprise are put on the market, the company name conforms to the characteristics of the industry, has a deep cultural heritage, and simple to remember, the competitiveness of the enterprise is clearly different from

the enterprises in the industry, to create a well-known brand for the enterprise. The foundation is laid. Therefore, the primary consideration in naming a company is whether the company name can reflect the corporate philosophy and convey the spirit of enterprise.

2.8 Relevant Laws and Regulations

The legal basis is: "enterprise name registration regulations" Article 8 enterprise name shall use Chinese characters, the name of the enterprise in the national autonomous areas can be used at the same time the national characters common to the national autonomous areas. Enterprises using foreign names, their foreign names should be consistent with the Chinese name and reported to the competent registration authorities for registration.

Article IX of the enterprise name shall not contain the following content and text.

- (A) detrimental to the state, social public interest;
- (B) may cause deception or misunderstanding of the public;
- (C) the name of foreign countries (regions), the name of international organizations;
- (D) the name of political parties, the name of the party, government and military organs, mass organizations, names of social groups and troop numbers;
- (E) the hanyu pinyin alphabet (except for foreign names used in foreign languages), numbers;
- (F) other laws and administrative regulations prohibit.

Obviously, the name of our company is in compliance with the legal provisions of our country on the naming of enterprises.

Section 3

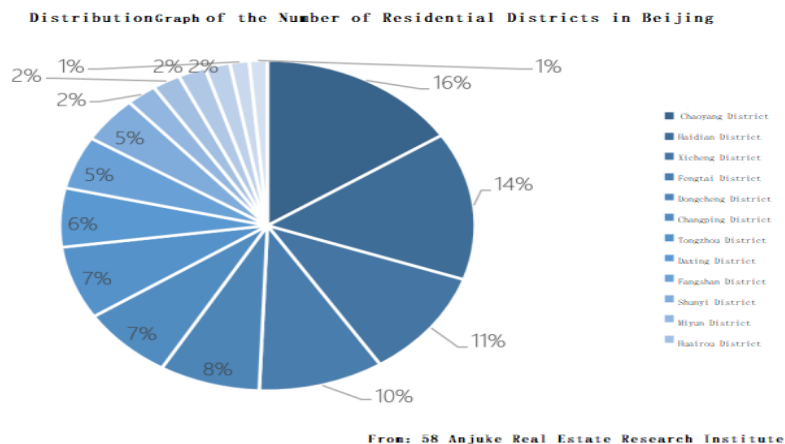
Industry Analysis

2020 global epidemic outbreak, the capital strictly into the management of the capital, strict and tighten the social surface prevention and control, strict community (village), units, public places to enter the check. With the normalization of national epidemic prevention and control, the community's epidemic prevention and control work is cumbersome and complicated. Community epidemic prevention and control governance, which effectively reduces the labor intensity of street community workers and reduces the complexity of the workflow, must introduce technology to assist the community in comprehensive management. Beijing is an international metropolis with a relatively large foreign population and movement of people, so community safety management is a long-term and arduous task.

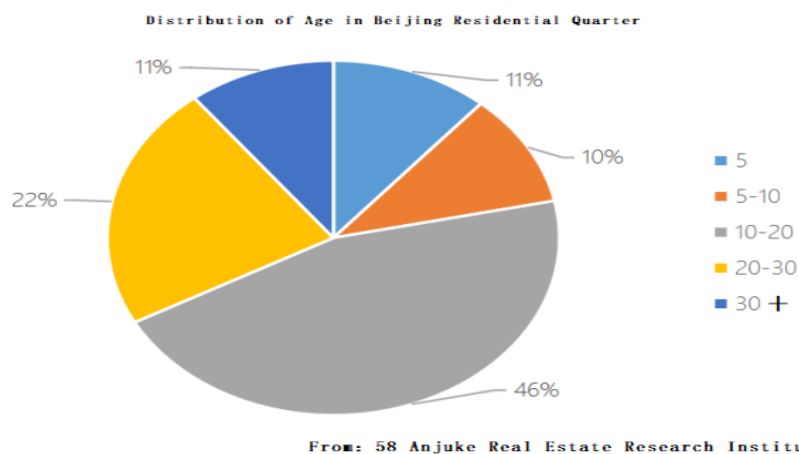
Therefore, the demand for intelligent access control system is objective and urgent. According to the statistics of Anju Customer Real Estate Research Institute, in 2022, there will be nearly 20,000 stock cells in Beijing, and the market scale is huge.

3.1 Industry Size, Growth Rate and Sales Forecast

In 2022, there are nearly 20,000 stock communities in Beijing. Half of them are distributed in Chaoyang District, Haidian District, Xicheng District, Fengtai District, Dongcheng District, these five areas, accounting for 16%, 15%, 11% and 10%, 8%, accounting for 60% of the total number of cells, is the largest number of cells in Beijing. Pinggu District, Yanqing District, Mentougou District, Shijingshan District and Huairou District, these five areas will have a relatively small number of cells, accounting for about 2% of the level. Several other regions have basically comparable stock of subdivisions, with a percentage between 5-8%.

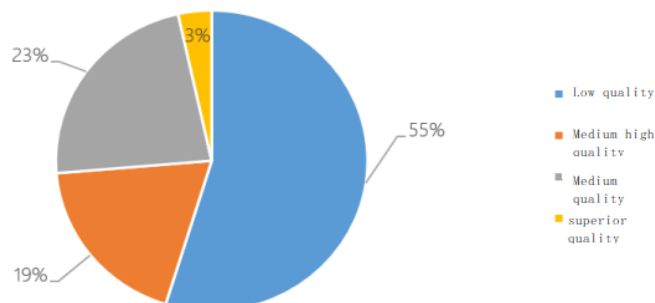


In terms of the age of the plots, 56% of the total number of plot points were 5-20 years old, 22% of the total number of plot points were 20-30 years old, and 78% of the total number of points for both together.



In terms of the overall quality of the neighborhood, low-quality neighborhoods account for a relatively large share, accounting for 55% of the total, while medium-quality ones account for 23%, and the two together account for 78% of the total.

Quality Distribution Graph of Residential Quarter in Beijing



From: 58 Anjuke Real Estate Research Institute

From the above data, we can see that Beijing's neighborhoods as a whole are characterized by long housing ages, many low-quality neighborhoods, and concentrated neighborhood locations. According to the old neighborhoods, low-quality neighborhoods need to strengthen access control management calculations, there are at least eleven thousand neighborhoods need to install access control management systems. If the use of significant results, access control systems have been installed in the community can also be used to upgrade the access control management system, that may have 97% of the community needs to be installed, that is, there are nineteen thousand six hundred cells need to install access control systems.

At present, our company's implementation capabilities, system development is complete, the complete installation of a cell access control system takes about two weeks, so that a year can be installed in about 50 cells. According to the installation cost of 75 wan yuan per cell, the annual operating income is about 37.5 million yuan.

With the increase in installation levels and the expansion of the installation team, it is expected that the number can be increased by 50% per year thereafter. At this rate, it is expected to last about 5 years

3.2 Industry Characteristics

The industry participants are mainly divided into four categories: hardware suppliers, community property enterprises, integration service providers and external government and public utility enterprises.

1. Hardware product suppliers: such as cameras, gates and other product suppliers. These products are not dedicated to community access control products, you can use common equipment, the range of products available is relatively large, the supplier dependence is small. Therefore, there is a comparative advantage in bargaining for suppliers.

2. Property management enterprises: Property enterprises vary greatly in the market because of their size, so their participation in the market and market influence are different, so their bargaining power is not the same. For example, in some old renovated communities, a property enterprise is basically responsible for property services in only one community, so its market participation is very low and it basically has no bargaining power in the market. However, if Zhonghai Property is a state-owned enterprise, it has a high degree of market participation, a wide range of participation and a large market influence. So its bargaining power is very strong. But in general, property companies belong to the purchasing side and have a relatively large influence on the price of products and services.

3. Service integration enterprises: such as us, which integrate many hardware functions and provide specific services for property enterprises. These enterprises are not consistent with the value of the services and service objectives they provide, and at present, homogenization is still relatively low. And the stronger enterprises are more inclined to provide complete solutions, which are more difficult to land. From the analysis of the whole industry development stage, it still belongs to the initial stage. Service integration enterprises also vary greatly in their participation and bargaining power in the market based on the characteristics and capabilities of their services. However, overall, the bargaining power is relatively high due to the small total number of participating companies.

3.3 Industry Trends (Environmental Trends, Business Trends)

In recent years, technologies such as IoT, big data, cloud computing, artificial intelligence, pattern recognition, and edge computing have developed rapidly, integrating various data resources such as people, equipment and facilities, houses, vehicles, and organizations in community scenarios, providing technical possibilities for community wisdom management, risk management, and wisdom services.

In the construction of smart communities:Through the use of information technology such as Internet of Things, 5G, cloud computing, artificial intelligence, block-chain, and big data, we combine various core elements of urban operation such as people, commerce, transportation, communication, water and energy, and realize urban safety and security, fine management, efficient service, through the whole life cycle process such as planning and design, construction management, and operation and maintenance services of the city brain wisdom hub. The development goal of ecological and environmental protection, happiness and livability.

In terms of safe community construction:On February 27, 2006, AQ/T2001-2006 "Basic Requirements for Safe Community Construction" was promulgated by the State Administration of Safety Supervision, and was officially implemented nationwide on May 1, 2006. The standard aims to help communities standardize accident and injury prevention and safety promotion, continuously improve safety performance, prevent and reduce injury accidents to the maximum extent, improve community safety, and raise the safety awareness and safety assurance level of community personnel through safe community construction.

In the community equipment implementation risk monitoring:The rapid development of wireless sensor networks, 5G and other Internet of Things technologies have been rapidly promoted and applied in the community equipment and facilities risk monitoring. Neighborhood level and courtyard of water, electricity, gas, heat of low and medium voltage pipelines and exchange stations, indoor facilities and other key parts need to establish an integrated risk monitoring and prevention platform to achieve comprehensive perception, comprehensive

analysis and prediction and early warning of community equipment and facilities risk, to achieve the refinement of community equipment and facilities risk monitoring and governance.

In the community security risk prevention and control: based on video security construction is mostly focused on basic management applications, the lack of intelligent analysis of personnel characteristics (such as facial or physical characteristics), relying mainly on manual analysis, the efficiency is low, unable to meet the needs of community risk refinement governance. In addition, although some of the various AI-based intelligent applications are used in some community video surveillance systems, but the scale of AI-based video security construction is still relatively small, lacking the use of video information for analysis, integrated linkage governance work model. In summary, the existing video security system in the community is difficult to achieve community security events in advance of active monitoring, prevention and timely disposal, the urgent need to build community intelligent video security platform, so as to meet the needs of intelligent, refined community security management.

3.4 Long-term prospects

First, the national level is vigorously advocating the construction of smart cities. China Smart City Development Level Assessment Report shows that Beijing, Shanghai, Guangzhou, Shenzhen, Tianjin, Wuhan, Ningbo, Nanjing, Foshan and Yangzhou are leading the development level of smart cities in China. The "Smart Beijing Action Plan" includes smart communities, smart families and other contents related to people's livelihood.

Second, the construction of "smart community" is to introduce the concept of "smart city" into the community, taking the happiness of the community as the starting point, providing convenience for the people in the community by building a smart community, thus accelerating the construction of a harmonious community and promoting regional social progress. Based on the Internet of Things, cloud computing and other high-tech "smart community" is a "cell" of the "smart city", it

will be a people-oriented intelligent management system, is expected to make people It is expected to make people's work and life more convenient, comfortable and efficient. Several leading companies have already started to invest in the construction. For example, Kuangwei's intelligent project has already landed in 12 cities nationwide; Ping An's intelligent program has also landed in many communities in Guangzhou, Zhengzhou, Chengdu and other cities.

Third, the current domestic multi-functional camera prices and service prices used in the field of intelligence have dropped significantly, and the financial threshold for use has been acceptable to most community properties.

Fourth, the construction of intelligent communities tend to focus. Most of the current intelligent community construction is concentrated in the community access, vehicle management, property charges and other aspects of the function. With the integration of urban management, community policing, community government, home care, online education, smart home, community security and other aspects of the development and integration, the wisdom of the community also tends to multi-functional.

Comprehensive above trends, community access control will be the necessary facilities for each community, but also will be integrated into the entire wave of intelligent community construction.

3.5 SWOT Analysis

At present, the construction of intelligent communities, still in the initial stage of the community hardware and software, interconnection system, cloud platform into use, mainly for community security, street government networking, basic travel, etc. to make some changes, from the industry applications, has not really achieved large-scale applications, but the general trend of integration into the social grassroots service governance has emerged.

(1)Strengths of our industry.

1.Solution implementability: Comparing with peer solutions, they can be broadly divided into two types. One is a large all-round solution with a full set of

solutions mainly for leading enterprises. This kind of enterprise is represented by Kuangwei. The implementation of the program requires high infrastructure of the cell, the one-time investment capital is very large, the implementation period is also relatively long, the post-maintenance cost is high, and the financial burden of the cell is heavy, which is beyond the affordability of most cells. The second is the existing improvement or renewal of existing cell equipment, which is the current solution adopted by most cells to cope with the current epidemic management. This situation is okay to deal with the current epidemic, but there is no substantial improvement to the management of the community itself and to the enhancement of the life of the residents. Our company's solution is an application scenario-based solution based on mature and stable face recognition and visual analysis technology, which can solve the practical needs of the community, with low investment capital and low requirements for the basic facilities of the community, and is applicable to all communities.

2. Good customer base: Our company has been engaged in central procurement business for many years, and has accumulated a large number of units with financial resources, and formed long-term and stable cooperative relationships. We have a better understanding of their living community environment, and have a better customer base for product promotion.

3. Cost advantage: The system is functionally focused and not too expensive, which can be accepted by most properties. In addition to the one-time system development cost, the implementation cost is relatively low and the profit can be guaranteed. At the same time, our supply partners can also supply nationwide, which can reduce our transportation cost in the project implementation process.

(2) Industry weaknesses of our company.

1. The large initial capital investment will put pressure on the company's financial costs. If the project fails or difficulties are encountered in recovering project funds, it will form a relatively large challenge to the company's working capital.

2. Since the system as a whole is relatively simple, the threshold of entry is not high, if a large number of similar products enter may form a fierce competitive environment for survival.

3. Since the old neighborhood property has fewer sources of income and less capital accumulation, it is less capable of undertaking large facility improvements.

(3) Industry opportunities for our company.

1. The market is relatively large. This system is more promotable. Communities all over the country can use it, the market is huge, if our products can be delivered smoothly, in the next five years, there is still a relatively large market space.

2. The cost advantage is obvious. Our company is a central purchasing enterprise. We have long-term cooperation with most hardware manufacturers in the market, so we have obvious advantages in hardware purchase cost and can make extra profit under the same competitive conditions.

3. Huge number of existing customers. Our company has formed a cooperative relationship with more than 100 government units, and the number of their family homes is considerable. If we implement the volume by 50%, we can also ensure that the company will achieve good performance in the coming five years.

(4) Industry threats to our company.

1. As the epidemic continues to spread around the world, it is believed that Chinese software companies should not be the only ones to develop intelligent community epidemic prevention and control software platforms, but software development in countries around the world will be scrambling to grab this piece of cake for their own economic benefits. This will inevitably cause competition within this industry.

2. The increase in the number of systems connected to each other may increase the difficulty and integration cost of integration. As our system can be connected with the property system, but also can be integrated into the large system of intelligent community. To connect with various systems that do not have access to the standard, the integration difficulty is relatively large. The cost of integration also increases rapidly as the number of dockings rises. It will likewise

increase the maintenance cost at a later stage, forming a squeeze on the company's profit.

3. As the epidemic continues, the number of vaccinations increases and the economy gradually regains vitality. Local governments may quickly promote the pace of construction of smart cities and smart communities. The complete set of intelligent solutions of the leading companies may squeeze part of the market share.

Section 4

Marketing Plan

The project is implemented in five years to complete the Beijing market plan. In the first year, we plan to select 5-10 of more than 100 existing institutional customers for trial runs to improve product functionality and customer experience, and then market up to 30 of these customers. Other customers 20. In the second year, with mature products and construction, the market customers will be developed to 75, 100 in the third year, 120 in the fourth year and 150 in the fifth year.

4.1 Overall Marketing Strategy

The introduction of "black technology" to help prevent and control epidemics greatly improves the efficiency of access management and health inspection; the use of "Internet +" technology to create a "cloud platform", residents can complete operations at home at the same time, it also establishes an effective bridge between neighborhood communication and community governance.

Marketing strategy 7ps.

Product: community intelligent access control system.

Price: strictly in accordance with the relevant departments of Beijing pricing system guidance implementation, in the case of ensuring the recovery of product costs, now pre-sale of each set of access control system 750,000 yuan, depending on the number of hardware equipment and control modules required by each community and the final determination of the contract amount

Promotion: for the specific circumstances of different communities to carry out the contract amount of discounts

Place: each community in Beijing and independent epidemic prevention and control units such as administrative villages.

Personal Sales: In this project, the pre-sales and after-sales service of technical service personnel is very critical, which directly affects the company's sales

performance. Therefore, the company will strongly support and encourage technicians to constantly improve their technical level.

Process: In 8.1, the product structure and functional flow chart of the project are listed in detail, and the sequence and connection of each module are described in detail, which will not be described here.

Physical Evidence: The technical research and development of this project is strongly supported by North China University of Technology. Our technical service personnel regularly participate in training. Our company is the supplier of the central procurement agreement. These conditions are sufficient to show that we can provide each community with various services of smart access control products.

Market target analysis and target market determination

The first year to develop the market as the main goal, focus on product function improvement and improve customer experience.

According to the data of 3.1 in Anju House Property Research Institute, new high-grade will not purchase our products because the infrastructure is more perfect.

The number of neighborhoods around 10-20 years old is high, and they are in the facility replacement cycle, and they are also a bit more interested in improving the management level of the neighborhood, so they are our main target customers. More than 20 years old neighborhoods basically do not have a perfect access control system, so these neighborhoods are also our target customers.

To sum up, all the communities over 10 years old are potential customers of our project, and the main target customers are about 10 years old communities.

Define marketing and sales strategy

(1). As the data in 3.1 shows that Beijing neighborhoods are mainly distributed in four areas, namely Chaoyang District, Haidian District, Xicheng District and Dongcheng District. Our original institutional customers are also mainly concentrated in these areas, so our sales target should also focus on these areas.

(2). First of all, we will look for customers with good relationship base and wide range of cooperation in the existing customer base, and conduct pilot projects to

improve the products. Then use the effect of using these products to market other customers among the current customers.

(3). First of all, the first echelon target is the community of about 10 years. The first two years to focus on sales force marketing these customers, and strive to gain market leadership in these customers, to obtain customer word of mouth and establish the product brand.

(4). In the process of implementing the project, focus on the integration of existing data with relevant property enterprises to lay a good foundation for the integration of the product into the smart community.

Marketing Campaign Management

Marketing activities are managed in three phases over five years for the class management.

The first stage is the pioneering market stage. In this stage mainly focus on customer value realization, pay attention to the collection of customer needs and customer value pursuit, customer experience tendency. Create product characteristics to enhance the competitiveness of products in the market, while enhancing the adhesion of existing customers.

The second stage is the market seizure stage. At this stage, the product has become mature, and the marketing activities focus on expanding the customer base, expanding market share and increasing project revenue.

The third stage is the profit expansion stage. On the premise of completing the objectives of the first two stages, the product has been on stable, product features and customer testing have been recognized by customers, the competitive position of the product in the market is basically stable, and the price of the product is also basically stable, at this time should strive to obtain more customers, with the goal of improving the speed of construction, improving the quality of construction and other ways to improve the profitability of the project.

4.2 Pricing Strategy

The implementation cost of the project is about RMB 3.25 million yuan, which mainly includes hardware cost, software amortization, staff salary, sales cost and other costs. Adding the maintenance cost and hardware damage cost in the later stage of the project, the base pricing is about RMB 0.75 million yuan.

The first batch of customers mainly source for the existing customers in the selection, so in order to increase customer stickiness, the pricing of old customers to the base price of 10% discount for the target.

For about 10 years of the community, the basic property charges are higher, and parking fees and other relatively stable, so the property companies are less sensitive to the price of 0.75 million yuan. And the infrastructure of these communities also to the point of renewal, the general budget is sufficient. Third, because at this time, there are fewer similar products on the market and poor comparability, so customers have less bargaining space for the price. The price for such customers can be raised appropriately and can be priced at RMB million 0.8-0.95 yuan.

Unit: RMB million

	old customer	Small communities	midsize communities	Large communities
Price	0.67	0.7	0.75	0.8-0.95

4.3 Promotion Strategy

According to the company's current customer resources and customer base, our promotional activities can take the following strategies.

1. Door-to-door sales to existing customers, this strategy is only implemented for the existing customer base. Because the scope is relatively small, the implementation is less difficult, and the customer target is concentrated, so we can receive good results in a short time.

2. When the product is basically stable and there are some influential customer success stories, we can use our partnership with Beijing Radio and TV Group to

promote the product to the public through Beijing TV's Life Channel, and use the power of the public to lose the property to improve the service and facilities in the community. This approach has a wide range and can expand the influence of the product in a short time, quickly expand the customer base, enhance market share and grab market profits.

3. Participate in the centralized projects of the current smart community vendors. By participating in the wisdom community project, the yield of the project can be reduced, but in this way, you can integrate into the tide of wisdom community in advance and expand the customer base of the product.

4. Develop the market outside Beijing through the way of foreign customer promotion, and lay out the national market early.

4.4 Distribution and Other Marketing Activities

As our business involves a wide range of industries nationwide, we have rich customer resources and many opportunities for cooperation. So make full use of these market resources for marketing.

1. We can entrust our national cooperative customers to carry out product agency. This is the best way to share the market and opportunities with cooperative customers, which can not only strengthen the relationship between customers, but also enhance the profit channel of customers, and enhance the influence and share of products in the market.

2. Cooperate with the integration company and use the customer relationship of the integration company to develop our channel. Hardware facilities and infrastructure concessions are not large, and the technical service fees that should be charged annually in the future are packaged in accordance with the number of years the community has purchased. 10% discount for purchasing one year of service, 20% discount for purchasing two years of service, and 30% discount for purchasing three years of service.

Section 5

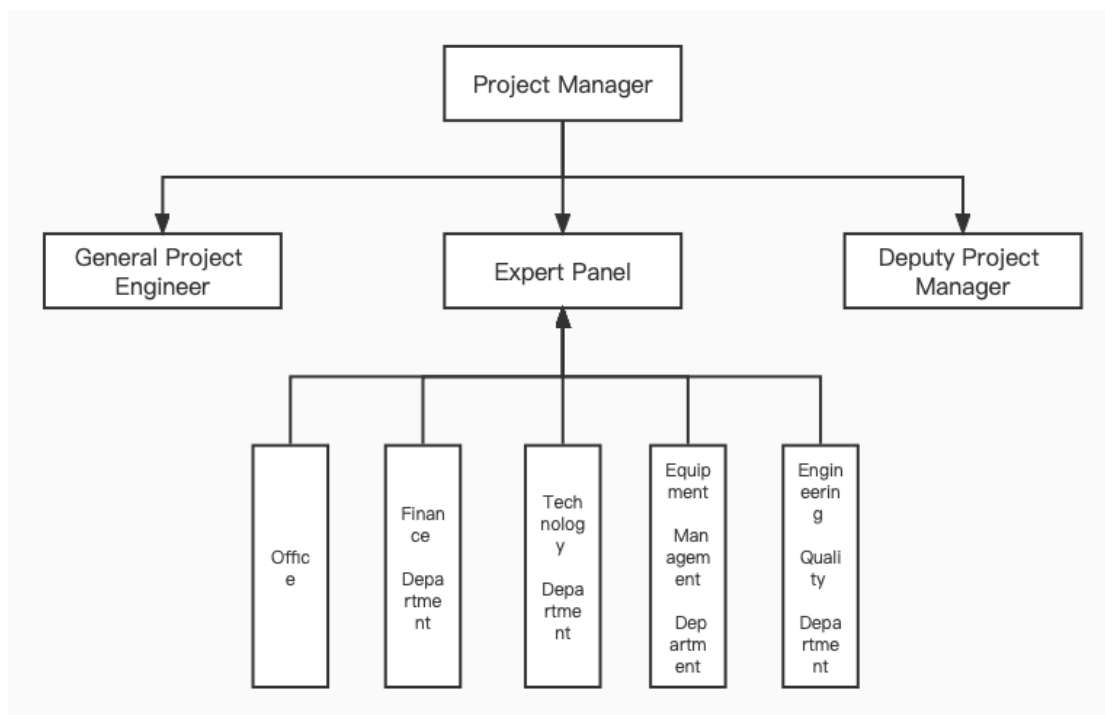
Management team and Company Structure

5.1 Project Management Team

The community smart access control project management team members are as follows.

No.	Name	Job	Credentials	Post
1	Li Hui	engineer	Project Manager	Project Manager
2	Lu Ping	engineer	Project Manager	Project Chief Engineer
3	Pang Po	engineer	Project Manager	Deputy Project Manager
4	Zhao Ou	engineer	IBM Systems Engineer	Expert Panel Members
5	Zhou Nan	engineer	Automation Engineer	Expert Panel Members
6	Shi Lian	engineer	Electronics Engineer	Expert Panel Members
7	Sheng Guo	engineer	Information Systems Engineer	Project Office
8	Zhang Jing	engineer	Junior Accountant	Project Finance Department
9	Wu Qiang	engineer	CCNP Engineer	Technical Department
11	Zhang Yi	engineer	CCIE Engineer	Technical Department
12	Lu Fan	engineer	Network Engineer	Facilities Management Department
13	Zhang Yu	engineer	ZTE Certified Engineer	Equipment Management Department
14	Qi Xin	engineer	ZTE Certified Engineer	Engineering Quality Department
15	Zhao Bin	engineer	ZTE Certified Engineer	Engineering Quality Department

The project management flow chart is as follows.



5.2 Board Members

At present, there are four members of the company's board of directors, one chairman, one vice chairman, one general manager and one director. The chairman is Ke Xia , the vice chairman is Xiaohui Wang, the general manager is Hong Liu, and the director is Jing Zhang.

5.3 Advisory Board

The company's advisory board consists of the following people.

1. Zhao Run, editor-in-chief of Guangming Daily, is responsible for the overall operation of the company
2. Che Guo, Director of the Asset Division of Guangming Daily, responsible for the procurement process of the company
3. Wu Qing, Chairman of Beijing Transocean Future Technology Development Co. Responsible for the company's customer relations

4. Qin Feng, Chairman of Beijing Xinchuang Rongtong Technology Co.
Responsible for the company's customer relations
5. Feng Rui, Chairman of Beijing Beike Bluelight Lab Technology Co.
Responsible for the company's customer relationship
6. Kang Kang, General Manager of Zhongdian Great Wall Technology Co.
Responsible for the product design and development of the company's projects
7. Mr. Tu Yan, General Manager of Aisino Four Creation Technology Co.
Responsible for the product design and development of the company's projects

5.4 Other Professionals

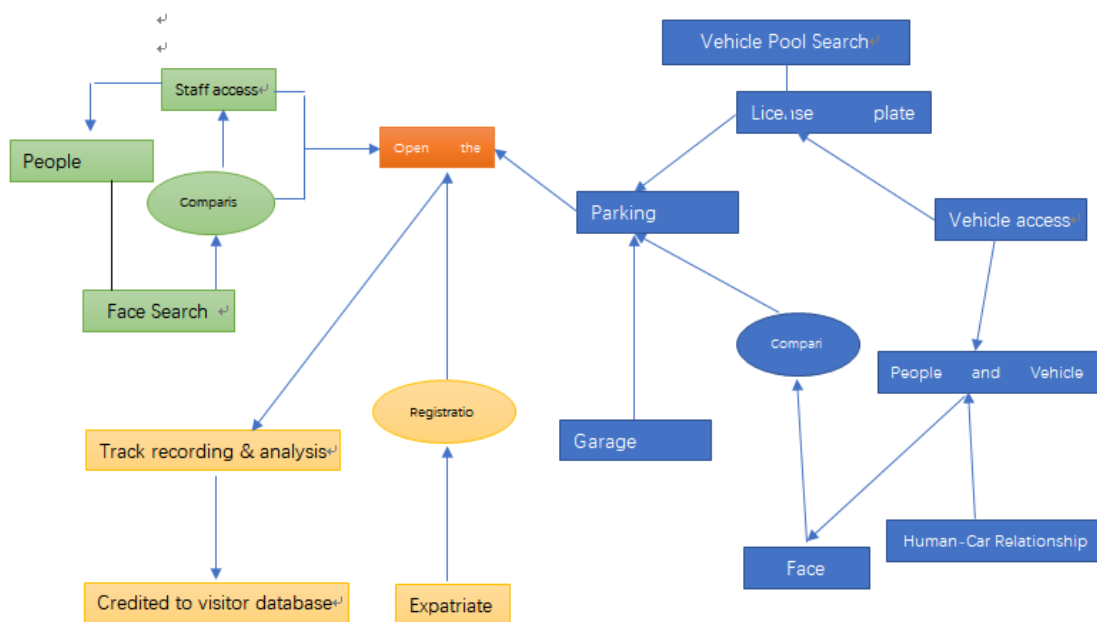
1. Peng He PR manager, responsible for the company and the customer's business communication and communication
2. Guo Bing technical director, responsible for the overall implementation planning of the company's projects
3. Li Qiang, technical engineer, responsible for the pre-sales technical support of the company's projects
4. Nie Hu technical engineer, responsible for the pre-sales technical support of the company's projects
5. Zhang Jun Technical engineer, responsible for the pre-sales technical support of the company's projects
6. Wang Xiaobo Administrative Manager, responsible for organizing and carrying out the administrative management of the company
7. Wang Lei, manager of logistics department, responsible for managing and improving the work of the company's logistics department
8. Zhang Feng, manager of the personnel department, responsible for organizing and carrying out the company's personnel management work
9. Li Tian, technical engineer, responsible for the management and improvement of the work of the technical department
10. Jing Zhang, manager of commercial department, responsible for managing and improving the work of the company's commercial department

11. Xia Ke, manager of finance department, responsible for managing and improving the work of finance department of the company
12. Wang Xiaohui, manager of the sales department, responsible for managing and improving the work of the sales department
13. Liu Hong, manager of the Key Account Department, responsible for the company's business exchanges and communication with customers
14. Yan Li, manager of the cleaning department, responsible for managing and improving the work of the cleaning department

Section 6

Operations and Production Plan

6.1 Business Model and Procedures



Business Process Description.

The business process of this product is divided into three parts: personnel in and out, vehicles in and out, and outsiders in and out, respectively. The specific process is as follows.

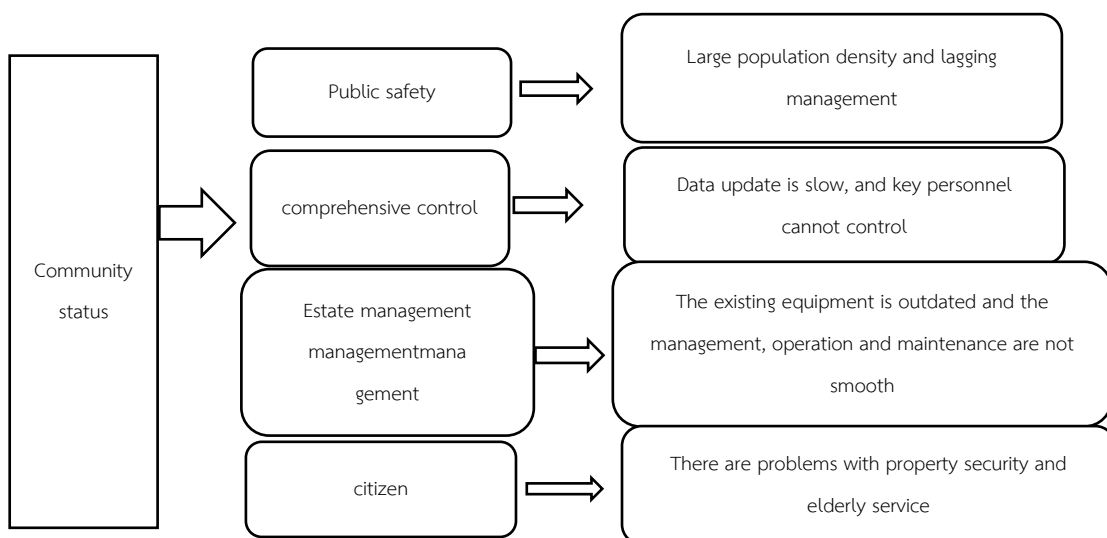
1. Personnel in and out: when personnel enter and exit the gate, first collect the face biometric value, and then query and compare with the community's face feature value library. If the comparison does not pass, the gate will not be opened.

2. Vehicle access: vehicle access has two identification methods, one is license plate recognition, through the license plate number to the vehicle library for query, if found, the gate is open, the vehicle can enter and exit the community, if no query gate does not open. The second is through the identification of the driver, the vehicle in and out of the district, the first collection of the driver's face features value, to the district face features library for query, and comparison, if the comparison is passed, the gate is open. If the comparison is not passed, the gate will not be opened.

3. Outsiders in and out: outsiders or people who do not pass the face comparison can enter and leave the district by registration, when registering, the system collects the physical characteristics of the registrant, and after the person enters the district, the track is recorded and analyzed, and the data is recorded into the visitor database.

6.2 Business Location

The software is mainly marketed to independent epidemic prevention and control units such as various communities and administrative villages in Beijing. It can also be sold to communities in every province and city in China. As long as our software platform is purchased in the first year, we can collect technical service fees for subsequent years, and our company should continue to earn its technical service fees once and for all if the purchasing unit does not replace its hardware facilities. We took the Bajiao community in Shijingshan, Beijing as the first project implementation site. The current situation of the Bajiao community is analyzed as follows.



Based on the analysis of "one need and three requirements", we design and build a community-based defense line and community-based services for the actual situation of Bajiao community. The final goal is to achieve the construction of the Pat pong community at the level of comprehensive governance and

property/residents.

6.3 Facilities and Equipment

6.3.1 Intelligent hardware products

1. 13.3-inch intelligent access control host.



Functional description.

(1) access control host integrated multi-functional card reader chip, support for resident ID cards, residence permits, CPU cards, IC encryption cards and other open door media swipe card.

(2) offline function, access control host support offline operation, the system automatically saves the door opening information picture open data, and to achieve automatic memory storage, the network recovery automatically upload the door data.

(3) support network self-test function, when the network is interrupted, the device automatically detects network drop after half an hour can automatically reset the network configuration to restore the network, to solve the problem of network devices work unstable for a long time, requiring manual intervention to reset the site.

(4) voice interaction function, in the process of limited operation of the access control machine, access control machine voice interaction reminders, such as digital key digital broadcast, open the door successfully broadcast, illegal operation reminders, etc.

(5) human-computer interaction function, access control machine with voice interaction at the same time also has a personalized human-computer interaction

interface, such as access control limited operation pop-up window left scratch interface to display the contents of the operation.

(6) network video playback function, access control machine comes with IPS HD retina display, support for video download and playback from the operating end of the platform.

(7) support online management and remote upgrade, access control host support remote status monitoring, software and hardware version information query, while supporting remote online management and upgrade operations. Also supports automatic rollback to the previous version of the upgrade failure. Significantly reduce the cost of manual on-site maintenance does and simple maintenance.

(8) Support hardware self-protection mechanism, hardware using industrial-grade design, support 7 days X 24 hours all-weather operation, hardware wiring port design over-current protection, overvoltage protection, undervoltage protection, anti-reverse connection, misconnection protection.

(9) support offline authorization to issue access control card function, in the case of network disconnection, but also by the management center offline card issuance and cancellation of access control card, offline operation when replacing the new lock new equipment without re-authorization.

(10) access control using private encryption, and support communication with the cloud server. All access control hosts in the system and the communication between the server using a unique communication key for encryption, while the back-end server for access control host GUID system authentication confirmation, the device has a front-end confirmation back-end authentication system to ensure the security of the device independent of non-hostage.

(11) support network camera access, access control host itself built-in 200 pixel camera, in order to match the door opening capture multi-dimensional shooting, to protect the authenticity of the door opening capture data, validity, access control system can access two external network cameras, the door, the door and other directions for video linkage recording.

(12) The system uses TCP/IP transmission protocol to ensure the real-time system data, system information collection, access control authorization, door opening data, equipment operating status and other information, that is, to check, what you see is what you get. Access control host and server real-time communication, real-time data transmission, system authorization access card, cell phone instantly effective, open the door event alarm event instantly reported, video linkage data instant online update.

(13) access control machine multi-mode network security door control, access control system using the "Internet + cloud platform" application, support from the platform to authorize users to open the door safely, access control also supports dynamic password to open the door function, the platform authorizes users to apply for a one-time time-sensitive dynamic password to open the door to prevent traditional access control fixed password propagation resulting in the access control is not secure.

(14) access control machine a key to call the management center, access control machine can quickly call the management center service button, a key to report to the management center or police center, while mobilizing video cameras to capture the image video, keep the voice open, the management center online shouting online to receive live sound.

(15) access control machine cameras to identify faces, face comparison analysis whether the background registered personnel, automatic collection of face images uploaded to the background storage, for the public security rich face library, to provide a basis for solving crimes.

(16) occupant call and audio and video confirmation of personnel management functions, access control machine can use digital keys to directly call the backstage authorized registered occupants cell phone number, room number, visitors to push the picture video and authorized registered occupants of the reality of the building video intercom open door control, open the door image information and authorized registered occupant information associated management, the reality of the

occupants through audio and video independent confirmation of visitor information, visitors and occupants associated.

2. 13-inch intelligent access control host.



Functional description.

(1) access control host integrated multi-functional card reader chip, support for resident ID cards, residence permits, CPU cards, IC encryption cards and other open door media swipe card.

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(11) support network camera access, access control host itself built-in 500 pixel camera, in order to match the door opening capture multi-dimensional shooting, to protect the authenticity of the door opening capture data, validity, access control

system can access two external network cameras, the door, the door and other directions for video linkage recording.

(12) The system uses TCP/IP transmission protocol to ensure the real-time system data, system information collection, access control authorization, door opening data, equipment operating status and other information, that is, to check, what you see is what you get. Access control host and server real-time communication, real-time data transmission, system authorization access card, cell phone instantly effective, open the door event alarm event instantly reported, video linkage data instant online update.

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6.3.2 Supporting Hardware Products

1. Gate Power Supply

Function description

The power supply is suitable for a variety of access control and building intercom equipment, especially for various types of electric locks. Access control signal line (PUSH) or other switch signal output to directly control the electric lock, can reduce the load of the access control, reduce security risks; can be connected to a variety of normally open (NO) or normally closed (NC) electric lock set delay circuit to set the time to open the lock; set open button input, can directly open the electric lock; set CONTROL point, you can input a 12V electrical signal to control the electric lock Automatic protection circuit is set inside the circuit, when the external line short circuit, excessive load and high temperature and voltage, the signal output will be cut off automatically, when the fault is removed, the signal

output will be restored automatically.

2. Closer



Function Description.

When the door is opened can be released by compression after the door automatically closed, can ensure that the door was opened, accurate and timely closed to the initial position.

3. Electrical control lock



Function Description

Automatic detection of the latch state, lock is not in place automatically replenish the lock to ensure safety, close the door without collision, automatic induction locking, reducing the selection requirements of the door closer, solving the problem of deformation of the door body due to excessive force of the door

closer in the building door, extending the service life of the door body.

4. Web camera



Function Description

Motion detection, dynamic analysis, network cable break, IP address conflict, memory full, memory wrong, anti-flicker, mirror image, password protection, video masking.

5. Gate



Function description.

(1) power failure automatically open to meet the requirements of firefighting; can be hooked up with a variety of control equipment to receive relay switch signal work.

(2) various modes of passage, can be one-way or two-way control of personnel access, or (2) Passage mode is diverse, can be one-way or two-way control of personnel access, or controlled, reverse free passage.

(3) strong ability to adapt to the environment, can work normally in a variety of harsh environments, super self-protection capabilities, can adapt to weak electrical short circuit, strong light exposure, fog, rain, typhoon weather and environmental changes.

6.4 Operational Strategy and Plan

The smart community is the "last mile" of fine urban governance, the basic unit of a smart city, and a fundamental project to provide residents with precise and refined services, directly affecting people's sense of security, experience and access. The Outline of the Fourteenth Five-Year Plan of the National Economic and Social Development of the People's Republic of China and the Vision 2035 clearly proposes to promote the construction of smart communities, relying on community digital platforms and offline community service organizations, to build people-friendly smart service circles and provide online and offline integration of community life services, community governance and public services, smart communities and other services.

The Guide to the Construction and Operation of Smart Communities (2021) provides a comprehensive and in-depth analysis of the concept of smart community construction and operation, business needs and construction points, technical routes, construction and operation modes, and regulatory compliance, and proposes construction guidelines for the sustainable and healthy development of smart communities in the context of the construction of Digital China.

Based on the analysis of "one need and three demands", our company now designs and builds community-centered defense and community-centered services for the actual situation of communities in Beijing. The ultimate goal is to achieve the construction of the Octagon community at the level of comprehensive governance

and property/residents.

The three needs are



National policy requirements: The 13th Five-Year Plan clearly proposes the construction of smart cities.

Smart communities are an important component of



Security situation needs: based on the community management's needs for the management of community houses, people, units and vehicles

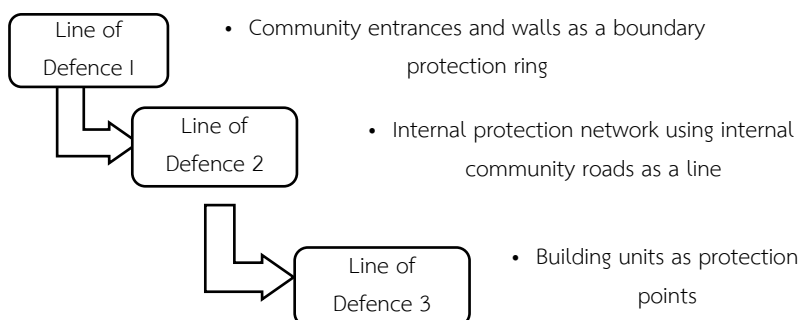


Residents' safety needs: the standard of living has increased and there is a strong demand for an intelligent and safe living environment

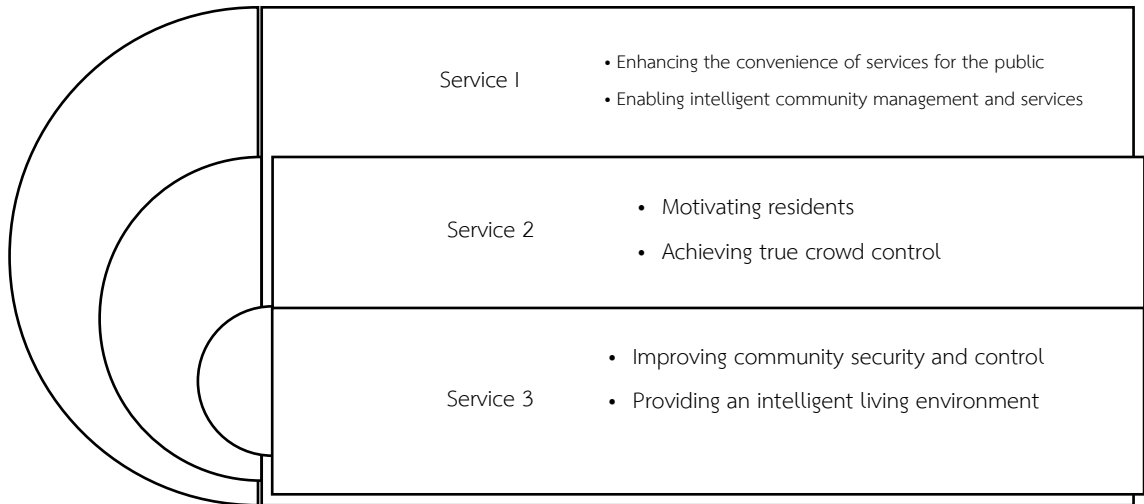


Management efficiency needs: lagging service operation model, high management costs and low economic efficiency

Building community-centred defences.

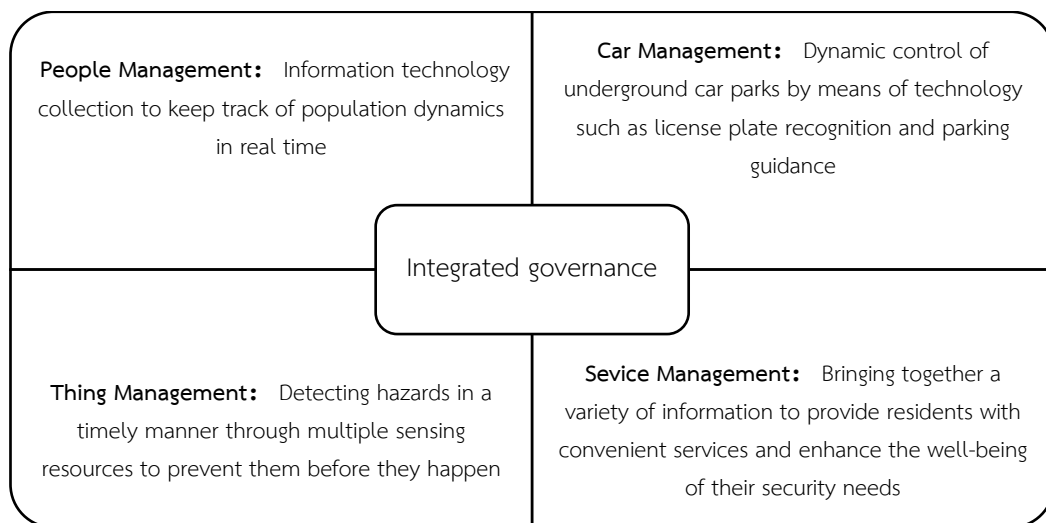


Building community-centered services.

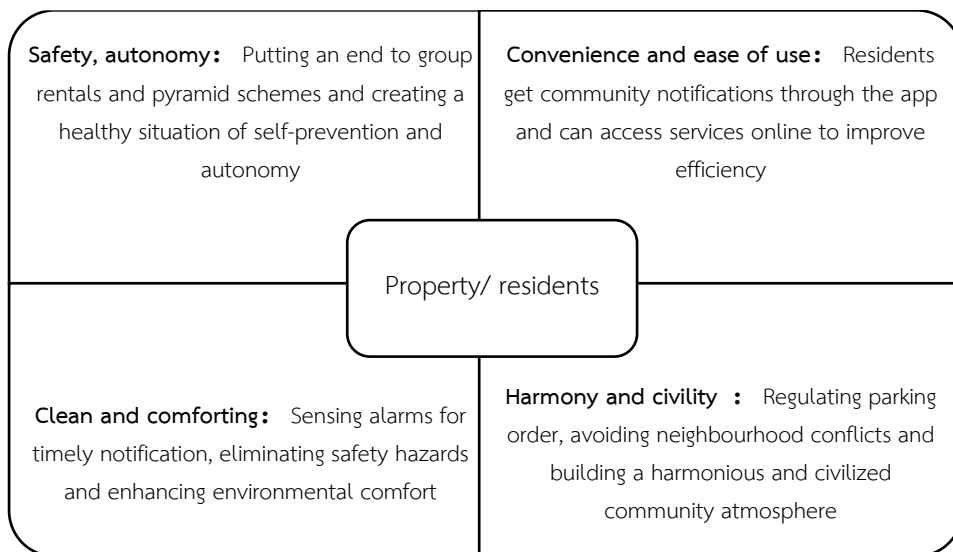


Construction Objective.

1. Comprehensive governance level: improve the service level.



2. Property/resident level: improve security and convenience.



Section 7

Financial Projections

7.1 Source and Use of Funds Description

The company's registered capital is 10 million RMB, of which 65% is contributed by Ke Xia and 35% is contributed by Xiaohui Wang. The 10 million RMB is the company's paid-in capital, of which the company uses 5 million RMB as start-up capital for community smart access control projects. According to the cost forecast in Chapter 8, where the project development cost is RMB0.28million and the average hardware cost to implement a community access control project is RMB 0.01 million, the list is as follows: (Unit: RMB million)

Source of funding		
Project start-up funding	5	
Net income from operations		
plus depreciation		
Total funding provided		5
Use of funds		
Purchase of equipment	0.01	
Research and development software	0.28	
Total funds expended		0.29
Net increase in working capital		0.21
Total		5

7.2 Assumptions table

7.2.1 Revenue drivers and profitability

Revenue is the most important financial indicator of a company or a project. Revenue looks simple, but in reality there are many detours. For example, revenue is recognized differently. Our company follows the new accounting revenue

standard, and the core principle of revenue is that our company recognizes revenue when we have fulfilled our obligations in the contract and when the customer obtains control of the relevant products and services, and the amount of revenue recognized is the amount we invoice to the customer. Broadly speaking, there are roughly 3 types of revenue: traditional revenue from the sale of goods, service revenue, and hypothetical revenue.

Our company's revenue model is simple: $\text{revenue} = \text{sales volume} * \text{unit price}$. Growth in revenue is also driven by growth in sales volume or/and unit price.

There are two main revenue drivers for smart access control projects.

First, price-driven: revenue from smart access control projects include revenue from hardware sales and software sales. The unit price of software is stable, and the unit price of hardware will not fluctuate much initially. So in the case of more stable sales, the price drive on sales revenue is not much. Service revenue is divided into two cases: one is simply the replacement of hardware equipment or debugging, a visit to the service fee is 500 yuan; the second is that customers have new needs, upgrade hardware and software equipment, counterpart software, this situation requires a fee based on the specific workload, but this does not happen often, so the impact of service revenue is not significant, negligible.

Second, sales-driven: software sales are relatively stable, a community is equipped with the corresponding set of software. The hardware sales are determined by the population and the number of buildings in the community, and with more people and buildings, more hardware equipment is needed.

Our company implements the accounting system for small and micro enterprises in Beijing, and the revenue recognition method is implemented according to the accrual basis, that is, if a contract is signed and the obligations in the contract are fulfilled in the current month, even if no payment is received from the customer, the revenue will be recognized as income in the current month and taxed according to the law. The tax rate is calculated according to the tax rate for small-scale taxpayers, which is 5% of the business income. According to the financial data analysis of similar computer network technology companies in Beijing,

the R&D expenses of this project are RMB 0.28 million, which can be amortized over a minimum of 2 years according to the current accounting standards in Beijing, and our company is amortized over 5 years. Selling expenses account for 6% of sales revenue, office rent is calculated at 50% of the total company rent, and employee welfare expenses within the project are listed at 14% of total wages. Office supplies such as printing consumables, pens and books are listed separately. Software outsourcing service fees are paid to third parties for the use of AI algorithms and are paid at 15% of the amount of each software set. Installation materials and installer wages within the project are paid at 15% of the amount of hardware equipment. The warranty service of the project is 3 years, so the repair and maintenance cost of the hardware sold by our company will be borne by us within 3 years from the date of the contract signed by the community, and the hardware repair cost will be paid at 1.5% of the hardware equipment amount.

7.3 Projected Financial Statement

According to our company's operation in the past years and the financial data of similar technology companies in Beijing, we now forecast the revenue of the first year of the project from January to December, as shown in the following chart: (Unit: RMB million)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hardware revenues	0.23	0.45	0.45	0.68	0.90	0.90	1.13	1.13	1.13	1.35	1.35	1.58
Technical service revenues	0.08	0.15	0.15	0.23	0.30	0.30	0.38	0.38	0.38	0.45	0.45	0.53
Software revenues	0.45	0.90	0.90	1.35	1.80	1.80	2.25	2.25	2.25	2.70	2.70	3.15
Project revenue	0.75	1.50	1.50	2.25	3.00	3.00	3.75	3.75	3.75	4.50	4.50	5.25

Note: Project revenue consists of three components: hardware revenue, software revenue and technical service revenue, which account for 30%, 60% and 10%, respectively.

Based on the estimated sales and market share in 4.4 annual sales, the company's revenue for the next 4 years is shown in the following chart: (Unit: RMB million)

	2022	2023	2024	2025	2026
sales count	50	75	100	120	150
sales	37.5	56.25	75	90	112.5

Note: As can be seen from the table, the first 2 years of project implementation are not progressing very fast, and after the latter 2 years of technical mastery and business proficiency, the number of project implementation can be completed 150 communities a year by 2026, and the sales revenue can enter the 100 million marks.

According to our operation plan and business forecast in 2022, we now forecast the development plan of the company for the next 4 years: see the following chart

Fixed Costs: (Unit: RMB million)

Abstract	2022	2023	2024	2025	2026
Number of Employees	20	20	25	28	30
Property rent	18	30	35	50	70
Staff Salary	180	185	235	245	255
Staff Insurance Premiums	27	30	45	57	70
Employee benefits	25.2	30.8	42	70	91
Daily office expenses	35	50	65	75	90

Notes.

1. Daily office expenses include printing paper, toner cartridges, signature pens, lunch fees for employees, courier fees, and office utilities.
2. There is no change in the number of employees in 2022 and 2023, but there is an increase in employees' salaries and insurance premiums and allowances, which is caused by the annual proportional increase in employees' salaries and the annual proportional increase in employees' social insurance premium bases.

7.4 Predictive Income Statement

The income statement as of December 31, 2022, is shown in the following chart: (Unit: RMB million)

Income Statement												
For the Month Ended, 2022												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
revenue												
Hardware revenues	22.50	45.00	45.00	67.50	90.00	90.00	112.50	112.50	112.50	135.00	135.00	157.50
Technical service revenues	7.50	15.00	15.00	22.50	30.00	30.00	37.50	37.50	37.50	45.00	45.00	52.50
Software revenues	45.00	90.00	90.00	135.00	180.00	180.00	225.00	225.00	225.00	270.00	270.00	315.00
Total revenue	75.00	150.00	150.00	225.00	300.00	300.00	375.00	375.00	375.00	450.00	450.00	525.00
Project cost	48.75	97.50	97.50	146.25	195.00	195.00	243.75	243.75	243.75	292.50	292.50	341.25
Gross margin	26.25	52.50	52.50	78.75	105.00	105.00	131.25	131.25	131.25	157.50	157.50	183.75
Operating Expenses												
Salary expenses	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
maintenance cost	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Cost of cleaning supplies	1.13	2.25	2.25	3.38	4.50	4.50	5.63	5.63	5.63	6.75	6.75	7.88
Marketing expenses	4.50	9.00	9.00	13.50	18.00	18.00	22.50	22.50	22.50	27.00	27.00	31.50
Employee welfare	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Rent	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Software assistance service fee	6.75	13.50	13.50	20.25	27.00	27.00	33.75	33.75	33.75	40.50	40.50	47.25
Office Supplies	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Installation materials and labor cost	3.38	6.75	6.75	10.13	13.50	13.50	16.88	16.88	16.88	20.25	20.25	23.63
Total operating expenses	36.35	52.10	52.10	67.85	83.60	83.60	99.35	99.35	99.35	115.10	115.10	130.85
Operating profit (loss)	-10.10	0.40	0.40	10.90	21.40	21.40	31.90	31.90	31.90	42.40	42.40	52.90
Taxes	3.75	7.50	7.50	11.25	15.00	15.00	18.75	18.75	18.75	22.50	22.50	26.25
Net revenue	-13.85	-7.10	-7.10	-0.35	6.40	6.40	13.15	13.15	13.15	19.90	19.90	26.65

The projected income statement for the next 4 years, i.e. 2022 to 2026, is as follows: (Unit: RMB million)

2022-2026 Income Statement					
For the Year Ended, Dec., 31					
	2022	2023	2024	2025	2026
revenue					
Hardware revenues	1,125.00	1,687.50	2,250.00	2,700.00	3,375.00
Technical service revenues	375.00	562.50	750.00	900.00	1,125.00
Software revenues	2,250.00	3,375.00	4,500.00	5,400.00	6,750.00
Total revenue	3,750.00	5,625.00	7,500.00	9,000.00	11,250.00
Project cost	2,437.50	3,656.25	4,875.00	5,850.00	7,312.50
Gross margin	1,312.50	1,968.75	2,625.00	3,150.00	3,937.50
Operating Expenses					
Salary expenses	180.00	185.00	235.00	245.00	255.00
maintenance cost	6.00	6.00	6.00	6.00	6.00
Cost of cleaning supplies	56.25	84.38	112.50	135.00	168.75
Marketing expenses	225.00	337.50	450.00	540.00	675.00
Employee welfare	25.20	25.90	32.90	34.30	35.70
Rent	18.00	30.00	35.00	50.00	70.00
Software assistance service fee	337.50	506.25	675.00	810.00	1,012.50
Office Supplies	18.00	20.00	25.00	30.00	50.00
Installation materials and labor cost	168.75	253.13	337.50	405.00	506.25
Total operating expenses	1,034.70	1,448.15	1,908.90	2,255.30	2,779.20
Operating profit (loss)	277.80	520.60	716.10	894.70	1,158.30
Taxes	187.50	281.25	375.00	450.00	562.50
Net income	90.30	239.35	341.10	444.70	595.80

7.5 Projected Balance Sheet

The projected balance sheet as of December 31 of each year from 2022 to 2026 is as follows: (Unit: RMB million)

2022-2026 Balance Sheet					
For the Year Ended, Dec., 31					
	2022	2023	2024	2025	2026
Assets					
Current assets					
Cash	545.15	664.83	835.38	1057.73	1355.63
Office Supplies	18.00	20.00	25.00	28.00	30.00
Total current assets	563.15	684.83	860.38	1085.73	1385.63
Noncurrent assets					
Software	56.40	56.40	56.40	56.40	56.40
Computers	10.00	15.00	17.00	20.00	25.00
Printers	2.00	5.00	5.00	5.00	5.00
Office desks and chairs	2.00	3.00	5.00	7.00	10.00
Accumulated depreciation	1.40	2.30	2.70	3.20	4.00
Total Noncurrent Assets	69.00	77.10	80.70	85.20	92.40
Total Assets	632.15	761.93	941.08	1170.93	1478.03
Liabilities & Owners' Equity					
Liabilities					
Accounts Payable	72.00	80.69	84.12	89.79	97.15
Payable wages	15.00	15.42	19.58	20.42	21.25
Total liabilities	87.00	96.11	103.70	110.21	118.40
Ownership Rights	500.00	501.00	502.00	503.00	504.00
Retained earnings	45.15	164.83	335.38	557.73	855.63
Total Owner's Equity	545.15	665.83	837.38	1060.73	1359.63
Total liabilities and owner's equity	632.15	761.93	941.08	1170.93	1478.03

7.6 Projected Cash Flow

The company's financial statements and cash flow statement can fully reflect the company's operation and profit and loss situation. Based on the company's projected financial statements for 2022, combined with the current bank interest rate and the industry growth rate of this software, the cash flow statement for 2022 and the cash flow statement for the next 4 years are expected to be as follows: (Unit: RMB million)

Cash Flow

Cash Flow Statement												
For the Month Ended, 2022												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cash balance, beginning of year	500.00	486.15	479.05	471.95	471.60	478.00	484.40	497.55	510.70	523.85	543.75	563.65
Cash flows from operating activities												
Cash received from the sale of goods and provision of services	75.00	150.00	150.00	225.00	300.00	300.00	375.00	375.00	375.00	450.00	450.00	525.00
Total cash inflow from operating activities	75.00	150.00	150.00	225.00	300.00	300.00	375.00	375.00	375.00	450.00	450.00	525.00
Cash paid for goods	48.75	97.50	97.50	146.25	195.00	195.00	243.75	243.75	243.75	292.50	292.50	341.25
Cash paid to employees	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
All taxes paid	3.75	7.50	7.50	11.25	15.00	15.00	18.75	18.75	18.75	22.50	22.50	26.25
Other operating-related cash paid	21.35	37.10	37.10	52.85	68.60	68.60	84.35	84.35	84.35	100.10	100.10	115.85
Total cash outflow from operating act	88.85	157.10	157.10	225.35	293.60	293.60	361.85	361.85	361.85	430.10	430.10	498.35
Dividend												
Total cash flows from investing activi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net change in cash balances	-13.85	-7.10	-7.10	-0.35	6.40	6.40	13.15	13.15	13.15	19.90	19.90	26.65
Cash balance, end of period	486.15	479.05	471.95	471.60	478.00	484.40	497.55	510.70	523.85	543.75	563.65	590.30

2022-2026 Cash Flow Statement					
For the Year Ended, Dec., 31					
	2022	2023	2024	2025	2026
Cash balance, beginning of year	500.00	545.15	664.83	835.38	1,057.73
Cash flows from operating activities					
Cash received from the sale of goods and provision of services	3,750.00	5,625.00	7,500.00	9,000.00	11,250.00
Total cash inflow from operating activities	3,750.00	5,625.00	7,500.00	9,000.00	11,250.00
Cash paid for goods	2,437.50	3,656.25	4,875.00	5,850.00	7,312.50
Cash paid to employees	180.00	185.00	235.00	245.00	255.00
All taxes paid	187.50	281.25	375.00	450.00	562.50
Other operating-related cash paid	854.70	1,263.15	1,673.90	2,010.30	2,524.20
Total cash outflow from operating activities	3,659.70	5,385.65	7,158.90	8,555.30	10,654.20
Dividend	45.15	119.68	170.55	222.35	297.90
Total cash flows from investing activities	45.15	119.68	170.55	222.35	297.90
Net change in cash balances	45.15	119.68	170.55	222.35	297.90
Cash balance, end of period	545.15	664.83	835.38	1,057.73	1,355.63

7.7 Break-even analysis

Projects must realize the important role of applying break-even point analysis when working on business forecasting, clarify the possible risk problems and the direction of risk prevention, and summarize scientific and reasonable countermeasures to eliminate economic risks during project operation, give full play to the application effect of break-even point, and promote the sustainable and healthy development of enterprises.

Break-even point is also known as zero profit point, capital preservation point, profit and loss threshold, revenue turning point. The break-even point is the production or sales volume when all sales revenue equals all costs (the intersection of the sales revenue line and the total cost line). With the break-even point as the boundary, when sales revenue is higher than the break-even point, the enterprise is profitable, and vice versa the enterprise is losing money. The break-even point can be expressed in terms of sales volume, i.e. the sales volume at the break-even point, or in terms of sales, i.e. the sales volume at the break-even point.

By amount: break-even point = fixed costs ÷ (1 - variable costs ÷ sales revenue).

The smallest unit in this project is a community, and from 7.3.2 above we know what fixed costs and variable costs contain, and then based on the revenues and

expenses we forecasted in Chapter 8, we know that

Fixed costs for this project = \$2,820,000/5 years + \$1,800,000 for salaries + \$180,000 for office supplies + \$252,000 for employee benefits + \$60,000 for maintenance + \$180,000 for rent + \$24,375,000 for cost of goods sold = \$27,411,000.

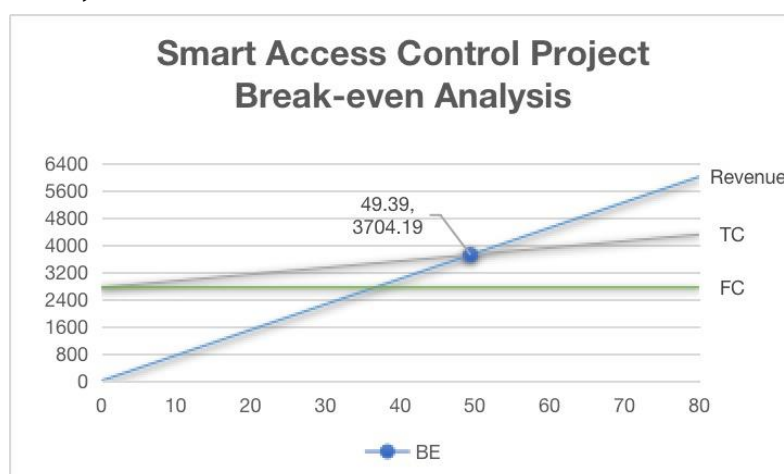
Variable cost = maintenance cost 562,500 yuan + software outsourcing service cost 3,375,000 yuan + installation material and labor cost 1,687,500 yuan + sales cost 2,250,000 yuan + tax 1,875,000 yuan = 9,750,000 yuan

According to the formula: break-even point sales = fixed costs / (1 - variable costs / sales revenue) = 27.411 million yuan / (1 - 975/3750)

$$= 37.04 \text{ million yuan}$$

This shows that the sales revenue at the break-even point is 37.04 million yuan. The sales revenue of this project in the first year is 37.5 million yuan, which is higher than 37.04 million yuan, indicating that the project is profitable from the first year.

The break-even analysis chart is as follows.



7.8 Ratio Analysis (ROE, ROA)

To measure the profitability of a company or a project, we usually look at the two indicators of ROA and ROE.

Based on the financial statements projected in 9.4 and 9.5, the ROA, ROE for 2022-2026 are calculated and analyzed as follows.

	2022	2023	2024	2025	2026
Return on total assets	14.28%	31.41%	36.25%	37.98%	40.31%
Return on common equity	16.56%	35.95%	40.73%	41.92%	43.82%

Note: The initial investment capital of the intelligent access control project is RMB 5 million, and the project is profitable in the first year of implementation, with ROA reaching 14.28% and ROE reaching 16.56% in the first year. If the project can develop smoothly according to the project's operation plan, the ROA and ROE of the project can reach about 40% by 2026, indicating that the project has a high level of investment return and the project is The implement ability of the project is very high.

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Biography

Name- surname	Xuerong Zhang
Date of birth	1981.1.8
Place of birth	Dezhou City, Shandong Province
Address	7-9i, Yanshuyuan Community, Shuguang Street, Haidian District, Beijing
Workplace	Beijing Beike Blue Light Laboratory Technology Co., Ltd
Position	Accountant
Education	MBA Southeast Asia University



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