BUSINESS PLAN FOR PRIVATE MEDICAL RECORD MANAGEMENT SOFTWARE

Wang Zhenning

Project submitted as partial requirement for the conferral of
Master in Business Administration

Supervisor:
Professor Renato Pereira, Professor of General Management, Department of
Marketing, Operations and General Management, ISCTE Business School

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Acknowledgments

I am very happy that this paper was successfully completed. It was inseparable from the help of some friends. I would like to thank them all here!

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Finally, I would like to thank myself for completing this project, and also to the friends who accompanied me to complete my master's studies!

Abstract

The last few years are the initial stage of the development of "Internet + medical" in China, and the market is in a blue ocean area. So far, the electronic medical records of various hospitals in China cannot be well shared. Under such a circumstance, this business project aims to explore the commercial value and feasibility of developing a personal electronic medical record management software and corresponding web platform suitable for the Chinese in the context of the Chinese market.

First of all, through the literature review, this project reviews the current state of private electronic medical record management in the Chinese market and the status of electronic medical record management in Chinese hospitals. It found that a satisfactory private electronic medical record management software and corresponding web platform have not yet appeared in the Chinese market.

This project then raises related issues and proposes a business plan from the literature review, and collects relevant market information and data through desktop research, then conducts market analysis, competition analysis, feasibility analysis, financial analysis from a business perspective.

Finally, it concluded the value evaluation conclusion based on the above analysis.

Keywords: Electronic Medical Record; Medical Record Software; Internet Medicine; Business Plan

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Resumo

Os últimos anos são a fase inicial do desenvolvimento da "Internet + medical" na China, e o mercado está em uma área de oceano azul. Até agora, os registros médicos eletrônicos de vários hospitais na China não podem ser bem compartilhados. Sob tal circunstância, este projeto empresarial visa explorar o valor comercial e a viabilidade de desenvolver um software de gerenciamento de registros médicos eletrônicos pessoais e a plataforma da web correspondente adequada para os chineses no contexto do mercado chinês.

Em primeiro lugar, por meio da revisão da literatura, este projeto analisa o estado atual do gerenciamento de registros médicos eletrônicos privados no mercado chinês e o status do gerenciamento de registros médicos eletrônicos em hospitais chineses. Ele descobriu que um software de gerenciamento de prontuário eletrônico privado satisfatório e a plataforma da web correspondente ainda não apareceram no mercado chinês.

Este projeto, então, levanta questões relacionadas e propõe um plano de negócios a partir da revisão da literatura e coleta informações e dados de mercado relevantes por meio de pesquisa de desktop e, em seguida, realiza análises de mercado, análises de concorrência, análises de viabilidade e análises financeiras de uma perspectiva de negócios.

Por fim, concluiu a conclusão da avaliação do valor com base na análise acima.

Palavras-chave: Electronic Medical Record; Software de registro médico; Medicina da Internet; Plano de negócios

Códigos JEL:
I11: Análise do Mercado de Saúde
M13: Novas empresas • Startups

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1 Executive Summary

1.1 Project Introduction

It is more than ten years since China experimented with electronic medical records in 2010. The hospital's electronic medical record system and related functions are quite mature and complete. However, the electronic medical records generate by each hospital belong to the custody of their respective hospitals. These electronic medical records data cannot share with patients, the public, and between different hospitals.

In one's life, about 80 years, an individual will generate many health data and medical records. The relevant medical institutions and medical examination centers will submit the relevant medical records to the customer in the form of a paper report. However, customers cannot easily access the data they have left in the health care center. These paper-based medical records and medical data are easily scattered and lost, which urgently needs an electronic platform that can help privately keep medical records.

Under the market's primitive demand, our business project plans to develop an electronic medical record software with a corresponding web platform to provide individuals with free storage, access, and management of electronic medical record platforms. At the same time, through our platform, doctors in different hospitals can quickly and easily access patient history medical records, which is conserved in other medical institutions. We use this platform to stick to users and realize commercial value.

1.2 Solve Two Major Users' Pain Points

First, individuals are the first direct users. Individuals cannot manage and keep paper-based medical records very well and are easy to lose. Each time they go to private hospitals, public hospitals, and referrals, it is very inconvenient to carry the previous paper medical records. By using our electronic medical record management software, patients can upload all previous health data and medical record data to our cloud data center by taking pictures, scanning,

manual input, control editing and can also link medical devices to upload measured blood pressure data, blood sugar data at home. No matter where the patients are, at any time, as long as they connect to the Internet, they can quickly assess and browse their personal medical records. This electronic medical record management platform also has complete functions such as disease analysis, follow-up reminders, physical examination reminder, vaccinating reminder for infants and young children, vital signs data monitoring, and first aid for the elderly, and so on.

Second, doctors are the second significant users, indirect users. When patients go to private clinics, community hospitals, or transfer hospitals, they can log into the mobile phone software or web platform and show their history medical records, medical history, medical examination data to doctors. That way can improve doctors' writing efficiency, diagnosis and treatment accuracy, and medication accuracy. It can also avoid repeated blood tests, laboratory tests, ultrasound tests saving medical resources, and reduce the burden of patients' medical expenses.

1.3 Product Value and Monetization Channels

The value of this project is the construction of a universal electronic medical record platform in China, and a paperless electronic medical record that can use for free for everyone for a lifetime. Medical institutions can quickly access patient medical record information with patient permission. Use medical record big data for scientific research activities, insurance settings, and epidemic monitoring.

We provide a free electronic medical record platform for individuals. At the same time, we also provide users with the added value of health and medical care, such as the function of the patient dating chat group, disease science video, doctor review reminder, blood sugar monitoring, vital signs monitoring. Through this platform, we can stick to customers and increase their monthly active volume to realize profitability.

The primary profit channels of this commercial project are as follows:

- **Health Mall:** The first is to serve individual consumers. It will divide into a self-operated health mall, settled pharmaceutical merchants, and online to offline physical pharmacies.

It mainly sells medicine, medical equipment, beauty products, health care products, sports and fitness equipment, and other major health products. Settlers need to pay entry fees and sales commissions. We will make the medicine mall into a well-known e-commerce sales company in China so that all Chinese people can think of our company's medicine mall as long as they want to buy medicines. The second is the business to the company section, which provides an online platform for mass sales and purchases of other medical and health institutions.

- **Consumer Medical:** Cooperate with offline physical medical institutions to sell: covering contracted family doctors, physical examination, gynecological examination, cancer screening, genetic testing, dental beauty, plastic surgery, and other standardized health service packages. It can also provide users with services such as report interpretation and follow-up reminders based on the customer's electronic medical records and examination results.

- **Online Medical Services:** signing contracts with partner doctors to provide patients with efficient and convenient one-stop services such as online consultation, referral, registration, online drug purchase with home delivery within 2 hours, so that patients can get fast and convenient service no matter where they are.

- **Advertising Business:** With massive user traffic, we provide advertising products and services for pharmaceutical companies, medical device companies, beauty products companies, retail companies, et cetera, to obtain revenue.

- **Big Data Business:** To the extent permitted by law, tap the value of big data in electronic medical records, provide disease atlas data for scientific research institutions, and develop accurate insurance products with insurance companies.

- **Health Insurance Business:** We will cooperate with insurance companies to launch one-stop health insurance products and services such as insurance sales and online claims.

1.4 Project Objectives and Cost Budget

Below we budget the company's operational goals and cost budget for the first two years:

Phases	Time	Goals	Cost	Estimated Revenue	Financing
1st Phrase	Six months	Company establishment; recruitment management, technology, marketing, and other teams; complete software and web platform research and development and listing	3 million RMB, mainly for management and R&D team salary and welfare	0	Initial investment: 30 million RMB
2nd Phase	Six months	Promote mobile platforms and web platforms; start operating online malls; produce medical science articles and videos	6 million RMB, mainly for customer acquisition costs, including promotion costs; production of medical science popularization, short videos, and articles; employee salaries, et cetera.	0.125 million RMB	
3rd Phase	Six months	Registered users exceed 20 million	8 million RMB, mainly for customer acquisition costs, including promotion costs; production of medical science chiefs, short videos, and articles; employee salaries	2 million RMB	
4th Phase	Six months	Registered users exceed 100 million and 10 million monthly active users	8 million RMB, mainly for customer acquisition costs, including promotion costs; production of medical science chiefs, short videos, and articles; employee salaries, et cetera.	3 million RMB	

Table 1- The project objectives and cost budget for the first two years. Source: Author

1.5 Project Features and Advantages

- Short prepare period. From the establishment of the company, the formation of teams, to the development of software and web platforms, it only takes about six months to be launched on the market.

- The initial investment is relatively small, about 30 million RMB, compared to other Internet companies when they established, need to invest hundreds of millions of RMB for operating. The main expenses in the early stage are the customer acquisition cost of the promotion market and the salary and benefits of programmers.

- The development prospect is excellent. The Internet pharmaceutical industry has broad prospects, and the Chinese market has reached trillions or more. Our electronic medical record platform is also a product of social demand. We conservatively estimate that our company is worth over billions.

- The net profit will be positive within two years. We are an asset-light company. The cost of acquiring customers will gradually decrease in the later stage. Our expenses mainly lie in the research and development and maintenance of platform functions, and over time, the overall cost will decrease significantly.

1.6 Financing Options and Return Ways

All shareholders participate in cooperation in a voluntary, equal, cooperative, and mutually beneficial manner, sharing benefits and sharing risks.

- The starting capital of the project is about 30 million RMB, financing by the form of cooperative participation.

- The project planner uses the intellectual property as a share, accounting for 30% of the total shares.

- The leading investors directly invest in the shares, which accounted for 40% of the total shares.

- Professional managers use their own management experience as a cooperate share, accounting for 10% of the total shares.

- Reserve five-year incentive options for core employees, accounting for 10% of total shares.

- Other forms of shareholding or cooperation, such as core resources, account for 10% of the total shares.

- The chief returns are the company's profit dividends and the possibility of selling individual stocks to exit when the company is listed.

2 Literature Review

2.1   China Internet Medicine and Health Industry Development Status

"Internet + medical" is a general term that refers to the use of information technology, like mobile technology, cloud computing, Internet of Things, big data, et cetera., to transform traditional medical services onto the Internet. (Zhou, Shupeng, & Jiahui, 2016).

Internet medicine and health is a closely integrated model of traditional medicine and health industry, Internet, Internet of Things, and other information technology applications. It provides a wide range of services, profoundly integrating the whole process of consultation, diagnosis, treatment, rehabilitation, health care, prevention, and integrates with the Internet to form a new type of medical and health care service system and medical industry entity. (Qiulin, 2020).

In 2015, Senior leaders of the Chinese government first proposed the "Internet+" action plan in the government work report. The action plan stated that cultivated significant projects such as information networks and biomedicine as leading industries, which indicated the direction of innovation and development of the traditional medicine and health service model and also provided a broad development space for "Internet + Medical."

Internet Medicare expects to become a technical means to promote the balanced allocation of medical resources, promote the reform and development of the medical industry, and help reduce the inequality in the allocation of medical resources in China's urban and rural areas, east and west (Qiulin, 2020).

From the industrial stage, China's Internet medicine and health industry have a bright future and an ample market space. According to Frost & Sullivan's forecast, China's big health market will reach 10.8 trillion RMB in 2018, and expect it will reach 26.8 trillion RMB in 2026, with a compound annual growth rate of about 12%. It expected the size of China's Internet medicine and health market would be 21 billion RMB in 2018, and the growth will

reach 180 billion RMB in 2026, with a compound annual growth rate of 33.6% (Xinming & Rui, 2020).
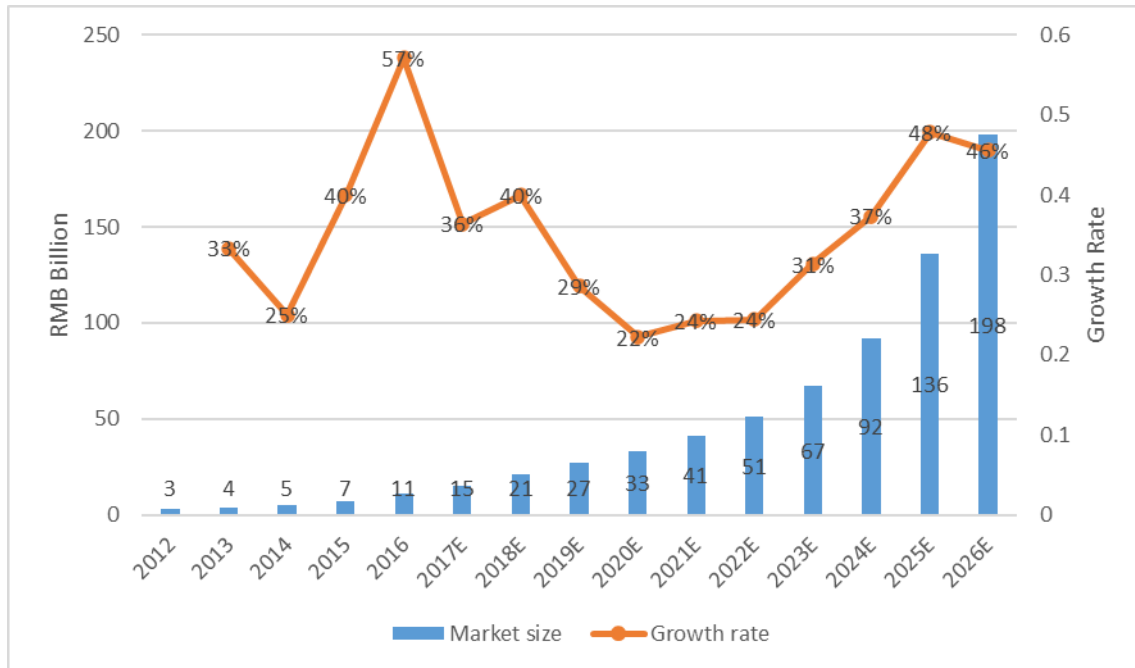
Graph 1- The scale of China's Internet medicine and health market. Source: Frost & Sullivan

Divided by content, Internet medical and health includes various forms of health services such as online consultation, medical information query, electronic medical record management, e-commerce, and health education, as shown below:

Internet Medicine and Health Service				
Hospital registration	Online consultation	Electronic medical record	Electronic prescription	Medical e-commerce
Medical specialist knowledge	Drug query	Doctor assistant	Dedication guidance	Online health data monitoring
Chronic disease management	Online medical payment	Health education	Interpretation of medical report	Others

Table 2- Internet medicine and health services by content. Source: Author

From the leading construction party aspect, Internet medicine and health mainly divide into two categories. The first category is hospital-led and looking for healthcare internet

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technology (HIT) manufacturers to cooperate and build, that is, the internet hospital; the second category is a third-party enterprise-led construction platform called internet platform. As shown below:

	Internet Hospital	**Internet Platform**
Leading party	Hospital	Third-party companies, mainly Internet companies
Construction party	HIT manufacturers	HIT manufacturers or self-built
Provide service content	Registration, follow-up diagnosis, remote consultation, et cetera.	Registration, consultation, electronic prescription, online drug purchase, et cetera.
Service subject	Patients in the hospital	All customers nationwide
Source of core employees	Own doctor	Registered doctor, own doctor, HIT technician
Direction of development	Online medical consultations and other complex medical services launch online to improve the income capacity of Internet hospitals	Accumulate customers and medical data in the early stage, and later realize revenue through medical e-commerce, consumer medical care, health insurance, advertising, et cetera.

Table 3- Divide Internet medicine and health services by leading builders. Source: Author

The Coronavirus disease (COVID-19) broke out globally at the beginning of 2020. Chinese Internet medicine has a positive role in the prevention and control of the epidemic. Online consultation has effectively relieved the strain on offline medical resources, and also guided patients to see doctors in different time intervals to reduce the concentration of patients in the hospital and reduce the risk of cross-infection. The online medical education sector in Internet medicine has also achieved a good breakthrough, and the use of Internet medicine has gained rapid popularity.

However, there has not been a market-proven business model for Internet medicine. Although Chinese major Internet pharmaceutical companies are concentrating on integrating all major

business sectors and medical resources, hoping to form their strong style and high industry barriers, these major companies are still in a dilemma of sustainable profitability (Qiulin, 2020).

2.2   Electronic Medical Record

In the mid-to-late 1990s, with the deepening of the research on electronic medical record systems, western developed countries began to work on a continuous, universal, and social electronic medical record model—electronic health records. The developed countries like the United States, the United Kingdom, the Netherlands, Australia, and Canada have successively set up specialized teams to plan electronic health records, actively develop standards, and begin basic research on electronic health records (Sijing & Qing, 2011).

Electronic medical record (EMR) is also called a computerized medical record system or computer-based patient record (CPR). It uses electronic equipment to record, save, manage, transmit, and reproduce the digitized medical records of patients. Its content not only includes all handwritten information on paper medical records but also includes the provision of related services. The International Electronic Medical Records Association defines it as a specific technical system for acquiring, storing, processing, securing, transmitting, and displaying patient-related medical information (Aixia, 2009).

The electronic medical record is an electronic patient record file based on a specific system. It has a system capability for users to access complete and accurate data, warnings, and prompts, and can support clinical decision-making (Materials from Friday Breakout session, 1997). Electronic medical records focus on recording and managing the health data of patients or users throughout their lives (Aiming, 2003).

Electronic health records are the data basis for the development of medical information. In the Chinese 12th Five-Year Plan for the development of Medicare informatization, electronic health records were defined as one of the most basic and essential medical and health data resources, and also an essential basis for public health, health management and planning, and scientific decision-making (Qianli & Jian, 2015). Furthermore, it found that those hospitals that use electronic medical records work systems can significantly improve the work

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efficiency of medical staff and the quality of diagnosis and treatment. (Loomis, Ries, Jr, & Thakker, 2002).

With social development and technological progress, people's demand for medical services has gradually extended from primary treatment to disease prevention, index testing, health management, and other fields. As the data basis for the development of medical informatization, electronic health files have completed the transition from "record condition" to "health management."

2.3   Issues with The Use of Electronic Medical Record

The electronic medical record carries the information of the patient's life-long medical examination data, diagnosis and treatment activities, et cetera., also has significant value for patient health, hospital management, scientific research and teaching, and insurance claims, et cetera. The essence of electronic medical records is information. Whether it is patients, doctors, scientific research institutions, insurance institutions, et cetera., it should be convenient and efficient to use. However, due to various reasons, the use of electronic medical records is not convenient enough, especially for patients. Ideally, the electronic medical record should be able to provide complete and accurate information for doctors, patients, or other authorized persons when they need to understand any health information or related information of the individual (Zongyuan, Ziwei, & Xue, 2020). However, no matter in China or the world today, electronic medical records cannot be well shared between medical institutions and medical institutions, medical institutions, and other institutions, medical institutions, and patients, not to mention digging out its more priceless value.

In China, patients today cannot access information in the hospital's electronic medical records. At the end of the patient's physical examination or diagnosis and treatment activities, the relevant medical institution will only issue the corresponding paper version of the medical examination report or diagnosis and treatment record to the patient, and the patient shall keep these paper medical records by himself. In the patient's life, there will be many paper medical records, and these paper medical records are easily scattered and lost.

The electronic medical record systems of all hospitals in China are independent of each other. Electronic medical records between hospitals and regions cannot achieve data sharing efficiency. Various medical institutions have become "information isolation islands" (Zongyuan, Ziwei, & Xue, 2020). Doctors in each hospital need to re-enter the admission records of new patients, past medical history, examination and treatment of medication, et cetera., which is time-consuming and labor-intensive. It is easy to appear incomplete data and reduce the effectiveness of diagnosis and treatment.

Therefore, when the patient is not treated in the same hospital and needs to transfer to another hospital, he needs to bring all his previous medical records papers to the new hospital. The new hospital re-registers his history based on his previous medical records. Some hospitals do not admit each other's test reports. Patients in new hospitals need to retake blood tests, which increases the patient's financial burden and wastes scarce medical resources.

Electronic medical records cannot well share among various institutional units and patients. Many obstacles cause this phenomenon, mainly in conservative thinking, challenging to define the scope of information sharing, inconsistent information sharing standards, inadequate policies, and laws and regulations, and information sharing is easy to cause privacy leakage and lack of relevant talents (Shuang, 2012). Different regions in China have large gaps in economic and medical technology levels, business guidance cannot meet business needs, and lack of information integration mechanisms (Juan, 2016). If society can strengthen the drive of social and economic benefits, improve the construction of laws and regulations, establish a unified and standardized electronic medical record, and improve software development technology, we can better achieve the sharing of electronic medical records (Rui, 2011). Regarding privacy issues, better let the patient decide who the information sharing object is and realize the patient's control over the private information of the medical record (Yunshuai, 2011). The author believed that a third-party commercial company could lead to the establishment of nationwide electronic medical record sharing, which will be more efficient and faster with the participation of capital.

2.4   Internet Medicine Future Trend

China Online Healthcare has crossed the 1.0 era, represented by online registration, and is currently in the 2.0 era, represented by online hospitals. It will move towards the 3.0 era represented by the linkage of three-medicine in the future. The online medical 1.0 era is represented by the registration network of the predecessor of the "micro-medicine" company. It is committed to providing patients with medical services such as appointment registration and waiting outside the hospital. The online diagnosis and treatment will represent the online medical 2.0 era, and doctors will prescribe online. In the 3.0 era, a three-medicine 'medical, medicine, and medical insurance' linkage system will be built, and build a medical service system centered for personal health (Jianhui, Sheng, & Zong, 2020).

The development of medical informatization has gone through three stages of development: hospital management information system (HIS), hospital clinical information system (CIS), and data integration stage. At present, China's medical informatization construction is mainly at the CIS stage and in the early exploration stage phase of data integration. From HIS, CIS to the data integration stage, medical informatization is moving from "point to face," that is, the informatization of a single hospital or medical institution is extended to the interconnection and integration of medical information of the hospital or medical institution. In the future, medical informatization will move towards intelligence. Advanced "big data + artificial intelligence" technology will improve the effectiveness of medical informatization so that medical informatization will move from simply improving efficiency to assisting doctors in improving the supply of medical resources.

The first stage	The second stage	The third stage	The fourth stage
HIS	CIS	Data Integration	Intelligent stage
Hospital management information system: management software to improve the efficiency of hospital management and daily affairs	Hospital clinical information system: business software, mainly serving doctors and nurses, improving the efficiency of medical staff	Realize the interconnection of medical information, improve medical decision-making, and reduce the waste of medical resources	Big data + artificial intelligence: realize an auxiliary diagnosis and health management, increase the supply of resources

Serve doctors and improve medical efficiency	Serve doctors and individuals, increase the supply of medical resources

Table 4- Development of medical informatization. Changed from China Merchants Industrial Research Institute. Resource: Dongxing Securities Research Institute

With the development of society, the application cope of medical information is no longer limited to the interior of the hospital, and it has gradually evolved into effective sharing among patients, doctors, and hospitals. In the future, medical informatization will move towards intelligence. Advanced "big data + artificial intelligence" technology will improve the effectiveness of medical informatization so that medical informatization will move from simply improving efficiency to assisting doctors in improving the supply of medical resources.

From the perspective of research content, the research hotspot for smart healthcare has gradually changed from the application scenarios of smart devices to the innovation of health services; from the perspective of research subjects, the research hotspot of smart healthcare has gradually shifted from "disease-centered" to "to User-centric." Users extract big health data through wearable devices, sensors, and other data record carriers. The platform combines personal dietary habits and daily routines to make personalized health management pushes, which can improve the disease prevention system and allow medical information to be effectively shared.

2.5   Innovative Business and Technical Feasibility:

Through the above literature review, we can know that electronic health records, as the data basis for the development of medical information, will soon change from "record condition" to "health management," from 'limited access to medical staff' to 'patients' access and initiative Management' change. Therefore, this project proposes an innovative business plan: to provide patients with a life-long free electronic medical record platform as the market entry point; users can conduct health management on our electronic medical record platform, communicate with other patients, learn medical science knowledge, et cetera., in order to

obtain the registration and use of a large number of users for this purpose, after a certain number of users, it will get commercial income and profit through channels such as medical e-commerce platform, online medical consultation, consumer medical care, advertising business, insurance business, and other channels.

It is technically easy to develop a comprehensive, interconnected platform that takes electronic medical record management as the core and integrates e-commerce shopping functions, consultation, and communication function platforms. In terms of technical feasibility, we will use underlying hardware, underlying system software, security protection, network technology, et cetera. These are ready-made technologies. The company only needs to form a software development team.

3 Reference Framework

The literature review in the previous section reviewed the Internet medicine and health industry dynamics, the overview of the electronic medical record branch, and described the pain points and potential market opportunities for market users. The following will list the main points of the literature review in the previous section, and propose solutions with potential commercial value.

'Internet + Medicine and Health' Current status	Nowadays, it is in a period of rapid market growth and fierce competition, especially in the online medical branch. The pharmaceutical industry is specialized; commercial companies have not yet found a good stable profit model.
'Internet + Medicine and Health' Future Direction	Information sharing, intelligence, and patient-centricity are future development directions.
The Facts About Medical Records Management	1. The hospital's electronic medical record platform is not open to individual patients, and the patients only receive a paper version of the medical record or medical report; 2. The electronic medical record system exists independently among hospitals, and medical information cannot be effectively shared.
User Pain Points for Medical Records Management	1. The paper version of the medical record cannot be well saved and accessed, and it is easy to lose; 2. The electronic medical record system of each hospital is not shared, and medical staff cannot easily obtain detailed medical examination and diagnosis history of referral patients.
Potential Opportunities for Electronic Medical Records	The market urgently needs an electronic platform that allows customers to save, access, and manage medical records conveniently, and it is convenient for customers to manage their health plans.

Solution	Develop a free lifetime electronic medical record platform for personal.
Value Realization Channel	After obtaining a massive number of users, the income is from the medical malls, consumer medical care, telemedicine, health insurance, advertising business, et cetera.

Table 5- Literature review framework. Source: Author

4 Methodology

This business plan is following the research ideas of "finding issues, investigating issues, analyzing issues, proposing solutions, and analyzing the commercial feasibility of the solutions."
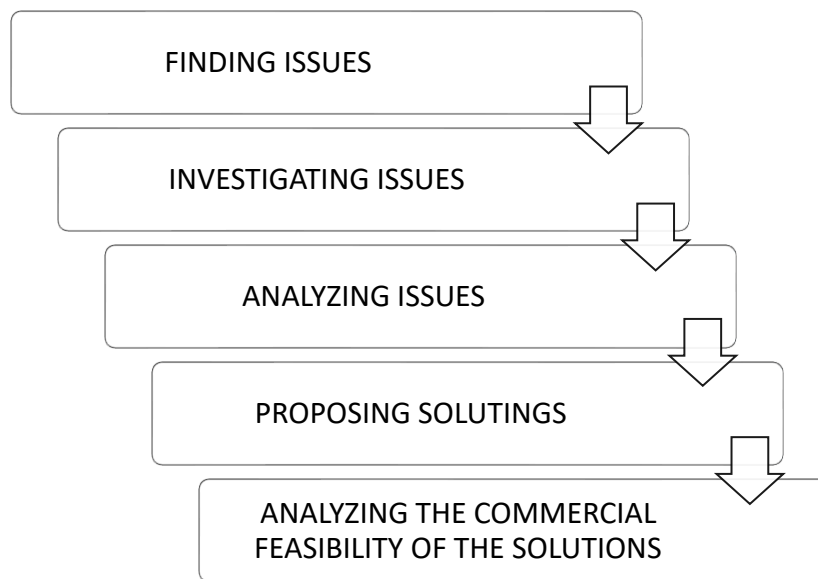
Table 6- Research route. Source: Author

The first-hand source of discovering the problem was the author's personal experience in the market. First of all, as a consumer in the Chinese market, the author started from the personal medical consultation and health management needs and experiences and perceived the current personal difficulties and pain points for medical records management. Secondly, the author's undergraduate was a clinical major. The author had been in a full-time internship in the hospital for more than one year and assisted physicians in writing thousands of medical records. Then the author knew the difficulties caused by the inability to share medical records among hospitals effectively and saw the potentially substantial commercial value of medical record big data.

Then put forward the hypothesis of an innovative business plan: the development of a private electronic medical record platform in the Chinese market will have an excellent commercial value.

In response to assumptions, the research methods of this commercial project mainly use the following:

1) **Literature Research.** Obtaining recent literature, business reports, and business data through search platforms such as CNKI (China National Knowledge Infrastructure), Web of Science, and Wind, and organize them to summarize and provide a necessary and comprehensive understanding of the development of Internet medicine and health and its electronic medical records sub-sector, laying the foundation for subsequent commercial feasibility analysis.

2) **Case Analysis Method.** It mainly selects one company that is currently the most representative of Internet medicine and health in the market as a case study. Using the comparative analysis method for competition analysis and using the reference analysis method or financial valuation. At the same time, after comprehensive analysis, the development strategy and definition of implementation policies of this commercial project are proposed.

3) **Financial Valuation.** Based on the customer size and industry size of the Chinese market, by comparing with the growth history of related listed companies in the industry, the cash flow generated by this business plan in the next five years is predicted, and the company is valued using the discounted cash flow method to predictive the feasibility of this business plan.

5 External Analysis

The external market environment of this business plan will be analyzed according to the following structure:
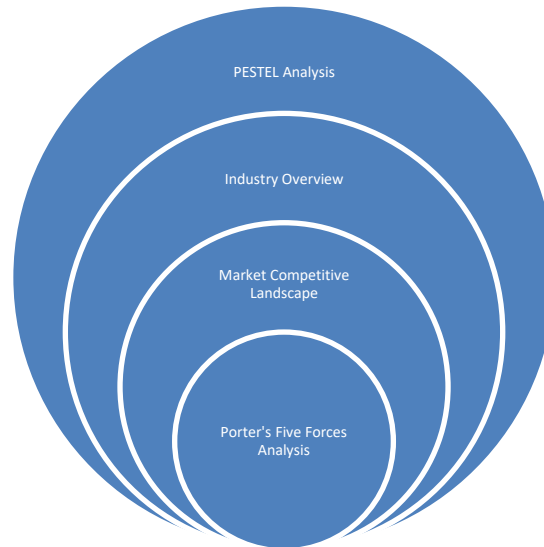
Table 7- External environment analysis model. Source: Author

5.1 PESTEL Analysis

5.1.1 Political Factors

Internet medicine and health is a manifestation of the application of medicine and health services on the Internet. It is related to the health of the people and is deeply affected by national policy directions, legal supervision, and the medical system. The development of Internet medicine and health in China has been more than 15 years, but the development of the industry is relatively slow. Early 2020 the coronavirus breakout, the National Health Commission of The People's Republic of China, and various provinces have promulgated many Internet medical policies to encourage the development of Internet clinics for epidemic prevention and control, which has brought Internet medical care to the forefront of epidemic prevention and control. It has well-cultivated a large number of Internet medical users. This year will be the new development milestone for Internet medicine and health industry. On February 15, 2020, Zhejiang Provincial Medical Insurance Bureau of China took the lead in

launching a pilot program for online payment of medical insurance at ShaoYifu Hospital, marking a breakthrough in Internet medical payment bottlenecks such as medical insurance reimbursement.

Since 2005, China's Internet medicine-related policies and laws have gradually opened up from the previous prudent attitude. Before 2018, it mainly promoted the construction of telemedicine, medical consortium, and graded diagnosis and treatment, and gradually opened to third-party institutions to participate in Internet medical services. After 2018, China has successively issued program documents for Internet medicine and three supporting documents for Internet diagnosis and treatment, Internet hospitals, and telemedicine, and further clarified the issue of Internet medical charges. The following is a summary of some relevant policies and regulations since 2005:

Time	Chinese Institutions	Documents	Main Contents
09/2005	State Food and Drug Administration (SFDA)	"Interim Provisions for the Approval of Internet Drug Trading Services"	Online drug trading is allowed but only allowed to sell non-prescription drugs.
08/2014	National Health Commission (NHC)	"Opinions on Promoting Remote Services of Medical Institutions"	The first time opens the online B2C business of medical institutions.
01/2015	'National Development and Reform Commission' (NDRC) and the National Health Commission (NHC)	"Notice from the General Office of the National Development and Reform Commission, the General Office of the National Health and Family Planning Commission on agreeing to carry out pilot work on	The pilot provinces are required to "research on the inclusion of telemedicine expenses in the reimbursement scope of the basic medical insurance pooling fund and the new rural cooperative medical insurance."

			telemedicine policies in 5 provinces and autonomous regions in Ningxia, Yunnan, et cetera."	
07/2015	General Office of the State Council (GOSC)	"Guiding Opinions on Actively Promoting "Internet+" Action."	Support third-party institutions to build a medical information sharing service platform, and use the Internet to provide services such as appointment diagnosis, line reminder, payment, and drug delivery.
01/2017	General Office of the State Council (GOSC)	"13th Five-Year Plan for Sanitation and Health."	Implementing the "Internet +" health care services to benefit national people. Promoting cloud computing, big data, Internet of Things, mobile Internet, virtual reality, and other information technology and health services deep integration. Improving health information service capabilities.
04/2018	State Council (SC)	Opinions on Promoting the Development of "Internet + Medical Health."	Improve the "Internet + medical and health" service system, improve the support system, and strengthen industry supervision and security. Medical institutions are encouraged to use the Internet and other information technologies to expand the space and content of medical services and build an online and offline integrated medical service model that covers pre-diagnosis, mid-diagnosis, and post-diagnosis.
08/2019	National Healthcare Security Administration (NHSA)	"Guiding Opinions on Improving the "Internet+" Medical Service Price and	It is the first time to propose "Internet+" medical services that meet certain conditions can be included in the scope of medical insurance

		Medical Insurance Payment Policy."	reimbursement from the national level: the "Internet+" medical services provided by designated medical institutions are the same as the offline medical services within the area of medical insurance payment, and the corresponding implementation, the price charged by a public medical institution shall be included in the payment range of medical insurance after corresponding filing procedures and shall be paid under regulations.
02/2020	National Health Commission (NHC)	"Notice on Strengthening Informatization to Support the Prevention and Control of Pneumonia Outbreaks of New Coronavirus Infections"	Medical institutions carry out voluntary online consultation and home medical observation guidance for new coronavirus-infected pneumonia. Encourage online review of some common and chronic diseases and drug delivery services to reduce the risk of cross-infection at offline visits.

Table 8- Main policies and regulations. Source: NHC, SFDA, SC, GOSC, NHSC, etc.

As we can see from the above policies and regulations, the policies and regulations of the Chinese Internet industry are becoming completer and more detailed. From the e-commerce qualifications for medical e-commerce, online diagnosis and treatment standards, price guidance, and medical insurance payment, these policies have relatively complete supporting regulations. The industry's development path is gradually clear, which has played a useful role in promoting the healthy and rapid development of the Internet pharmaceutical industry.

5.1.2 Economic Factors

Since China's reform and opening up in 1978, China has achieved world-renowned economic achievements. In the first 30 years of reform and opening up (1978-2008), China was first committed to transforming a poor and backward economy into a sustainable and expanding economy, mainly in developed coastal areas. After 2009, at the beginning of the second 30

years of reform and opening up, China focuses on technology and innovation and regards it as the country's next stage of economic growth and development direction.

After 2018, China has gradually transformed its manufacturing and export-led economy into the service industry and a proactive consumer economy. Today, China will focus on industries such as innovative technology (such as 5G technology), smart manufacturing, semiconductors, robots, and service industries, and gradually realize the transition from "Made in China" to "Smart Manufacturing in China."

"In 2019, China's GDP reached 99 trillion RMB, an increase of 6.1% over the past year. The per capita GDP was 70,892 RMB in 2019, an increase of 5.7% over the previous year" (National Bureau of Statistics of China, 2020).
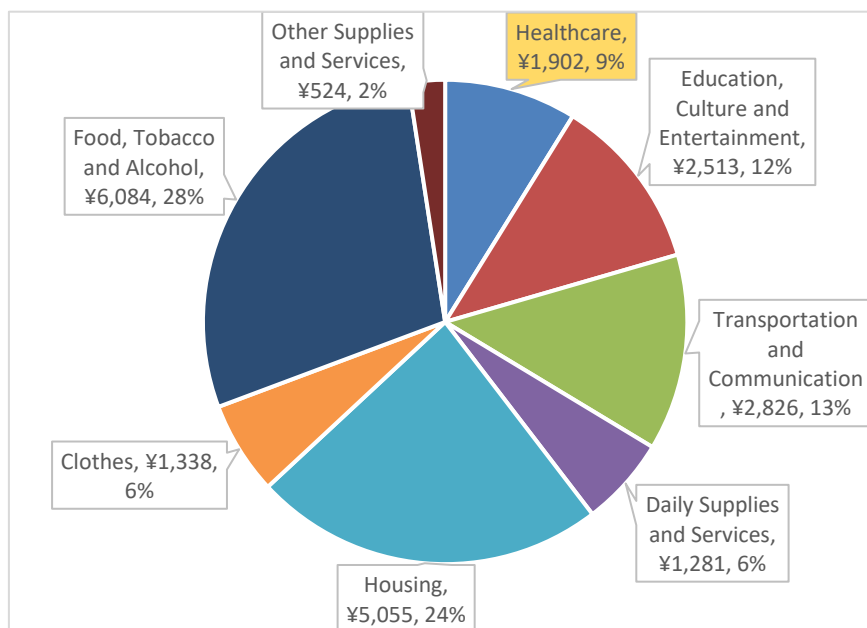
Graph 2- China's per capita consumption expenditure and proportion in 2019. Source: National Bureau of Statistic of China

According to relevant statistics in China, in 2019, China's per capita expenditure on health care was about 1,902 yuan, an increase of 12.9% over the previous year, and accounting for 9% of total per capita consumption expenditure. (National Bureau of Statistics of China, 2020).

To sum up briefly, in 2019, China's per capita GDP exceeded 10,000 US dollars (converted at the annual average exchange rate), and the per capita GDP of developed countries is generally above 30,000 US dollars. Compared with developed countries, there still has a large gap, and the future market potential is vast. China's economic foundation is solid, there are many favorable conditions, it has maintained a stable operation and has developed well, and it will have a good and stable growth rate in the future.

5.1.3 Sociocultural Factors

"In 2019, China's total population reached 1.4 billion, with a natural population growth rate of 3.34‰, the working-age population aged 16 to 59 is about 896 million, accounting for 64.0% of the total population; the population aged 60 and over is about 254 million, accounting for 18.1% of the total population" (National Bureau of Statistics of China, 2020).

China implements the universal medical insurance policy, which is divided into three types: employee medical insurance, urban residents' medical insurance, and rural cooperative medical insurance. The number of people participating in basic medical insurance nationwide is about 1.35 billion, an increase of 9.78 million, basically covering the entire Chinese population. In addition to purchasing national basic medical insurance, individuals can also purchase additional commercial insurance as a supplement (National Bureau of Statistics of China, 2020).

With the improvement of the Chinese people's economic living standards, people are paying more and more attention to a healthy lifestyle, as well as prevention before illness, and timely diagnosis and treatment of illness. Although the overall saving rate of the Chinese is high, the consumption concept of a new generation of consumers tends to be closer to the West, like credit consumption has become very common.

Internet medicine is an emerging industry, and people hold a wait-and-see attitude towards this industry, but after years of industry precipitation, many people have already used the registration services and appointment inspections for medical care provided by Internet medicine companies. In particular, the outbreak of the coronavirus epidemic in 2020 has cultivated a large number of consumers' habit of using Internet medical services.

5.1.4 Technological Factors

In recent years, China's basic Internet technology and resources have reached the same level in the world, and the whole is still on upgrading and optimizing. The system operation is safer and more stable, which is very basic and safe for the operation of network commerce.

At present, the Internet pharmaceutical industry mainly involves equipment and technology that are widely available in the market and can get access easily. It is very convenient, such as basic hardware facilities, system software, information transmission technology, extensive database technology, et cetera., which cannot form significant technical barriers. The innovation of the Internet information technology industry provides good technical support for Internet medicine. Ample data storage and analysis rely on Internet cloud computing, which has innovatively changed the traditional access to data.

In terms of China's national policy, the State Council's "Notice on Printing and Distributing a Platform for Promoting the Development of Big Data" clearly states that public service big data projects need to build medical and health service big data. In the future, technical barriers to the Internet pharmaceutical industry will appear in the direction of blockchain, artificial intelligence, and big data processing. These emerging technologies are still being researched and developed. At present, there are not many practical applications, and the application effects are lacking.

5.1.5 Environmental Factors

China is still in a developing country, facing the dual challenges of economic development and environmental protection. However, nowadays, China also paid more and more attention to environmental protection issues, and has taken the construction of a green economy as a basic national policy, and formulated a series of laws and regulations for a green, low-carbon economy.

Green, energy-saving, and low-carbon are the development direction of the future economy and a new economic life that the people are willing to pursue. Traditional paper medical

records consume a lot of paper and wood, which increases carbon emissions. The implementation of electronic medical records can effectively save energy and reduce emissions and promote the development of ecological and environmental protection. From the perspective of environmental protection, people are more willing to accept electronic medical record management.

5.1.6 Legal Factors

There are many legal aspects involved in electronic medical records and electronic medicine business. With China's liberalization and encouragement of Internet medical treatment, relevant business management laws are relatively complete. The primary relevant laws and regulations are listed below:

- Regarding the operating licensing regulations for Internet service providers, under the 2017 "Administrative Measures for Telecommunications Business Licenses," telecommunications value-added service operators must obtain relevant business licenses from relevant information technology management departments. Licensed service providers must participate in annual inspections every year.

- Relevant mobile Internet applications shall be operated following China's 2016 "Mobile Internet Application Information Service Management Regulations," obtain the legal qualifications for related operations and do a good job in information security management.

- Regulations related to Internet advertising are mainly operated under the 2015 "Advertising Law of the People's Republic of China." China has strict restrictions on medical advertising, which stipulates that advertisements for medical treatment, medicines, and medical devices must not be published in the public media.

- Regulations on information security and user information confidentiality are mainly based on the 2013 "Provisions on the Protection of Personal Information of Telecommunications and Internet Users." Service providers should collect personal information under regulations and inform users of the content, purpose, and use of the

collected information and the scope of application, shall not disclose or tamper with the personal information. When the user suspends the service, it shall stop collecting the user's personal information under regulations and provide the user with the cancellation service.

- Regulations related to the medical and pharmaceutical industries mainly include the "Law of the People's Republic of China and Practicing Physicians," "Regulations on the Administration of Medical Institutions," "Regulations on the Classification of Prescription and OTC Drugs," "Drug Administration Law." Relevant operators must obtain relevant qualifications under relevant laws before they can conduct business and operate under relevant regulations.

- Regulations on Internet drug services, Internet drugs, and medical equipment operations mainly include the 2017 "Internet Drug Information Service Management Measures," the 2015 "Internet Drug Transaction Service Approval Provisions," and the 2018 "Drug Online Sales Supervision and Administration."

- Other laws and regulations include network culture operation regulations, labor regulations, environmental protection regulations, fire protection regulations, and operations that need to be implemented under relevant regulations.

5.1.7 PESTEL conclusion

From the PESTEL analysis, we can see that the operation of the electronic medical record platform is a product and service that is urgently needed by Chinese society. China's policy also encourages and supports this aspect. The legal aspect is relatively complete and guaranteed. It is easy to assess the basic technology, and the economic level shows that future development prospects are broad.

5.2 Industry Overview

The big health industry is an important national economy in China. The big health industry generally refers to industries that promote human health and maintain human rehabilitation

and fitness functions, including products and services, such as medical care services, drug sales, nutrition, and health care products, medical equipment, elderly care services, et cetera. The Internet health industry is an extension of the health industry on the Internet, including Internet medical consultation, medical e-commerce, online sales of insurance services, and patient medication consultation and guidance.

In October 2016, the "Healthy China 2030 Planning Outline" issued by the General Office of the State Council of China clearly stated the supporting attitude for "Internet + Medical," and for the first time, raised the outline of the health and medical industry to a national strategic level. According to Frost & Sullivan's prediction, China's big health market will be 10.8 trillion in 2018, and it is expected to reach 26.8 trillion in 2026, with a compound annual growth rate of about 12% (Ping An Healthcare and Technologycal Company Limited, 2018)

With the increase of China's national income and the aging of China's population, as the body declines and immunity declines, the elderly population will be more likely to acquire chronic diseases and need more medical and health services and products. The future of China's medicine and health market will become even larger.

According to Frost & Sullivan's report, the incidence of cancer and diabetes (both chronic diseases) in China is expected to almost double in the next decade. China's total medical and health expenditure was RMB 4,634.5 billion in 2016 and is expected to reach RMB 11.4031 trillion in 2026, with a compound annual growth rate of 9.4%. (Ping An Healthcare and Technologycal Company Limited, 2018)

From the figure below, we can see that it is predicted that the prevalence rates of chronic diseases such as diabetes and hypertension in China will reach 14.1% and 27.6%, respectively, in 2026. Compared with other developed countries, China's medical expenditure in 2015 was very low. Regardless of its GDP ratio or per capita calculation, China's relatively low healthcare expenditures indicate that it has considerable growth potential. (Ping An Healthcare and Technologycal Company Limited, 2018)
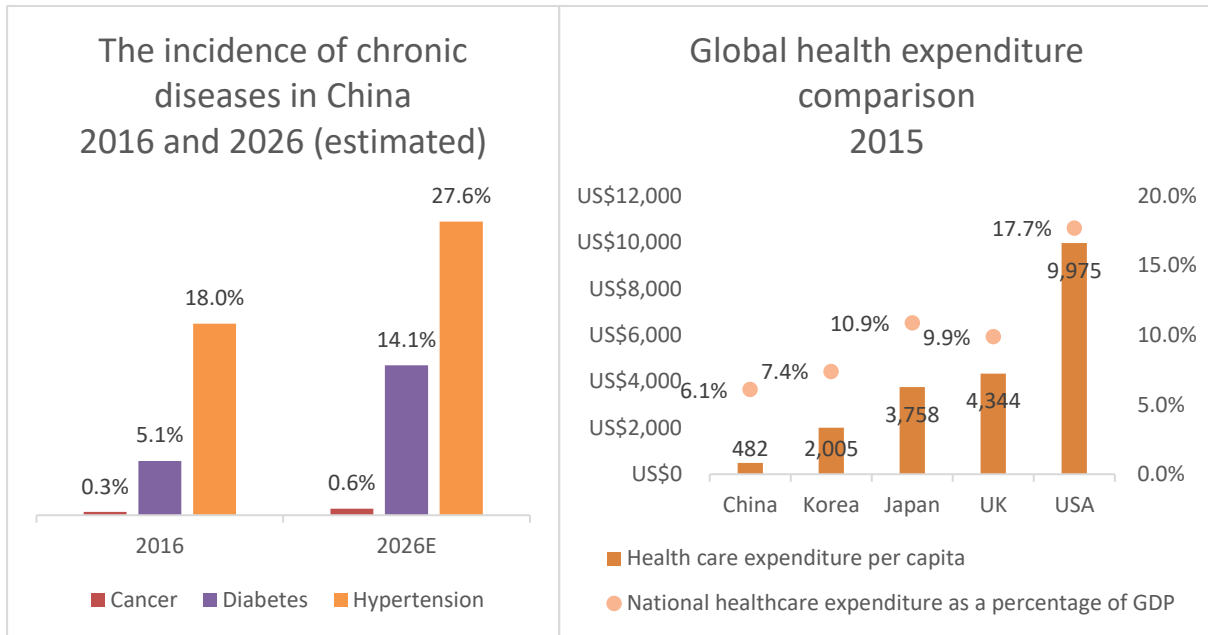
Graph 3- The incidence of chronic diseases in China 2016 and 2026 (estimated) and Global health expenditure comparison 2015. Source: Frost & Sullivan Report; Ping An Good Doctor's Report.

At present, China's medical and health service market has the following shortcomings: China's medical resources are unevenly distributed. Good medical resources are mostly concentrated in large and medium-sized cities. Medical resources in small cities, remote areas, and villages are scarce, and medical resources per capita are insufficient. The patient's medical service experience is not good. The patient spends an average of 2 hours waiting for treatment in the hospital, but the time for the doctor to talk with the patient is about 10 minutes. With the online registration of the doctor, the queue time is greatly shortened. The reimbursement ratio of national social medical insurance funds is insufficient to support expensive medical expenses, especially most imported drugs or high-end equipment cannot be reimbursed, and additional commercial insurance is required. It is predicted that the future development of Internet medical health in the Chinese market, the increase of private medical health services, and the rise of commercial insurance will solve or alleviate these shortcomings in the current market.

At present, the business of China's Internet medical and health industry is mainly divided into the following business: pharmaceutical B2C business, online advertising, and marketing promotion, insurance sales cooperation, health management, patient guidance, online consultation, and so on. The scale of China's Internet health market is expected to be 21 billion RMB in 2018, and the growth will reach 198 billion RMB in 2026, with a compound

annual growth rate of 33.6% （Graph 1- The scale of China's Internet medicine and health market. Source: Frost & Sullivan） (Xinming & Rui, 2020).

According to Frost & Sullivan's report, the total transaction volume of China's pharmaceutical B2C business (excluding prescription drugs) increased from RMB 2 billion in 2012 to RMB 19.7 billion in 2016, an increase of nearly ten times, a compound annual growth rate at 77.0%, it is expected to reach RMB 499.2 billion in 2026. This growth was mainly driven by increased per capita disposable income, increased awareness of medical and health care, the increased popularity of online purchases of health products, and increased promotion of pharmaceutical companies. (Ping An Healthcare and Technologycal Company Limited, 2018)

Relevant government departments in China have imposed strict restrictions on online pharmaceutical marketing and advertising, so most pharmaceutical marketing is indirect advertising through community promotion and academic promotion activities. In recent years, China's online medical advertising has developed rapidly. According to a Frost & Sullivan report, online medical advertising revenue in 2012 was approximately RMB 300 million, and it increased to approximately RMB 12 billion in 2016, representing a compound annual growth rate of 40.5%. It is expected that relevant government departments in China will gradually relax restrictions on online pharmaceutical advertising in the future, and the advertising business in related fields is expected to be further enlarged and increased. (Ping An Healthcare and Technologycal Company Limited, 2018)

According to Frost & Sullivan's report, with the continuous development and expansion of online medical services in China, the number of online medical consultations in China has increased from 29.8 million in 2012 to 148 million in 2016, with a compound annual growth rate of 49%. It is expected to reach 4.2 billion in 2026. The penetration rate of online consultation was 0.4% in 2012, increased to 1.8% in 2016, and is expected to reach about 29% in 2026 (Ping An Healthcare and Technologycal Company Limited, 2018).

In the next decade, the driving factors for the development of China's Internet pharmaceutical industry mainly come from the following aspects.

First, China has a huge population and a large number of Internet users. These Internet users include computer users and Internet users. The number of users is the basic factor for the development of Internet companies. The huge number of Internet users is expected to be transformed into industry revenue potential.

Second, a sound and favorable industry development policy. The Chinese government is gradually deregulating the Internet pharmaceutical industry and has introduced some measures to encourage the development of the industry to improve relevant laws and regulations. These will play a legal role in promoting and protecting the development of the Internet medicine and health industry.

Third, there is an increasing demand for improved availability and convenience of medical and health services. As China's population is aging, and the prevalence of chronic diseases is rising, it is expected that the demand for medical and health services will continue to grow with strong momentum. However, China's current pharmaceutical industry has not yet been able to meet customer needs well. The demand for medical and health industries in China as a whole has not been met, and the demand for services and products in the medical and health industries will only increase unabated. The Internet pharmaceutical industry is expected to release residents' demand for the medical and health industry, and the convenience of the Internet can well meet the basic needs of many customers.

Fourth, with the development of science and technology, the Internet pharmaceutical industry will use technology to improve its own service functions and products and create and provide users with convenient and complete good services. In the future, high technologies such as big data, artificial intelligence, and the Internet of Things will be well integrated into the Internet pharmaceutical industry and help the Internet pharmaceutical industry develop at high speed.

From the industrial stage, China's Internet pharmaceutical and health industry are currently in the initial stage of the industry, with broad industry prospects and huge room for growth. The industry is in a stage of complete competition, and there is no oligopolistic market. The required technologies are all basic Internet technologies. With the development of artificial intelligence, big data processing, blockchain, and other technologies, this high-tech will drive the industry in the future force and change factors.

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From the perspective of the industry chain structure, online consultation is the core of the Internet medical business at this stage. By building an online medical treatment platform, Internet medical companies can provide patients with drug sales, health management, and even commercial insurance while linking the doctor-patient relationship—cooperation to increase the added value of the industrial chain. In the future, it will transform from a single-core business to an integrated, comprehensive, and supporting business group competition.

5.3　Market Competitive Landscape

Although the Internet pharmaceutical industry is an emerging industry, competition in this industry has become increasingly fierce. The competition and entry barriers of this industry are mainly reflected in the following aspects.

First, providing high-quality products and services is the basic requirement for entering this industry. The medical and health industry is related to human health issues. Only when the quality of the products and services provided can be guaranteed can it be favored by consumers, and then can it form a strong brand image. Moreover, once a new entrant has formed a good brand image, it will give priority to gaining the trust of customers, and then consolidate its position in the market, thus forming a powerful blow to subsequent market entrants and gaining market advantage.

Second, have a sufficient number of customers and active user participation. The Internet pays attention to network traffic. Only with a large enough number of registered and user users can there be a chance to convert user traffic into operating income. The more users the company has, the better the company has a competitive advantage in the market. And to obtain a huge number of users it is inseparable from providing good products and services.

Third, it satisfies customer needs well. In this era of rapid changes in market demand, who can satisfy customers well will win customers' favor. We must not only consider providing customers with high-quality products and services but also provide customers with a complete range of products and services. Only by providing a full set of one-stop products and services

can the cost of customers changing service providers are reduced, and the cost of changing service providers can be reduced. Then the company grabs the customer firmly.

Fourth, the application and accumulation of technology. The Internet medical and health industry will involve many data and other technical aspects. It is best for the company to have a certain accumulation in the innovation and application of high-tech innovations and applications such as big data, artificial skills, and the Internet of Things, which will bring competitive technological advantages and form a technical barrier. It is difficult for new entrants to accumulate certain technical capabilities in a short period of time.

The frequency of using the Internet medical and health platform is relatively low. Young people and economically developed cities are the main users and regions in this industry. Among them, online registered doctor appointments are the most frequently used. The business models of the major Internet pharmaceutical companies on the market today are Online Medical + Medicine E-commerce.

The following is a comparative analysis of the competitive characteristics of China's key Internet pharmaceutical companies:

company name	Business model	Whether profitable	The main source of income	Cooperation giant	Expert consultation cost
Ping An Good Doctor	Medical + medicine	Not yet	Medical e-commerce (accounting for 55.9%, 2018)	Ping An	RMB 30~100; 200; 300
Ali Health	Medical + medicine	Not yet	Medical e-commerce	Ali	-

WeDoctor	Medical + medicine + insurance	Yes	Registered and consultation (accounting for 45%, 2016)	Tencent, AIA	RMB 20~100; 200; 300
Good Doctor Online	Medical + drug consultation	Not yet	Online consultation	Tencent	RMB 50~100; 200; 300
Chunyu Doctor	Medical	-	-	Sogou	RMB 10~50

Table 9- Competitive business models of key Internet pharmaceutical companies. Source: Minsheng Securities.

In the Chinese internet medicine and health market, Ping An Good Doctor is the first listed company in the internet medicine and health industry, and a representative of a relatively well-developed company in this industry. This project will select Ping An Good Doctor as the vital case analysis object.

Ping An Doctor was registered and established in 2014, the mobile APP was officially launched in April 2015, and was listed on the Hong Kong Stock Exchange in May 2018. Relying on self-built software and website online health consultation service platform, Ping An Good Doctor uses online diagnosis and treatment services as its entry point to provide customers with one-stop medical and health management services, including online medical services, consumer medical services, pharmaceutical e-commerce, Health management, and healthy interaction. Most of the company's executives have worked in Alibaba and Ping An Health Insurance. They have a deep understanding of the Internet industry and combine with the medical health industry expertise accumulated in Ping An Health Insurance, and they have a significant advantage in Internet medical operations.

At the end of 2019, the cumulative registered users of Ping An Good Doctor reached 315 million, the average monthly active users were 66.9 million, the annual average conversion rate of paid users was 4%, and the average daily online consultation was 729 thousand times.

The company's operating income is mainly derived from the pharmaceutical e-commerce business, and its overall performance has grown by leaps and bounds. The revenue growth rate in 2016-2019 was 115.83%, 210.28%, 78.68%, and 51.82%. In 2017, the company's net profit loss began to narrow, and in 2019, the net loss was 734 million, narrowing 19.5% year-on-year. (Xinming & Rui, 2020)

5.4　Porter's Five Forces Analysis

The Five Forces Analysis Model was proposed by Michael Porter in the early 1980s and used to analyze the competitive environment outside the enterprise. According to this analysis theory, external competition cannot be a single peer competitor, but also involves the threat of new entrants and the substitutes, plus the bargaining power of suppliers and the bargaining power of buyers, which together constitute the industry's fierce competition, and then will ultimately affect the company's pricing level and the company's comprehensive profitability.

1)　Bargaining power of suppliers - relatively low

The Internet medical and health industry has multiple businesses, so its different businesses have different suppliers. However, the products or services of these suppliers are not rare, but if the company wants to change suppliers after cooperation, the cost of switching suppliers is relatively high. The suppliers of the pharmaceutical e-commerce business are pharmaceutical companies and pharmaceutical intermediaries. There are many pharmaceutical industries, and there are many manufacturers of the same product with similar performance. Therefore, the bargaining power of pharmaceutical companies and intermediaries is weak. The service providers of the consultation business are licensing physicians and nurses. Their services for Internet pharmaceutical companies are to provide diagnosis and health advice for patients. As individual professionals, they have not formed a strong organization, so their bargaining power is also weaker. Offline physical medical institutions such as dentist clinics, plastic surgery institutions, and medical examination institutions, they provide customers with standardized and customized packages, such as a dental beauty package, plastic surgery package, and elderly medical examination package. However, these institutions are numerous on the market, so their bargaining power is relatively weak. There are many suppliers of the commercial medical insurance business, and their bargaining power is relatively weak. In

general, there are many suppliers of products or services, so there are many alternative suppliers, and their bargaining power is weak.

2) Bargaining power of buyers - relatively high

China has a large population and a large number of buyers. There are many options for buyers. Buyers can skip the e-commerce business and directly choose to go to physical medical institutions or physical pharmacies to purchase related products or services. Buyers can quickly obtain information about products or services. After buyers use specific Internet medical and health companies to form a habit, they generally do not change suppliers, and the replacement of suppliers has a specific time and conversion cost. In general, the bargaining power of buyers is relatively high.

3) The threat of new entrants – very low

The barriers to entry of the industry include the provision of complete and high-quality products and services, the accumulation of a certain number of users, the vast start-up capital and technology accumulation, and the establishment of certain brand awareness in the market. Therefore, the threat of new entrants is relatively low, but the industry is in its early stages, new entrants still have a chance to grow. Overall, the threat of new entrants is low.

4) Substitutes – very low

The Internet medical and health industry is an extension of physical medicine and health services on the Internet. It belongs to an emerging industry, and there is no substitute for it at this moment.

5) Rivalry – high

The Internet has a dominant effect, the strong one will become stronger, and the weak one will gradually lose their position and market. If companies are on the same business track, their products and services often do not have any substantial difference, so that future competition will be fierce. Once the first entrant has a particular scale of users and a strong brand influence, it will have a significant advantage. Then the Internet medical and health industry is an emerging industry, with fewer competitors, huge industry prospects, and ample room for development. In general, the competitiveness of the industry is relatively high.

The following comprehensive analysis of the industry's five force analysis and industry attractiveness:

Force	Power	Industry Attractiveness
Bargaining power of suppliers	Relatively low	Very high
Bargaining power of buyers	Relatively high	High
The threat of new entrants	Very low	High
Substitutes	Very low	Very low
Rivalry	High	Very high
Overall	Relatively low	High

Table 10- Porter's Five Forces Analysis. Source: Author

From the above, we can see that the degree of competition in the same industry has begun to become very fierce, and buyers also have strong bargaining power, so we should seek differentiated entry points to enter the market and provide customers with complete and excellent services, and relatively low price. The advantage is that the bargaining power of suppliers and the threat of new entrants is relatively low, which can help the company keep costs down and prevent new entrants. The overall supply chain industry is relatively attractive. From upstream suppliers to downstream buyers, there are full expectations for this industry.

6 Internal Analysis

6.1 Strengths:

1. The unique business profit model integrates online and offline medical and health resources with customers to create a complete one-stop service platform to meet all user needs and achieve multiple business income.

Provide users with a life-long free electronic medical record management platform, which integrates users, online medical and health resources, and offline medical and health resources. Online resources such as electronic health records, health and disease education science, medical and health electronic mall, online consultation, health management plan, Chinese medicine health care, et cetera. Offline medical resources such as licensed physicians, registered services, referrals to hospitals, health checkups, medical insurance, commercial medical institution services, offline medicine delivery, et cetera. It is a platform-level product that provides comprehensive and customizable personalized medical and health services to meet all medical and health needs of users, thereby sticking to customers and achieving multiple business revenues.

2. Unique market development methods allow registered customers to exhibit exponential growth and strategically promote the maximization of user interaction, participation, and activity.

The success or failure of Internet software depends on the number of users. Using the free electronic medical record management platform as the market entry point, inviting TikTok celebrities with more than one million fans for live broadcast introduction and promotion, not only can save costs, but also promote high efficiency. At the same time, set up science channels, there are videos and articles. In the video category, invite medical experts to make popular science videos for diseases and health care. The videos are divided into two categories. The first category is a 1-minute short-time video, which is convenient for forwarding in social software, and the second category is a popular science video of 3 to 15 minutes or more. This category is in-depth scientific knowledge. Develop chat and post-bar social functions so that patients can communicate one-on-one or can also establish chat

groups. Medical software is a low-frequency app of opening and use. The chat function and post-bar function can increase the user's viscosity and frequency of use.

3. **Provide the online consultation platform to link medical care and patients, and medical personnel joins in as individual practitioners to reduce management and operation costs.**

Now many online consultations are self-employed by the companies. The companies independently recruit and train medical teams, and the salaries and benefits of medical staff are a relatively high cost. Online medical consultation is a particular business, and it is hard to control and predict the actual operating income of the online consultation business. At present, most companies are still subsidizing the online consultation business. This business project will plan to outsource online consultation services, build a platform to connect medical staff with patients in need, medical staff will settle in for franchise mode, and the company is responsible for consultant quality monitoring. The medical staffs joining this platform are responsible for their profits and losses. The company only draws the platform service fee. So the company can reduce the company's high operating costs, and the company can spend more funds on marketing and technology research and development.

4. **Self-built technology research and development team, increase investment in research and development and application of high-tech, to provide users with an excellent experience.**

Self-built technology R&D team, increase investment in R&D of this software and web platform. Follow up with the world's latest technologies in real-time, and increase R&D and application of new technologies such as artificial intelligence and big data processing. For example, the artificial intelligence assistant can carry out preliminary screening classification based on the patient's initial symptoms, recommend the relevant specialists to choose for the patient, shorten the initial screening time, save labor costs, and improve the efficiency of consultation. Combined with the processing and analysis of big data, it can provide relevant advice to relevant doctors and patients to improve the accuracy of diagnosis and treatment.

5. **Hire senior chief executive officer and professional management teams，and set up stock options to motivate employees.**

Professional things need professional people to do it. Set a 10% share option for the CEO. The selection criteria are the CEO with senior Internet and pharmaceutical experience. The task is to build a modern enterprise structure, formulate corporate rules and regulations, and formulate, implement, and supervise the strategic development direction of the company. Besides, we set another 10% of stock options for the company's core employees, such as core technical employees, chief financial officer, and market core employees. The implementation of equity incentives can provide incentives and constraints to corporate managers and employees, improve corporate governance structure, enhance company cohesion, reduce management costs, maximize the talents of employees, and enhance the company's competitiveness.

6.2   Weaknesses:

1   Too much business disperses the company's financial resources and energy to a certain extent.

From online consultations and electronic medical malls to electronic medical records management and health management to consumer medical and advertising businesses, there are too many businesses and a wide range. To a certain extent, the company's financial resources and employees' energy will be easily scattered and cannot focus on one thing.

2   It is a long time before achieving dividend distribution

Starting from start-up, listing on the platform, realizing business revenue, and net profit start to be positive. It may take a few years for the entire cycle to achieve positive net profit. The investment technology startup company has a relatively long time before achieving dividend distribution.

3   The medical staff joining in the station are inconvenient to manage and easy to lose. It is not easy to manage the franchise medical staff; they are easy to quit it.

The online consultation service implements a franchise system, which may face shortages of medical personnel, medical personnel are easily lost, and it is not convenient for unified management.

4   There may be suppliers selling counterfeit and shoddy products that damage the company's goodwill.

The cooperative suppliers of the medical mall may sell counterfeit and shoddy products, which seriously damage the company's goodwill. The medical and health industry is a unique industry that involves human health problems. Any product and service may have the probability of a medical accident, which will seriously damage the company's reputation.

6.3   Conclusion

This business plan straight points mostly are the unique business model, integrate online and offline resources, and provide a comprehensive one-stop service. Moreover, the unique and efficient market development method, registered users will grow exponentially, maximizing customer activity and participation. The opposite weakness points are that we have too many businesses maybe will disperse the company's financial resources and energy to a certain extent.

7 SWOT Analysis

7.1 SOWT Framework

The following table is a SWOT framework used to summarize and analyze the main points of the internal and external environment of the business plan:

Internal factors	External factors
Strengths	**Opportunities**
1. Unique business model, integrate online and offline resources, and provide comprehensive one-stop service. 2. Unique and efficient market development method, registered users will grow exponentially, maximizing customer activity and participation. 3. The online consultation service implements a registered franchise system, and most medical staffs are self-employed staff, which will reduce operating costs. 4. Self-built technical team, increase investment in research and development, committing to providing customers with an excellent experience. 5. Hire senior chief executive officer and professional management teams，and set up stock options to motivate employees.	1. Chinese medical and health market has a large volume and broad prospects and can reach a trillion-level market in the future. 2. There is no good private electronic medical record management software in the market. The public urgently needs an individual electronic medical record management software, and the efficient sharing of electronic medical records is the future development direction. 3. Technological updates promote industry innovation and create more industry opportunities, such as the development and application of artificial intelligence and big data technologies.
Weaknesses	**Threats**

1. Too much business disperses the company's financial resources and energy to a certain extent. 2. A long time from investment to profit. 3. The medical care team belongs to the registered franchise system, freelancers, not employees within the company, so it is inconvenient to manage, and there is a possibility of easy loss. 4. There may be suppliers selling counterfeit and shoddy products that damage the company's goodwill.	1. The competition in the same industry is becoming increasingly fierce, threatened by strong competitors such as Ping An Good Doctor, Ali Health, WeDoctor. 2. National public medical institutions may become potential competitors.

Table 11- SWOT Framework. Resource: Author

7.2 SWOT Strategic Analysis

Comprehensively analyze external factors (opportunities, threats) and internal factors (strengths and weaknesses) then propose relevant development strategies.

Internal / External	Strength	Weakness
Opportunities	**Focus Strategy**	**Phased Strategy**
	1. Focus on the research and development of the technology platform to bring customers an extraordinary experience. 2. Intensify the development of the market, cultivate customers' habits and loyalty, and increase customer stickiness and frequency of use.	1. Advance major projects in stages, focusing on one or two significant businesses each period. 2. Strength manage the Medicare staff who are in the franchise system. 3. Strictly select suppliers and monitoring the quality of products and services.

Threats	**Differentiation Strategy**	**Enhance Shortcoming Strategy**
	1. Focus on providing high-quality electronic medical records management services, cutting into the market by differentiated services. 2. Use differentiated marketing strategies such as medical education short videos, long videos, disease communication groups, disease communication post bars, and Internet celebrity medical education to increase customer retention and frequency of use.	1. Strength manage the Medicare staff who are in the franchise system. 2. Strictly select suppliers and monitoring the quality of products and services.

Table 12- SWOT Strategic Analysis. Resource: Author

From the SWOT strategy analysis, we know each strategy has its position and function, can not lose any one of them. Focus strategy is the basis for we provide excellent service for our customer, differentiation strategy is our way to win over competitors, and phased strategy is our strategy for rationally allocating resources and energy and maximizing resources. The enhance shortcoming strategy is an essential strategy for quality assurance.

8 Objectives of The Plan

A success goal means half of success. The goals of the project run through the entire project and appropriate adjustments at different stages can guide the company to continue to forge ahead, innovate, and update better services and products.

The main objectives of this project are as follows:

- Build the best personal electronic medical record management platform in China.
- Become the best service provider in China's Internet medical industry.
- Achieve breakeven within five years of starting the business, and achieve excess returns after five years.
- Achieve a market share of 50% within five years, achieve a market share of over 80% within ten years.

9 Development Strategy

9.1 Mission, Vision and Values

In order to achieve sustained and long-term victory in the fierce market competition, we must have a long-term view, examine our goals and directions from a higher and longer-term perspective, and create brilliant achievements with our employees, partners, and customers.

Our mission:

Use technology to create a better life, provide every Chinese with a free electronic medical record file, and continue to help people keep healthy and live a happy life.

Our vision:

Become the number one technical service provider in China's Internet medical and health industry.

Our value:

Health: Help people stay healthy and happy.

Green: Practicing a green sustainable development strategy.

Quality: Provide customers with high-quality products and services.

Innovation: Continuously update technology and walk in the forefront of technological innovation.

9.2 Development Strategy

1) Our project's strategic positioning is to build convenient and one-stop products and services.

Our project will create a convenient and easy-to-operate electronic medical record management platform. Customers can access, conveniently, and manage their own electronic medical record files anytime and anywhere. The future goal is to achieve mutual transmission and convenient sharing of medical records with hospitals through simple two-dimensional

code technology. Through this medical record management platform, we will provide customers with one-stop medical and health products and services, such as medical malls, online consultations, insurance services, and consumer healthcare. Rich and comprehensive products and services are one of the keys to firmly sticking to users. Users do not need to download too many software to solve the products and services required by the schedule for medical and health care. Once users and our platform are tied together, we can form a business closed loop, which can consolidate our position in the customer's daily life and can also achieve more profits.

2) In order to achieve our mission, goals, and strategic positioning, we will use the following strategies:

- **Comprehensively develop the market, increase customers exponentially, and maximize the number of customer registrations, activity, and participation.**

We will settle on online platforms such as TikTok and WeChat, and cooperate with online celebrities to promote our software platform through short videos, live broadcasts, medical science popularization so that the coverage of the promotion is vast, and the promotion can reach the crowd quickly, and the promotion cost is much lower compared with the cost of TV advertising, outdoor advertising. Provide users with a lifetime free electronic medical record management platform, which can increase the number of user registrations. Newly registered users who share the registration link to social groups such as WeChat groups can also get certain rewards, such as a free online consultation, to achieve fission-type growth of registered users.

- **We plan to increase user stickiness, activity, and engagement by not limited to the following methods:**

i. Create a popular medical science park, with short videos, long videos, articles, et cetera, free for users to use.

ii. Create social media functions. Users can form or join discussion groups for different diseases, health, and beauty groups, and users can also communicate with others one-on-one.

iii. Expand and improve our service products to provide users with comprehensive and high-quality products and services.

iv.   Research and develop personal health data monitoring functions, such as setting up reminders for physical examinations and medications, real-time monitoring of blood pressure, heart rate, and other data, guiding users to participate in personal health management plans actively, and helping customers achieve health goals.

- **Increase investment in R&D technology and improve the technical strength of our platform.**

We will attract investment funds and technical talents to research and develop technology on the platform and update and improve platform functions. Based on the prediction of the vast number of users in the future, we will have a vast health database, and we will increase the analysis and utilization of big data in human and material resources. Increase funds to develop a set of artificial intelligence assistants to help medical staff improve the efficiency and accuracy of online consultations, and help patients with a more satisfactory experience.

- **Expand the scope of services, provide comprehensive products and services, expand business monetization channels, and improve value monetization capabilities.**

A single electronic medical record management function cannot meet the increasingly diverse needs of customers. We will expand our service scope to provide diversified products and services, such as the electronic medical mall, consumer medical care, insurance business, online consultation, and health management, to provide customers with a one-stop service that can broaden our business realization channels. We have an extensive health database. By developing the value of big data, we can in-depth cooperation with insurance companies, medical research institutions, individual customers to improve the ability to realize value.

10 Implementation Policies

10.1 Marketing

In order to better enter the market and maximize market share, we need to be clear about our target market, position our products well, and do an excellent job in the marketing mix.

10.1.1 Segmentation, Target and Positioning

Segmentation: We create the electronic medical record platform aim to provide a private electronic medical record file to every Chinese and help them manage their health plan. Medical and health products are connected to the public, and every customer's needs are almost the same, so there is no particular market segmentation for our products and services. However, the use and management of the electronic medical record platform are inseparable from computers, mobile phones, and the Internet. As of March 2020, the number of Chinese netizens reached 904 million, and the Internet penetration rate of about 64.5% (China Internet Network Information Center, 2020). We will segment according to behavior. The segmented market will be netizens who use computer networks and mobile phone networks, and they are more concerned about and pay attention to their health, and are easy to accept new things such as new software.

Target: The target group is netizens who use the Internet. In different business segments, each target group is not the same. The goal of electronic medical records, health plan management, and electronic medical malls is all users. The target groups for online consultation are patients with chronic diseases and mild illnesses, such as colds and pharyngitis. The target group of consumer medical care is mid-to-high-end customers. For example, the target group of dentistry is teenagers and children and mid-to-high-end customers, and the target group of plastic and cosmetic products is mainly female customers. The target group of commercial medical insurance will be everyone.

Positioning: The market is now full of different competitors, and competition is becoming increasingly fierce. There are companies whose primary business is online medical care, companies whose single business is medical e-commerce, and some companies are relatively

large and have comprehensive businesses. Our company's positioning is to provide differentiated services "electronic medical record management platform + medical education + online communication function" as a market entry point to acquire a large number of customers, and then provide comprehensive and rich products and services to achieve profitability. In future development, innovative technology to bring excellent user experience is the main direction of the future market reform and development. We will position ourselves as a high-tech and applied medical and health service provider to consolidate our technical capabilities in the industry.

10.1.2　　　Marketing mix

The starting point of the marketing mix is to meet the needs of target customers and provide customers with excellent products and services. In order to obtain the best competitive advantage in the target market, we need to consider the external environment comprehensively, our capabilities, competitive conditions, and other factors in formulating our marketing mix.

1)　Products：

We aim to gain customers by providing a free personal electronic medical record management platform and provide customers with one-stop products and services to realize profitability. Therefore, our products and services are more diversified. Below are our main products and services.

Electronic medical record management platform: The electronic medical record management platform has a mobile terminal and a computer terminal. The mobile terminal is an APP, and the computer terminal is a web version. Both ports can be registered and logged in and edit and save personal medical records. The electronic medical record file will record the user's personal information, past medical history, current medical history, and other information in detail. Customers can also directly scan and upload medical examination sheets, B-ultrasound, imaging examinations, and other materials. The electronic medical record management platform has built-in reminders of various alarms, such as reminders for physical examination, medication reminders, reminders of pregnancy and childbirth, and reminders of children's vaccination. This platform also has select chronic disease management columns, such as diabetes, hypertension, which can connect to external monitoring

instruments via Bluetooth, upload data in real-time, and perform monitoring and early warning. The future vision is to connect with the database of medical institutions seamlessly. Under the permission of the patient, the use of two-dimensional code technology for mutual transmission of medical records can save a lot of paper consumption for medical records.

Medical and health e-commerce: Medical and health malls are divided into self-operated malls and settled malls. The Medical Health Mall mainly sells over-the-counter drugs, auxiliary medical equipment, health care products, beauty products. At present, China's relevant drug management laws and regulations only allow online sales of over-the-counter drugs and prohibit online sales of prescription drugs. In the future, the law will release the privilege of online sales of prescription drugs, and the annual sales of prescription drugs over trillions will be a new round of revenue growth.

Online consulting service: The medical team of the online consulting business is mainly based on the franchise system, and the company extracts commissions. The company also built its own small medical team as a supplement to human resources. The online consultation service mainly helps patients who have mild common diseases, such as colds, gastroenteritis, pharyngitis, as well as patients with chronic diseases, for follow-up diagnosis and treatment. If the patient's condition is serious, we can assist the patient go to the offline physical hospital for treatment.

Consumer medical packages: We cooperate with offline physical medical institutions to launch consumer medical packages for middle and high-income customers, such as teeth orthodontic whitening packages, microplastic surgery packages, middle-aged and elderly health check packages, which can be purchased through our platform, and can contact the nearest entity to exchange the corresponding service.

Commercial medical insurance: We cooperate with insurance companies to tailor and sell commercial medical insurance for our customers. As our platform owns users' health data, we can develop commercial medical insurance with insurance companies, which significantly reduces insurance costs for users.

Big data services: We have first-hand health big data, and under the premise of complying with relevant laws, we will jointly develop the value of these health data with pharmaceutical companies, insurance institutions, medical institutions, and scientific research institutions.

2) Price：

In terms of pricing, we need to comprehensively consider the degree of competition, the bargaining power of buyers, and the bargaining power of upstream suppliers in different businesses to formulate a good pricing range. Below are the pricing strategies for different products and services:

Electronic medical record platform: We will provide customers with free lifetime access to this platform to attract a large customer base.

Medical and health mall: self-operated medical mall, we directly provide products to customers through the platform, we have a particular ability to adjust prices, but the pharmaceutical industry is fiercely competitive, we will focus on the industry's pricing model and adjust sales appropriately. The company itself does not operate the participating pharmaceutical merchants. They sell goods to customers through our platform, and we will charge a 10% commission fee.

Online consulting service: We will make appropriate adjustments according to the market price. During the market introduction period, we will give the customers moderate profits. In the later period, we will implement the market price. Physicians with different qualifications will charge different consultation fees. The charging reference is as follows:

Service	Price
Licensed doctor	10 RMB - 20 RMB
Attending physician	20 RMB - 30 RMB
Deputy chief physician	30 RMB - 50 RMB
Chief physician	50 RMB - 80 RMB
Expert	80 RMB – 500 RMB

Table 13- Online consultation fee schedule. Resources: Author

Consumer medical packages and commercial medical insurance: We cooperate with offline medical institutions and insurance companies, relying on our platform functions. As our platform grows, we will have significant bargaining power and reduce our costs. When consumers purchase products or services through our platform, we will appropriately lower the market price, which will help us have an absolute advantage in market competition.

Big data service: This business is an undeveloped value product. We will comprehensively consider the cost of research and development and the degree of scarcity of resources. We will appropriately increase the price of this business to obtain excess revenue.

3) Place

Our headquarters will locate in a business park in a southern city in China. The conditions for selection are to obtain specific government rent reductions, tax subsidies, government business loan amounts, government business subsidies, and other preferential benefits. We will need to purchase some computer equipment and office supplies. The mobile apps and web pages developed by our technical team will be our primary business service venues. We mainly release customers through the network platform and provide customers with a variety of products and services.

4) Promotion

Promotional activities can help us quickly acquire users and open up the market. We adopt the online and offline promotion model. For online promotion, we will cooperate with online celebrities to produce short promotional videos and put it on platforms such as TikTok, and invite online celebrities who have more than one million fans to conduct live broadcast promotion, so that users can quickly learn about our company's platform, What kind of services are we provided. Besides, the overall cost of hiring Internet celebrities is much lower than traditional advertising costs, and we can save our marketing costs. Carry out offline promotion in different cities. In 1st class cities and 2nd class cities, we choose more outdoor advertising, such as subway advertising and bus station advertising. In other 3rd class cities and 4th class cities, we will choose direct outdoor advertising.

During the promotion period, all newly registered users, as long as they fill incomplete personal information and upload at least one piece of health information, will receive a 50%

discount for online consultation. If registered users repost the promotion, each repost will receive a shopping discount voucher for the medical and health electronic mall.

5) Process

The startup process of our project is rough as follows:
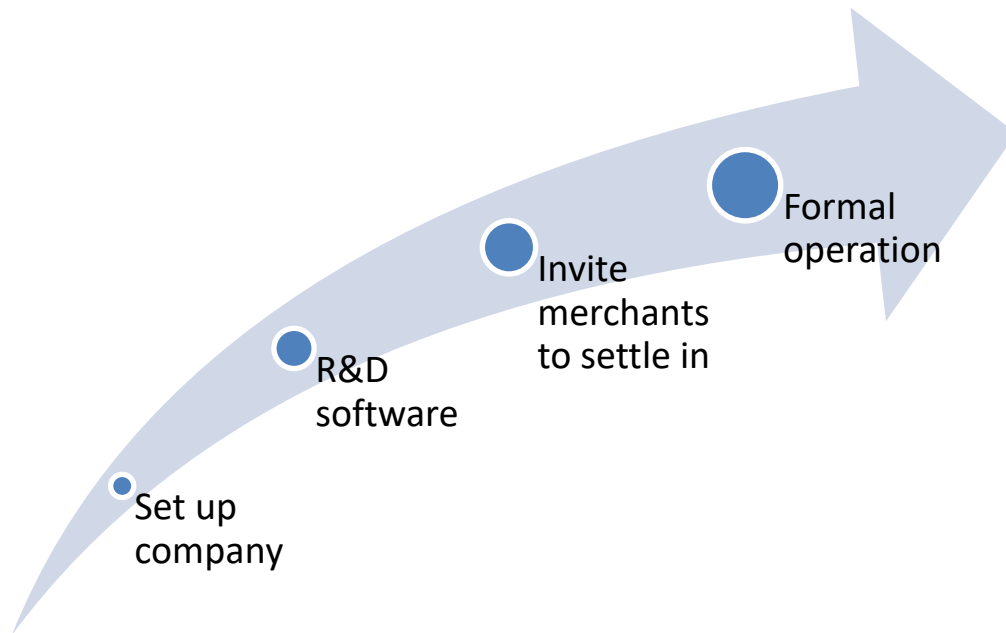
Table 14- The startup process. Resources: Author

- **Set up the company:** Including application for company registration, corresponding operating license, selection of office address, purchase of office computers.
- **Recruitment personnel:** Including recruit management personnel, IT technical personnel, marketing team, financial personnel, logistics personnel, et cetera. Managers need to have more than five years of Internet operation and management experience, preferably with work experience in the pharmaceutical Internet industry.
- **Software development:** It will take 6 months to develop the APP for mobile phone ports and the web version for computer ports.
- **Invite merchants to settle:** including building our pharmaceutical e-commerce platform and inviting other pharmaceutical e-commerce, medical examination institutions, insurance companies, and other partners to settle on our platform. We will strictly review the qualifications, product, and service compliance of settled businesses.
- **Formal operation:** Including preliminary trial operation, market promotion, and formal provision of products and services.

10.2 Technology

We will build our own IT technical team. The early period technology is mainly APP and web code development. In the later stage, we will strengthen the research and development investment in artificial intelligence assistants and large database applications. According to related reports, there are about 1,000 human diseases that can treat through Internet medicine. We hope that in the future, our artificial intelligence assistants can assist medical staff to screen and classify patients, help medical staff quickly serve patients, and improve the efficiency of diagnosis and treatment.

We plan to attract more investment funds and technical talents to join our technology research and development department to improve our internal technology research and development capabilities. We also plan to strengthen technical cooperation relationships with research institutions and universities in the future, consolidate our technical strength, and continue to provide users extraordinary experience and excess value.

10.3 Organization

A good company organizational structure not only saves the communication cost between departments and achieves efficient operation, but also prevents operational risks and good for the company's talents to release talent.

The company's organizational structure is as follows:
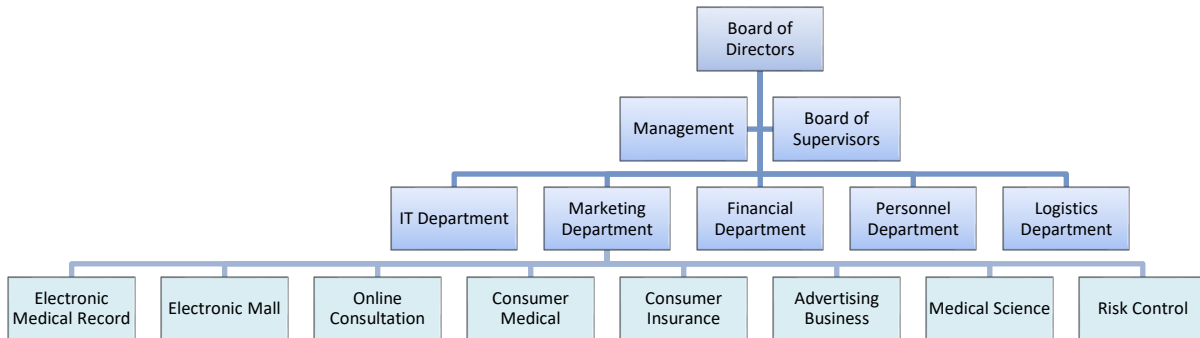
Table 15- Organization Structure. Resources: Author

The board of directors is the legal representative of the company and represents the authority of all shareholders and employees of the company. It will be composed of significant shareholders. Responsible for convening the general meeting of shareholders and making relevant company reports to the general meeting of shareholders. Decide on the company's production and operation policy plans and investment plans.

The management is mainly composed of the chief executive officer, IT director, marketing director, finance director, personnel director, and logistics director. The board of directors directly decides to hire or remove management personnel. The management is directly responsible for the company's production and operation, and the management must ensure that the company usually operates, and can achieve the set operating goals, and produce more excellent value for the company.

The board of supervisors is selected by the general meeting of shareholders and the company's employees to supervise and inspect the company's daily business activities to prevent violations of laws and regulations during the company's operations, or other actions that damage the company's interests.

The IT department will be responsible for the company's technology platform. We will recruit technical personnel with extensive software design experience and medical Internet-related experience as IT department heads.

The financial department will be responsible for the company's accounting, capital management, cost control, internal control, et cetera. **The personnel department** will be responsible for the company's recruitment, training, performance appraisal, salary and benefits, et cetera. **The logistics department** will be responsible for the company's daily chores, logistics work, and other supporting tasks.

The marketing department is the primary department of the company's business, which subdivides into different business departments below. The marketing department will be responsible for the management of all subdivided business departments, as well as the company's market planning and marketing. The subdivided business departments divide into the electronic medical records department, electronic mall department, online consulting department, consumer medical department, commercial insurance department, advertising business department, medical science department, risk control department, et cetera.

10.4 Operating Expenses and Financing Amount

1) Operating Expenses:

Below we forecast our company's operating expenses and the amount of financing required based on the Chinese market environment, industry conditions, and financial data of competing companies. All data are hypothesized based on comparable data available in reality.

We divide operating expenses into two categories: the first category is **sales and marketing expenses** (that is, the comprehensive expenses of the marketing department, which is the comprehensive cost of all branches under its jurisdiction, including the electronic medical records department, the electronic mall department, the online consulting department, and the commercial medical department, commercial insurance department, advertising business department, medical science department, risk control department, et cetera.); The second category is **administrative expenses** (that is, the operating expenses of the IT department, the

board of directors, the management, the board of supervisors, the financial department, the personnel department, the logistics department, et cetera, plus the cost of renting office space, decorating the office environment, purchasing equipment, other miscellaneous expenses, et cetera.).

Our sales and marketing expenses mainly include employee salaries and benefits, marketing expenses, advertising expenses, and other expenses. Below we will have a breakdown of the main parts of the sales and marketing expenses of our company's sales and marketing expenses in the next five years.

Sales and Marketing Expenses (RMB Million）					
	Year 1	Year 2	Year 3	Year 4	Year 5
Employee salaries and benefits	1	2	2	3	3
Marketing expenses	2	4	4	4	4
Advertising expenses	2	3	3	3.5	3.5
Other expenses	0.5	0.5	0.5	0.5	0.5
Total	5.5	9.5	9.5	10	11

Table 16- Sales and Marketing Expenses. Resources: Author

Our administrative expenses mainly include employee salaries and benefits, rental expenses, decoration expenses and depreciation of property and equipment, postage and communication expenses, business tax and surcharges, travel and conference fees, and other expenses. Below we assume that we forecast the main part of the administrative expenses of our company in the next five years.

Administrative Expenses (RMB Million）					
	Year 1	Year 2	Year 3	Year 4	Year 5
Employee salaries and benefits	0.8	1.6	1.6	2.4	2.4
Rental expenses	0.8	0.8	1	1	1.2
Decoration costs, depreciation of property and equipment	0.3	0.3	0.5	0.5	0.7

Postage and communication costs	0.5	0.5	0.6	0.6	0.7
Business tax and surcharge	0.2	0.2	0.3	0.3	0.4
Travel and conference fees	0.2	0.5	0.5	0.8	1
Other fees	0.5	0.8	0.8	1	1
Total	2.9	5.2	5.3	6.6	7.4

Table 17- Administrative Expenses. Resources: Author

Based on the above assumptions, we predict the total operating expenses of the company in the next five years are as follows:

Operating Expenses (RMB Million）					
	Year 1	Year 2	Year 3	Year 4	Year 5
Sales and Marketing Expenses	5.5	9.5	9.5	10	11
Administrative Expenses	2.9	5.2	5.3	6.6	7.4
Total	8. 4	14. 7	14. 8	16. 6	18. 4

Table 18- Operating Expenses. Resources: Author

2) Financing Amount:

We plan to raise funds through equity participation. All shareholders participate in cooperation in a voluntary, equal, cooperative, and mutually beneficial manner, sharing benefits and sharing risks.

• The starting capital of the project is about 30 million RMB, financing by the form of cooperative participation. Under the extreme assumption of no operating income, the start-up capital can cover at least the operating costs of the first two years.

• The project planner uses the intellectual property as a share, accounting for 30% of the total shares.

- The leading investors directly invest in the shares, which accounted for 40% of the total shares.

- Professional managers use their own management experience as a cooperate share, accounting for 10% of the total shares.

- Reserve five-year incentive options for core employees, accounting for 10% of total shares.

- Other forms of shareholding or cooperation, such as core resources, account for 10% of the total shares.

- The chief returns are the company's profit dividends and the possibility of selling individual stocks to exit when the company is listed.

11 Implementation Requirements

In the implementation of the project, we need about 30 million RMB in start-up capital, and we will obtain venture capital funds through equity financing. After obtaining the start-up funds, we began to recruit related staff, lease office space, renovate office space, and purchase related computer equipment.

Before the formal operation, we first need to register with the Industrial and Commercial Bureau of China, the company form is a joint-stock company limited, and we need to apply the official seal, tax number, company bank account, et cetera. Furthermore, we also need to apply for various operating licenses. When we provide value-added telecommunications services, we need to apply for a value-added telecommunications operating license at the Ministry of Industry and Information Technology of China.

Before operating medical advertisements, first, we need to apply for a relevant advertisement approval number from the provincial drug regulatory authority in China. When we conduct related pharmaceutical business activities, we need to apply for a pharmaceutical business license, a medical device business license, et cetera. from the provincial drug regulatory authority in China.

Our pharmaceutical business activities are mainly conducted through the Internet. We need to apply for business licenses or filing procedures with the information industry department of the State Council of China or the provincial telecommunications management agency to obtain the qualification certificate of Internet drug transaction service agency. Our business activities will also involve cultural operations. We also need a relevant license for online cultural operations.

12 Financial Valuation

12.1 Main Assumptions

The business and revenue performance of our business plan is mainly affected by the overall development of China's Internet industry and the Internet medical and health industry, including China's population size, China's economic growth, per capita disposable income, relevant government policies and laws in the Internet medical and health industry, The market and social acceptance of the Internet medical and health industry.

Based on the current business environment, our project's investment plans and measures, and a comprehensive comparison of the performance of existing Internet pharmaceutical and health companies in the market, combine the revenue of various businesses, we have made the following conservative Main Assumptions about accounting and finance:

Main Assumptions					
	Year 1	Year 2	Year 3	Year 4	Year 5
Registered users 100% (Million)	10	100	400	500	600
Active users 25% (Million)	2.5	25	100	125	150
Paying users 0.25% (Million)	0.025	0.25	1	1.25	1.5
Per capita consumption	5	20	80	120	150
Revenue (Million)	0.125	5	80	150	225
Cost of sales 60% (Million)	0.075	3	48	90	135
Gross profit 40% (Million)	0.05	2	32	60	90
Sales and Marketing Expenses (Million)	5.5	9.5	9.5	10	11
Administrative Expenses (Million)	2.9	5.2	5.3	6.6	7.4

Table 19- Main Assumptions. Resources: Author

At the same time, based on China's preferential tax relief for high-tech Internet enterprises, it is estimated that the company's income tax for the first five years will be 15%, and the income tax will be assumed to be 21% from the sixth year.

12.2 Income Statement Forecast

Below we forecast the income statement for the next five years:

Income Statement Forecast (RMB Million)					
	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	0.125	5	80	150	225
Cost of Sales (60%)	0.075	3	48	90	135
Gross profit (40%)	**0.05**	**2**	**32**	**60**	**90**
Sales and Marketing Expenses	5.5	9.5	9.5	10	11
Administrative Expenses	2.9	5.2	5.3	6.6	7.4
EBITDA	*-8.35*	*-12.7*	*17.2*	*43.4*	*71.6*
Depreciation and Amortization	0.1	0.1	0.2	0.2	0.2
EBIT	*-8.45*	*-12.8*	*17*	*43.2*	*71.4*
Interest Income	0.6	0.15	0.2	0.3	1.2
Interest Expenses	-0.3	-0.4	-0.5	-0.6	-0.7
Financial Result	*-8.15*	*-13.05*	*16.7*	*42.9*	*71.9*
Taxes (15%)	0	0	0	3.255	10.785
Net Income	*-8.15*	*-13.05*	*16.7*	*39.645*	*61.115*

Table 20-Income Statement Forecast. Resources: Author

Based on the development of the Internet medicine and health industry in the market and the performance of existing companies, we predict that the gross profit will be about 40%, and the company will realize a positive net profit in the third year of operation. The growth rate of net profit after the third year is about 25%, as shown in the figure below:

Main Financial Ratio Forecast					
	Year 1	Year 2	Year 3	Year 4	Year 5

Total Revenue Growth Rate		3900%	1500%	88%	50%
Gross Margin	40%	40%	40%	40%	40%
Net Interest Rate	-6520%	-261%	21%	26%	27%

Table 21- Main Financial Ratio Forecast. Recourses: Author

12.3 Balance Sheet Forecast

Below we forecast the company's balance sheet for the next five years:

Balance Sheet Forecast (Million RMB)					
	Year 1	Year 2	Year 3	Year 4	Year 5
Cash	21	6	10	30	70
Accounts Receivable	0.045	1.4	8.5	16	24
Prepayments	0.205	0.3	0.6	4.545	8.46
Inventory	1.5	1.5	8	20	35
Total Current Assets	**22.75**	**9.2**	**27.1**	**70.545**	**137.46**
Goodwill and Other Intangible Assets	0.1	0.2	0.4	0.5	0.5
Property, Plant and Equipment, etc.	0.4	0.4	0.5	0.6	0.8
Total Non-current Assets	**0.5**	**0.6**	**0.9**	**1.1**	**1.3**
Total Assets	**22.35**	**9.8**	**28**	**71.645**	**138.76**
Share Capital	30	30	30	30	30
Retained Earnings	-8.15	-21.2	-4.5	35.145	96.26
Total Owners' Equity	**21.85**	**8.8**	**25.5**	**65.145**	**126.26**
Current Accounts Payable	0.49	0.99	2.5	6.5	12.5
Total Current Liabilities	**0.49**	**0.99**	**2.5**	**6.5**	**12.5**
Non-current Accounts Payable	0.01	0.01	0	0	0
Total Non-current liabilities	**0.01**	**0.01**	**0**	**0**	**0**
Total Liabilities	**1.5**	**1.5**	**8**	**20**	**35**

Table 22- Balance Sheet Forecast. Resources: Author

The company's fixed assets are relatively low, most of which are current assets. It is in line with the asset-light model of Internet companies in their early days. The company is a start-up company, the operating risk is relatively high, the company's financial leverage is relatively low, the long-term and short-term debts of the company are relatively small, the assets and liabilities are relatively low, and the company's short-term and long-term debt solvency are relatively strong, as shown in the following figure:
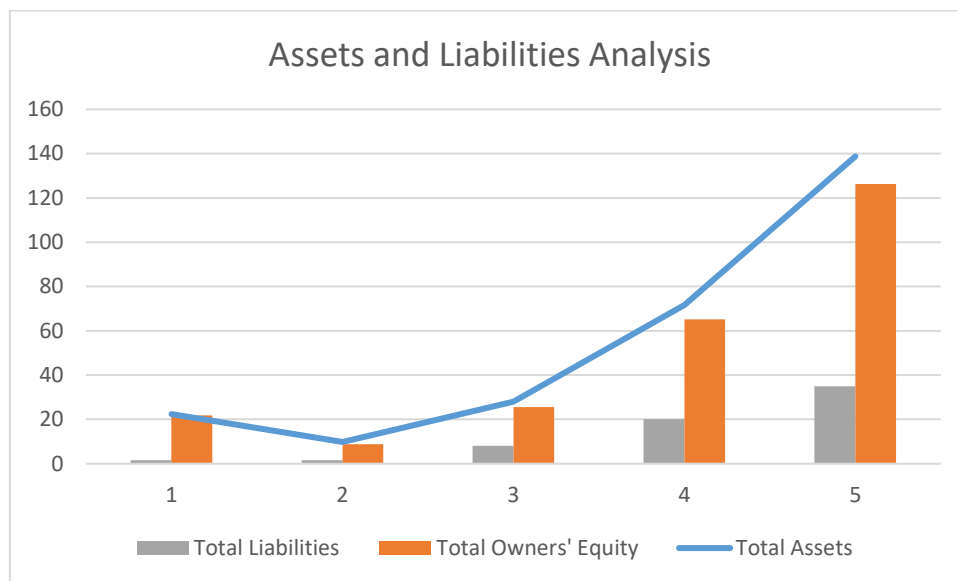

Table 23- Assets and Liabilities Analysis. Resources: Author

12.4 Cash Flow Forecast

Below we forecast the company's cash flow statement in the next five years:

Cash Flow Statement Forecast (Million RMB)					
	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Collected from Customers	0.08	3.6	71.5	134	201
Cash Paid for Supplies	0.075	3	48	90	135
Cash Paid for Wages	8.4	14.7	14.8	16.6	18.4
Cash Paid for Income Tax	0	0	0	3.255	10.785
Other Cash Increase for Operation Activities	0.3	-0.25	-0.3	-0.3	0.5
Cash Paid for Other Items	0.205	0.3	0.6	4.545	8.46
Cash Flow from Operating Activities (1)	**-8.3**	**-14.65**	**7.8**	**19.3**	**28.855**

Tangible Fixed Assets	0.4	0.4	0.5	0.6	0.8
Intangible Assets	0.1	0.2	0.4	0.5	0.5
Cash Flow from Investing Activities (2)	**-0.5**	**-0.6**	**-0.9**	**-1.1**	**-1.3**
Increase in Share Capital	30	0	0	0	0
Cash Flow from Financing Activities (3)	**30**	**0**	**0**	**0**	**0**
Variation of Cash and Cash Equivalents (4)=(1)+(2)+(3)	**21.2**	**-15.25**	**6.9**	**18.2**	**27.555**
Cash and Cash Equivalents at The Beginning of The Period	0	21.2	5.95	12.85	31.05
Cash and Cash Equivalents at The End of The Period	**21.2**	**5.95**	**12.85**	**31.05**	**58.605**

Table 24- Cash Flow Statement Forecast. Resources: Author

The primary inflow and outflow of cash come from operating activities. Starting from the third year, the cash flow from operating activities has turned from a negative value to a positive value, which is the turning point for the company to achieve positive profitability.

Using the discount cash flow to predict the company's net present value is 1398.05 million yuan, and the initial investment amount is 30 million yuan, our project has a strong return on investment.

Discount Cash Flow Forecast (Million RMB)										
Year	1	2	3	4	5	6	7	8	9	10
Free Cash Flow Forecast	21.20	-15.25	6.90	18.20	27.56	38.58	54.01	75.61	105.86	148.20
Growth Rate		-172%	-145%	164%	51%	40%	40%	40%	40%	40%
Discount Rate (WACC)	10%									
Discount Cash Flows	19.27	-12.60	5.18	12.43	17.11	21.78	27.71	35.27	44.89	57.14
Accumulated Discounted Cash Flow	19.27	6.67	11.85	24.28	41.39	63.17	90.88	126.16	171.05	228.19
Residual Value (assuming a 5% growth rate)	1199.867									
Present Value	1428.05									
Initial Investment	30									
Net Present Value	1398.05									

Table 25- Discount Cash Flow Forecast. Resource: Author

12.5 DuPont Analysis

DuPont analysis can help us better understand the company's profitability and shareholder return。

DuPont Analysis					
Return on Equity	-37%	-148%	65%	61%	48%
Year-Over-Year Growth Rate		298%	-144%	-7%	-20%
Factor Decomposition:					
Equity Interest Rate	-36%	-133%	60%	55%	44%
Equity Multiplier	102%	111%	110%	110%	110%
Net Sales Interest Rate	-6520%	-261%	21%	26%	27%
Asset Turnover	1%	51%	286%	209%	162%
Asset-Liability Ratio	7%	15%	29%	28%	25%

Table 26- DuPont Analysis. Resources: Author

From the table, we can see that the company's return on equity and net sales interest rate has been positive since the third year, predicting the company has good capital profitability and net profit. The asset turnover rate is high, and the asset-liability ratio is low because the equity multiplier is low, then the financial leverage is low. Because the company is a start-up company and, therefore, cannot obtain more debt. On the other hand, it also shows that debt solvency is good.

12.6 Risk Factors

The above financial data and financial analysis are based on the current information of the industry to make assumptions and forecasts. However, the success of a start-up company is affected by many factors.

All financial data comes from existing market data analysis and forward-looking industry forecasts. There is significant uncertainty. It does not mean that the future will be able to achieve a good advancement plan and achieve market goals.

Making customers interest in our software platform and increasing their trust in our business system is the key to our success. If it fails to attract the attention of customers and gain high trust from customers, it may seriously affect the profitability of our business plan.

The Internet medical and health industry is in the initial stage of development. The business model has not been well verified. Our business model will face the risk of market uncertainty.

The medical and health industry involves sensitive issues of human health and privacy and is subject to strict supervision by relevant agencies. The ever-changing regulatory policies in the future may adversely affect the medical and health industry and our company.

If we lose our competitive advantage, we may be overwhelmed by our competitors and adversely affect our business performance and financial condition.

13 Conclusion

Internet medicine and health industry is an emerging industry that can reduce industry costs and efficiently allocate resources. Related Chinese institutions have also issued a series of policies to encourage the development of the Internet medicine industry. In the future, it will be a new trillion-plus RMB market.

By developing an electronic health record management software, we combine offline and online medical and health resources to create a low-cost, one-stop service, and vibrant business ecosystem. In terms of business model, we have vital innovation and application scenarios, and we have a good execution plan for market development, user data acquisition, and customer trust. In terms of finance, we mainly obtain initial venture capital through equity financing and use relatively small capital to test the market and open the door of the market. The initial investment is approximately RMB 30 million, and we have made a very conservative discount on future earnings. The present value exceeds over 1400 million. This is a relatively good return on investment income.

However, at the same time, we must also realize that in the Internet pharmaceutical industry, in addition to the pharmaceutical e-commerce model, the industry has not yet emerged other good profit models. Start-up companies in an emerging industry are bound to face many uncertainties and risks. This requires a good business plan and execution team to start a new business in the market.

Regardless of its social value, market size, market feasibility, or financial valuation, this commercial project is a relatively good and promising investment return project.

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