

# The 22nd M&EP (Millennium Entrepreneurship Programme) – Business Proposal

## Basic Information

Group No. : 020

### Details of Group Members

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# 1 Basic Information of Business

## 1. Name of Business

「藥時」Key



## 2. Type of Products

Smart medicine box with a linked mobile application including an e-commerce platform descriptions.

## 3. Executive Summary

Medication errors are preventable events due to the inappropriate use of medications, which can lead to life-threatening scenarios. Elderly is the group that is most commonly affected, as many develop chronic diseases and require many medicines. One of the main reason for medication error is that patients fail to be discipline in taking their medications.

Taking medications are not only limited to elderly, but is also extended to everyone in a family. Taking supplements is becoming a growing trend, as the awareness in healthy lifestyle increases. Yet, a busy working life can be a hurdle in developing a habit in using supplements in particular.

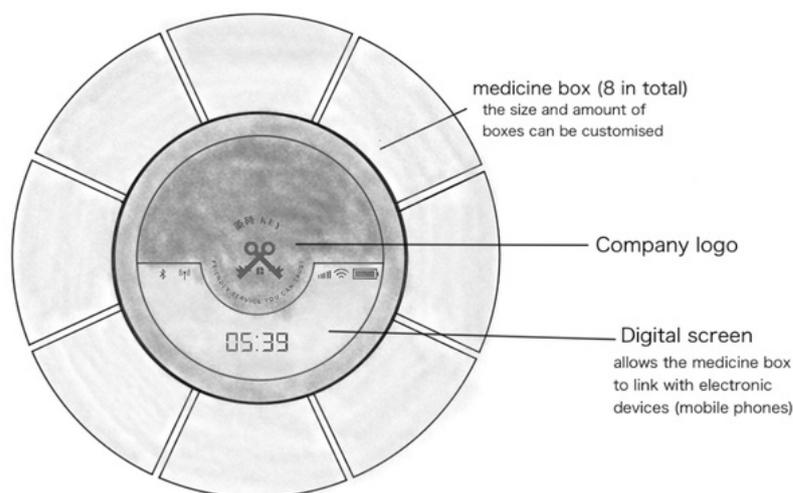
“ Our product is a personalised smart medicine box, seamlessly connected with a mobile application. It offers a full experience in medication organisation that is tailored for each user to fit their specific needs. ”

This product is designed to help users in (i) developing a routine, (ii) monitoring medication usage and (iii) exploring health lifestyles. It is meant suit the specific medication needs of each individual. Especially to address the social needs mentioned above, where people show difficulty in maintaining a schedule. Ultimately we would like to promote a healthy living style.

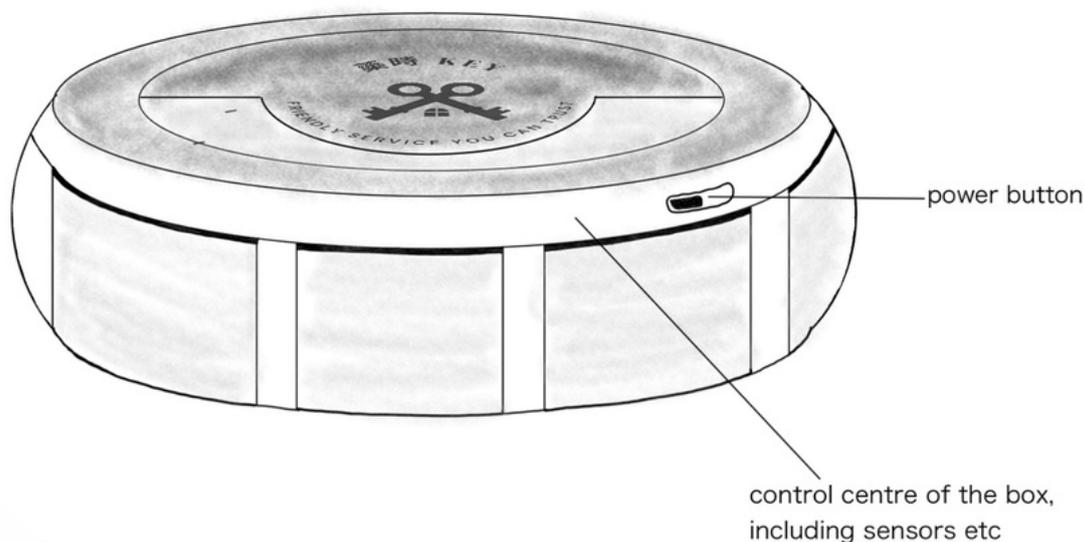
Main components of our product are (i) the personal medicine profile, (ii) customise medicine schedule, (iii) e-commerce shop and (iv) a smart and secure medicine box.

As a personal account is created by the users, they can input their medication information, and it will automatically sync with the data recorded with the medicine box based on customers' usage.

Top view



Side view



## Smart Medicine Box Prototype Design

# 2 Social Impact

## 1. Social Needs

### Medication Errors Become Life-threatening

The foremost social need observed is that elderly people have difficulties in taking medicines, which leads to a high risk of medication error.

Many elderly have the need to take medication. According to the Hong Kong Census and Statistics Department, more than 70% of them suffer from chronic illnesses and over 40% of them have a medical subscription of over 4 types of medicines.

Elderly have to encounter many hurdles as they take their medications. According to a research conducted by the Elderly Rights League and Society for Community Organisation (SoCO), over 70% of the elderly could not follow the instructions in taking pills, and around 40% of the respondents expressed that they have no confidence to allocate and take the pills on time.

Yet, elderly do not have sufficient help in facing such challenges in taking their medicines. With the ratio of 1:132 for one healthcare professional to patient, Hong Kong lacks professionals that provide comprehensive care for each patient, especially in addressing the need of medication taking. In addition, many are not able to receive constant help from their family members as they battle with their illnesses. There are over 150,000 elderly living alone in Hong Kong.

The above raises serious concerns on medication errors, which can often be life-threatening. Common medication errors include missing medications, duplicate medications and dosing errors. According to the survey mentioned above, 40% of the respondents have experienced side effects, and some were even hospitalized after medication errors. Such errors are preventable events, there is an immediate need to solve this problem.

## Lack of Routine for a Healthy Lifestyle

Elderly also have a relatively low awareness of having a healthy lifestyle. In the report by SoCO, it is mentioned that most elderly only visit the doctor when they are sick. Many underestimate the importance of disease prevention and maintaining a healthy lifestyle. Only a small group of elderly has the habit of taking supplements, as they find taking them regularly is too much of a burden and it is difficult to take the habit. Some may not choose to take as they do not understand the functions of supplements.

Another problem is that people lack discipline in maintaining their supplement taking habit. There is an increasing awareness in healthy lifestyle, healthy products such as superfood, vitamins and supplements are becoming a trend. A survey conducted by Hong Kong Health Food Association reflected that nearly 60% of respondents had taken at least one supplement in the last six months of the survey. However, it is a great challenge for busy citizens to build a routine of eating supplements. There is a need for a platform that is able to manage their routine.

## 2. Addressing Social Needs

### App Connected to Medicine Box as Guardian

Our application reminds users to take medicines on time, reducing the risk of taking medicine at the wrong time, thus preventing medication errors. Also, our medicine box will unlock only one grid so as to eliminate the possibility of taking the wrong proportion of medicine. In this way, users can take medication at the right time and with the right amount, reducing cases of inappropriate use of medicines and suffering from side effects or unwellness.

### Digital Assistant in Creating a Healthy Lifestyle

With the reminder function, users are able to maintain a regular routine of medicine taking. The community within our application and health-related information provided through the discovery page also provide users with the chance to exchange their opinions and health-related habits. Not only can users use our product as a tool to maintain discipline, their awareness and willingness on creating a healthy lifestyle can also be enhanced.

### Forming a Circle of Family Support via In-app Connectivity

Our application allows multiple users to be connected and monitored by one single device, family members are able to keep track of the elderly's health condition from time to time, they are able to check the time when the user took the medicine and the respective medicine proportion. Families that do not live with the elderly can fulfill filial piety and enhance family relationships even when they cannot always meet each other. Moreover, it lightens the burden of family members, they no longer have to monitor the elderly 24/7 and be worried about them.

### Offering a One-stop E-commerce Platform for Working Class

Users can purchase supplements through our application and there will also be reminders for users to purchase new supplements when theirs are almost finished. Our application serves as a one-stop platform where users can simply purchase supplements, track their orders and maintain a healthy habit. They are able to deal with everything with just one application and enjoy a convenient and personal purchase experience.

# 3

## Details of Business

### 1. Introduction of Product

With just with an mobile application and a medicine box, users can manage their medicine taking routine systematically. Users will have no more worries on missing medications, they will be able to monitor their medication usage, build up a routine and explore on a healthy living.

#### Monitoring Medications

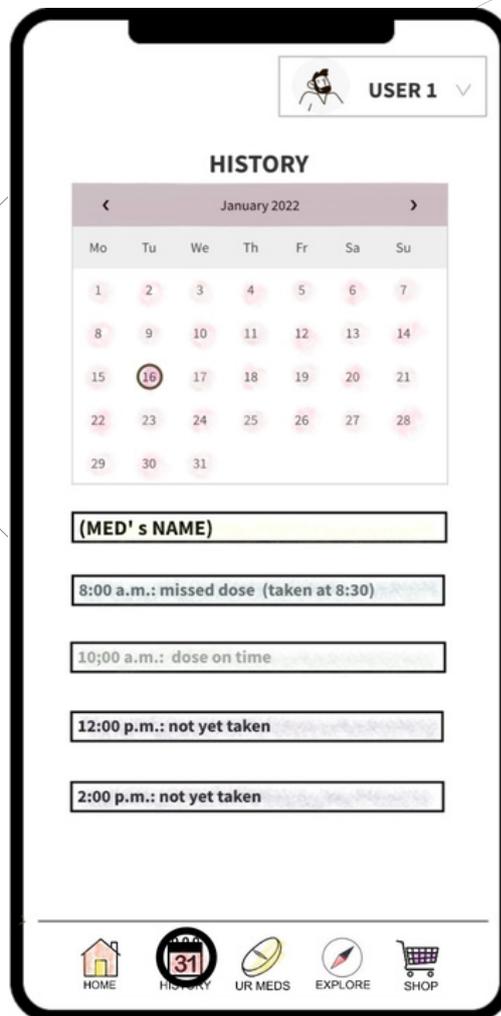
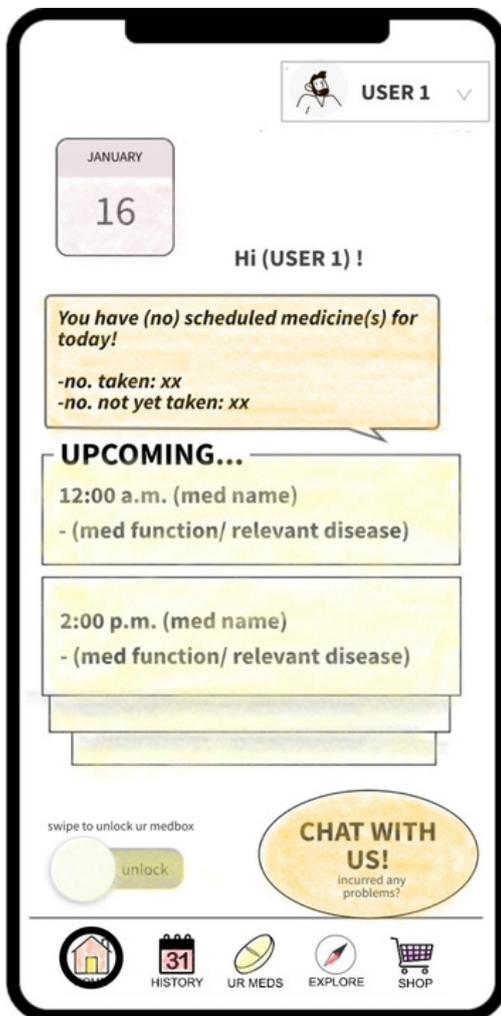
A QR code can be scanned to watch a step-by-step tutorial on the set-up of an account on our application. Once a personal account is created, users can scan the medicine package to input the information into their profile. Information such as the number of pills, the function and the instructions for taking the pills will be recorded.

Users can also build a family medicine network with multiple medicine boxes, creating separate profiles for each family member. Making family's health monitoring accessible and simple in one single application.

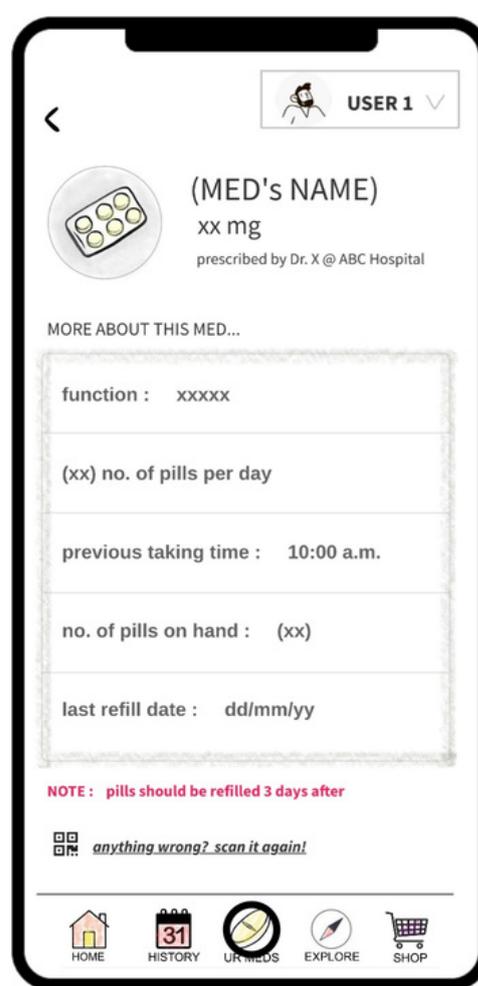
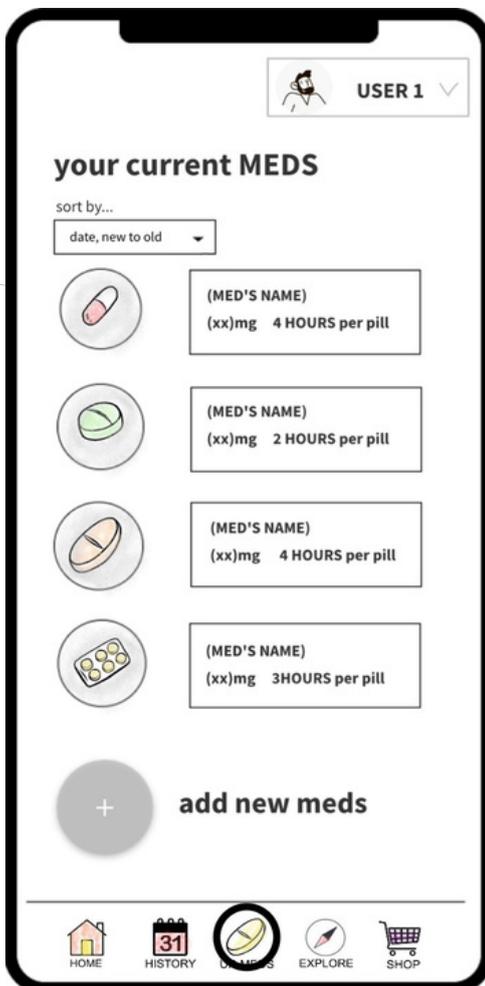
#### Building a Routine

Users will be instructed to put the pills into their respective compartments that will be locked securely. The calendar in our application can allow users to clearly visualise their medication schedule, and to only unlock the box at the preset time. The alarm on the box reminds the user to take the medication on time. If the the presence of the pills is still detected after a period of time, a notification will be sent to the linked account through the application.

Our application also includes a wide range of functions that allow users to further build up their own medicine taking routine. Ringtone, activation of the box alarm, and notification period can all be managed through the application.



App UI - Schedule & Calendar



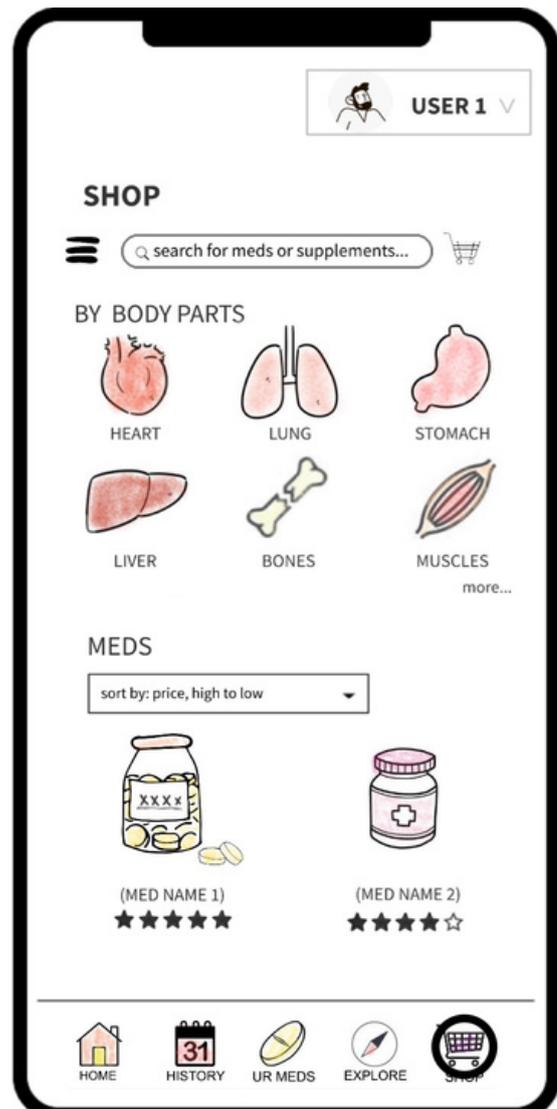
## Explore Healthy Living

The Discovery page in our application offers health articles from trusted sources, recommendations based on the users needs and health information. An in-app online shop, MediShop, links users to different online shops to purchase non prescription medicine and supplements. According to the amount of medicines left, MediShop estimates and notifies users to reorder medicine based on their needs. MediShop provides the tools for users to keep stock of their medications.

## Customisation

Our product provides design customisation. Including the number and size of the compartments, colour and shape of the medicine box. Customers can also create their own designs, special carvings with heart-warming messages on the medicine box as a present for their family.

Customers will also be able to receive personal assistance from our customer support, with a live chat box



## App UI - Discovery & MediShop

## 2. Characteristics of Product

### Personalised medicine taking experience

Our product is personalised from the box design to the scheduling of the medication routine. Users have full control on how to organise their medicines by utilising the various functions of the application. The flexibility of our product is designed to accommodate the needs of all users.

### Centralised platform for medicine taking

Users will be able to manage the medication routine of multiple family members. This facilitates the usage of medicine and supplements in a family by creating a connection among its members. The connection helps enforcing the discipline in taking medicines and supplements.

Users can also handle their full medication routine on our product, the application helps streamline the process. From taking the medicine to replenishing the medication, and recommending health information. Building the routine is crucial in preventing medication errors.

### User-friendliness with consideration of user experience

The medicine box is facilitated by the seamless control with the mobile application. It includes video instructions for self set-up, which can be an assistance for people who are not so familiar with technology. Users simply have to put in their medicine in the box as everything is set.

Users' usages of the medicine box and the application are clearly presented as their health profile. This health data allows users to monitor their health easily as to build up their routine.

## 2. Business Goals

### Short-term Goals:

To begin with, we will fundraise for our project by introducing our product to potential investors so as to gradually start and expand our production and market (e.g. through Angel Investment network, connect our business with interested investors).

In the first three years, we aim to collaborate with supplement companies, connect their stores with our application as well as make preliminary agreements with medicine manufacturers, pharmacies to supply medicine for our customers through our app. These ties will allow us to have a steady source of income from the commission sales in our

Also, we will launch pilot projects to collaborate with NGOs or government to promote different themes such as healthy living, establishing healthy relationships between patients and families.

To gain popularity and boost exposure, we would promote our product through social media, leaflets posted in healthcare centres, hospitals, and websites of the collaborated supplements companies; as well as Invite telecommunication/ insurance companies/ NGOs to cross-sale (packages), so as to attract more application and medicine box users with an increasing rate in the first three years, starting from 5% of the elders who have chronic diseases as our target customers in the first year. We aim to make ends meet within three years, and have an increase in profit continuously.

### Long-term Goals:

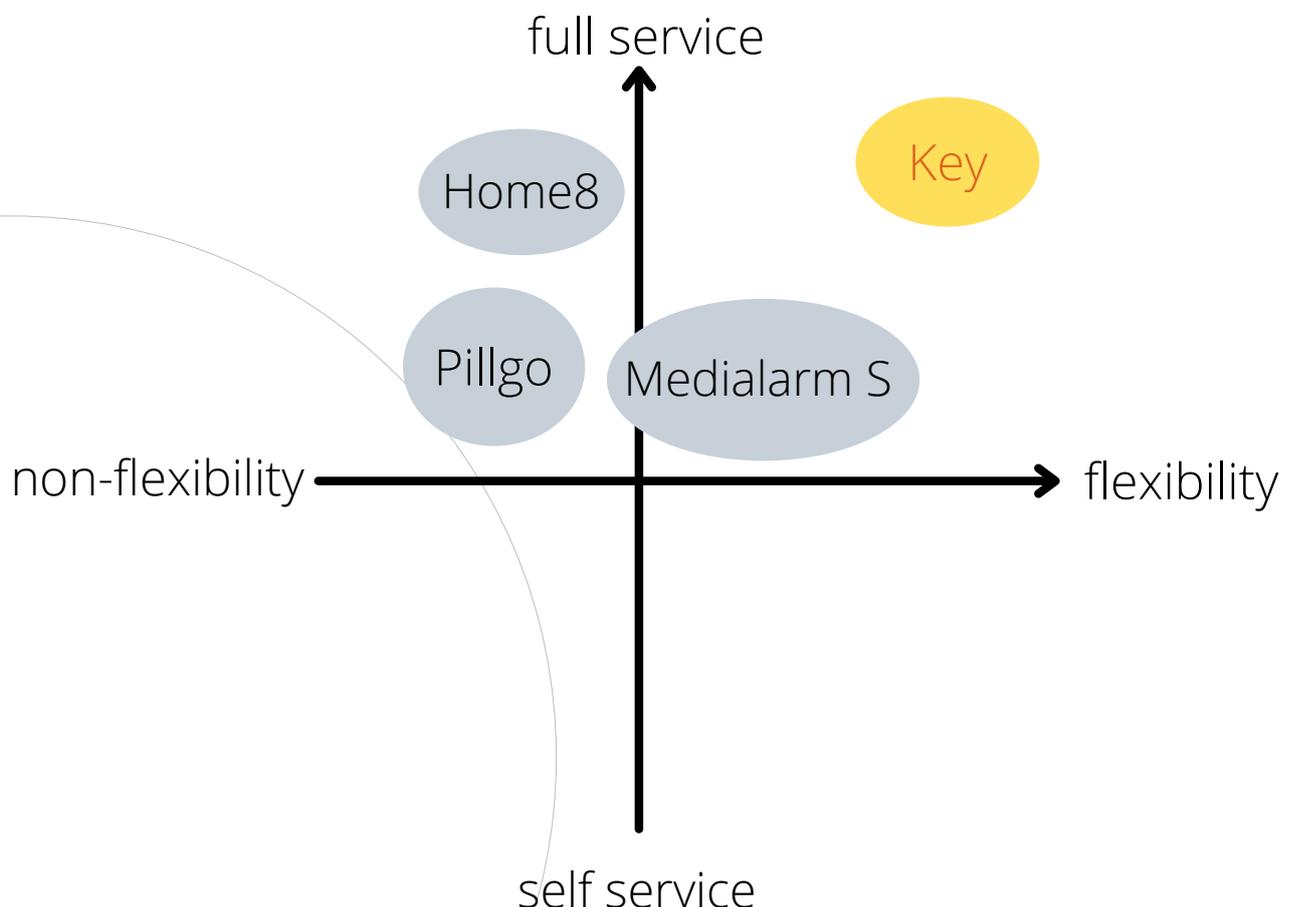
As the business continues to operate and has a larger customer base, we will be able to build a community that makes healthy living choices. We aim to become a key influencer of healthy living. Users will build the habit of self-care or being able to take supplements by themselves. We are going to promote a culture of taking precautions before diseases are diagnosed, rather than taking a bunch of medicines to cure the disease after being diagnosed.

After building a solid experience in the local Hong Kong market, we will expand to the Asian market, where many places faces similar social problems. The ultimate goal is to develop a global market where using an E-medicine box will become a norm.

# 4 Sales & Marketing Strategy

## 1. Market Positioning

Key is the name of our company. The Cantonese pronunciation of our name, 「藥匙」, mixes medicine with the tool that unlocks lock. Here in our company, we tackle different difficulties and also address the social needs of the elderly. Helping the family members of the elderly to take better care of them. Therefore, we target the family members of the elderly who have a high risk of developing serious disease because of failing memory, forgetting to take medicines on time. Our products– the medicine box and the application are user-friendly and personal, with their help, the chance of elderly forgetting to take the medicine can be reduced. Full services, like customer services, are also provided. There are staff to teach the users how to use our devices. Family members can keep track of the elderly's health situations and conditions. Besides, we aim to raise citizens' awareness of health, so we have included the purchases of supplements. Customers can get to know more kinds of supplements which are beneficial to their health and prevent the sickness from worsening.



## 2. Target Customer

### Family members of the elderly who requires regular medicine taking.

In Hong Kong, more than 1.71 million of the elderly suffer from chronic illnesses and nearly 1 million of them have a medical subscription of over 4 types of medicines. In addition, over 150,000 elder people live alone in Hong Kong. With our product, family members are able to monitor their elder members' medicine-taking record even if they cannot stay with the elderly, it can also be ensured that the medicine taken by the elderly is of the correct proportion and time.

### Elderly that would like to arrange their own medical schedule

According to a survey held by the Census and Statistics Department, of more than 1 million respondents, 93.1% of them have the ability to take care of themselves in their daily lives. Using our product can enable them to arrange their personal medical schedule, eliminating the possibilities of errors including taking the wrong proportion of medicine or at the wrong time.

### People who have the habit of taking supplements

Through the 'Survey on Health Supplement Market in Hong Kong 2019' held by Hong Kong Health Food Association and Social Science Research Centre, the University of Hong Kong, it was found out that nearly 60% of the respondents had taken at least one health supplements in the last six months of the interview, indicating that more than 3.5 million people in Hong Kong experienced a habit of taking supplements, our product allows them to form the habit more easily and be able to maintain it even if they have a busy schedule.

## 3. SWOT Analysis

### Strengths

#### Personalised care and flexible experience

Customers can have a specialised pill-taking schedule for themselves. Users can decide the reminders for medicine-taking time on their own. Unlocking the medicine box when necessary is also allowed, when the user feels unwell suddenly, he/ she can take the pills immediately to control the severity of the sickness. We have also included reminders for users to purchase supplements when they have almost finished the pills, functions such as purchasing supplements through our application and controlling multiple medicine boxes with one single application also provides a more personal and flexible experience to users.

#### Additional services

We provide additional services including real-life demonstration and on-site initial setting to customers so as to ensure that the user is clear with the operation of the box.

#### Chat bot and CS hotline for real time enquiry

If users or customers have any kind of inquiry, they can seek help through a chat box bot available on our application or dial our CS hotline, these allow us to solve the customers' problems instantly.

#### Speedy access to medicine-taking data

Family members no longer have to worry about their elder member's medicine-taking condition, they can be able to access their data simply through our application anytime, anywhere. This can allow the family members to keep track of elderly's health situations and conditions easily, this also facilitates them from telling the doctor about the elderly's sickness when necessary.

#### Simple and easy to understand user interface

Our application is simple and easy to use, elderly and family members can simply operate the medicine box by just pressing a few buttons. Even though they have difficulty in using our products, assistance and services are provided to ease the problems. Therefore, they do not have to worry whether they are able to adapt to the new technology.

# Weaknesses

## Additional charge for services may be demotivating

The additional services require additional charges, this may discourage customers to buy this service or even to purchase our medicine box. If the customers do not pay for additional services due to finance burden, they may not find the medicine box and application useful. Hence, choose not to purchase the medicine box as well.

## Purchase of medicine may require prescriptions from users

Users may not be able to purchase all medicines they need through our application because prescriptions from doctors may be needed for some of the medicines. As they may not have the prescriptions required and cannot buy the medicines, they may experience inconvenience to them.

## Large storage in phone needed for download of app

Downloading this application for use requires much data and storage. As well as the purchasing of medicine and supplements. However, some users' phones may not have enough storage to support the downloading.

## Network is required for the app to connect to the medicine box

Some users, especially the elderly who live alone, may not have a network at their homes. Therefore, it may be demotivating for them to purchase our medicine box as they will have an additional expense.

# Opportunities

## New market of promoting intake of supplement

Japan and Korea are the most popular countries that sell supplements, even many citizens in Hong Kong are buying different supplements from these places. Promoting intake of supplements abroad may help develop new markets in this aspect and as well increase the opportunities of introducing our products in those places.

## Further expanding to international markets

The ageing population in Singapore is serious. The needs of elderly in taking supplements and medicines are increasing. Hence, our product may be helpful for the citizens there. Tsao Foundation, Gerontological Society of Singapore and different hospitals are developing different gerontechnology in facilitating elderly's lives. We may work with these organisations for further expansion of our company to increase exposure and people's understanding of our company. Besides, AgeTech and Aging2.0 in the United States are also our choices for cooperation. These two companies are working to help the elder generation, our product can help them further assist the elderly.

## Collaboration with government/ insurance companies/ health products companies/ NGOs

For more promotions, collaboration with different stakeholders can be efficient. Government, insurance companies, health products companies, like iHerb, and different NGOs are organisations that are well-known among citizens, they also receive information or news from these channels. Having more collaborations with these companies can further raise the awareness of the citizens about the importance of taking medicine and supplements on time. Also, more people will know about our company and we can progressively expand our connection to promote our products.

## Further expanding to control several gerontech products

With an increased popularity of our company, we have the opportunity to further expand our control over several gerontech products. With our user-friendly application, it can be connected to more gerontech products from our company, which are more useful to facilitate elderly's lives. Better tracking of the elderly will be promoted and developed, such that elderly's health can be improved.

# Threats

## Loss of reputation of faulty in case of system failure

As it is our first attempt in developing the whole application as well as connection between the applications and different medicine boxes, some system errors might happen. When these situations occur, our reputation and credibility will be negatively affected, our company's sales may also be dropping.

## Negative customer reviews

We can not ensure that all customers enjoy using our product, there might be some drawbacks in the applications or the medicine boxes. Some users may find them less helpful, not able to tackle the aims and individual needs. Hence, leaving negative reviews on different platforms may reduce our sales afterwards, as other citizens will re-consider whether our products are worth purchasing.

## Competition from other gerontech companies/ products with similar functions

There are some gerontech companies in Hong Kong and worldwide, for example, Hong Kong Science and Technology Parks Corporation (HKSTP) and Medisafe in the United Kingdom. They are all developing and designing more products in gerontech, hence, our competition is increasing. With similar products produced, we have to be more engaged and be ahead of the industry, so that we can have more customers supporting our company, which require a lot of effort.

## Hesitant social adoption of technology

In the recent society of Hong Kong, the awareness of gerontech is not significant enough. Not many citizens are aware of the needs of the elderly as well as the methods and solutions of solving the difficulties of our target customers. It takes time to change the unconcerning atmosphere in the society. Requiring many citizens to adopt the new living lifestyle may be challenging, which causes a threat to the development of our company.

## 4. Sales Channels

### **Sales to elderly:**

#### Recommendation from doctors or pharmacists

Sales of medicine boxes at pharmacies and clinics. This attracts patients who go to these places to collect their medicines and are in need of a medicine box to organise their medications.

#### Cross-sale with NGOs

NGOs in Hong Kong, such as Lok Sin Tong and Baptist Oi Kwan Social Service provide community pharmacy services and are in touch with a large group of elderly and patients. Through cross-sales with NGOs, our company will be able to reach these sectors of customers.

### **Sales to family members:**

#### Official product website

On our official website, customers are able to purchase our product directly with online payment. The product will be delivered to the customer's address. Details of the product, images, and users' reviews are available on the website.

#### Social media

On our official social media account, regular updates including photos, information and details of our product will be published and posted. By making use of the repost and hashtag functions of social media, our product can reach a larger population.

#### Health product selling websites

Our product will appear on health product selling websites such as Watsons and Mannings. When customers are looking for the supplements they need, our product will appear in that category.

## Pharmacy/ clinics/ healthcare centres

By sticking posters on the walls of the clinics and pharmacies and putting leaflets and brochures on the shelves in the clinics and pharmacies, family members taking care of the elderly will be able to get to know our product when waiting for their turn to be served.

## App Store/ Play Store - distribution of application

Our application is available for free on both App Store and Play Store, the two largest mobile app distribution platforms. Users will have to update the application from time to time to have a complete and comprehensive user experience and enjoy the latest improvements.

## 5. Promotion Method

### Television/ radio/ newspaper

By arranging advertisements both online and offline, our product can be able to attract the public's attention and interest. For instance, our advertisements will appear during the golden hours on TV channels (ViuTV, TVB). Also, being introduced and promoted by the hosts during radio broadcasts(RTHK). An advertising section on the newspapers (SCMP) targeting the readers will also appear.

### Social media

Official instagram or Facebook accounts will be set up to increase our exposure by posting advertisements to promote our medicine box, including its function, design, discounts, updates on software etc. They will all be available so as to reach more potential customers. Some Q&A sessions and discussions will be conducted from time to time in order to get connected to our existing customers. We aim to convert our customers into long-term ones through regular promotions.

KOLs who have a regular medicine-taking practice will be invited to collaborate with our company and try our products. Some user's feedback will also be published on their social media platforms to increase our exposure and our product's credibility.

### Website (SEO rankings)

A secure, mobile-friendly and accessible official product website which provides optimised content will be created for customers' purchases, instant chats, additional information on health and drugs etc, as well as a comment box for customers to leave their opinions on our website display or comments regarding our services. As we operate, we continue to update our customers with high-quality health and drugs information regularly in the "Discover" section in the application to allow them a splendid experience when visiting our website. By doing so, our SEO improves as well as our visibility, which can attract more customers.

## Hospitals/ clinics/ pharmacy/ NGOs

Posters and leaflets of our products will be posted or given in the hospitals, clinics, healthcare centres or social centres (Just Med Limited). In addition, talks and sharings on healthy lifestyles or health can be held by collaborating with the NGOs, so that we can reach our target customers easily (especially the elders) and be able to promote our products to them as well.

## Collaboration with medicine selling platforms

Advertisements of our medicine box would be posted on the the websites of the collaboration company, for example HKTVMall, Watsons etc, and vice versa, so that more citizens get to know about our company, they can also consider buying our products to have a better discipline on the time of pill-taking as well as appropriate amount of medicine to be taken. Our customers can also choose to purchase pills from those collaboration companies, as a result, both of us will be mutually benefited.

## Participating in Gerontech and Innovation Expo sum Summit

Participating in the largest gerontechnology public education event in Hong Kong can arouse attention from different parties, including the general public, the elderly and the rehabilitation service sector, the investors etc, so as to gain publicity for our product. By joining more public exhibitions and events, we can become one of the expo members to reach more partnerships or develop new markets at the same time.

## 6. Sales projection

	No. of medicine box sold	No. of app users	No. of monthly/ yearly subscribers
1st year	28,000-56,000	50,000-100,000	10,000-20,000
2nd year	42,000-84,000	80,000-160,000	15,000-30,000
3rd year	84,000-16,800	165,000-300,000	32,500-45,000

### 1st year:

- By calculation,  $7,000,000 * 40% * 20% = 560,000$  (population of elderly having chronic diseases), we assume 5-10% of them will become our users in the first year.
- The number of application users is expected to be greater than the number of medicine box users as there should be more people as family members to keep track of the pill-taking habit of the elderly.
- Only around 30% of users will subscribe monthly/ yearly for additional functions due to low credibility of our company in the first year of operation.

### 2nd year:

- With continuous promotions and cross-sales with other companies, more customers will be attracted and users will increase in 50%.
- With positive reviews from other users, more customers are willing to pay for additional functions to connect two or more medicine boxes to our application, leading to the greater increase in sales of medicine box than the users of our application.

### 3rd year:

- With accumulated promotions and increasing collaboration with different companies, sales of medicine boxes will increase one time significantly.

### Overall:

- We estimate the number of monthly/ yearly subscribers to be 50% of that of medicine boxes sold every year.

# 5 Finance overview

## Summary

	2023	2024	2025
<b>sales</b>	<b>Total</b>		
Product sale (no) 85%	54,000	81,000	162,000
\$500/box	\$27,000,000	\$40,500,000	\$81,000,000
sub fee (no) 15%	16,200	54,270	109,979
<b>Other income</b>			
Commission income add on 2%	\$540,000	\$810,000	\$1,620,000
Advertisement income add on 3%	\$810,000	\$1,215,000	2,430,000
fund raising	\$1,000,000	\$0	\$0
	\$2,350,000	\$2,025,000	\$4,050,000
<b>less: Expenses</b>			
Marketing \$100,000/mth	\$1,860,000	\$3,300,000	\$4,740,000
Wages and salaries	\$1,620,000	\$2,430,000	\$4,860,000
Admin cost	\$1,488,000	\$1,488,000	\$1,488,000
start up cost	\$561,970	\$0	\$0
product listing fee on ecommerce	\$10,850,000	\$16,200,000	\$32,400,000
App listing fee \$82.5/mth	\$990	\$792	\$792
Misc exp	\$75,600	\$75,600	\$75,600
Patent fee	\$9,000	\$9,000	\$9,000
distribution cost \$30/box	\$1,620,000	\$2,430,000	\$4,860,000
	\$18,085,560	\$25,933,392	\$48,433,392
product listing fee on ecommerce	\$10,850,000	\$16,200,000	\$32,400,000
App listing fee \$82.5/mth	\$990	\$792	\$792
Misc exp	\$75,600	\$75,600	\$75,600
Patent fee	\$9,000	\$9,000	\$9,000
distribution cost \$30/box	\$1,620,000	\$2,430,000	\$4,860,000
	\$18,085,560	\$25,933,392	\$48,433,392
profit before tax	\$5,302,840	\$11,605,248	\$26,833,854
Tax -15%	\$795,426	\$1,740,787	\$4,025,078
<b>Net profit</b>	<b>\$4,507,414</b>	<b>\$9,864,461</b>	<b>\$22,808,776</b>

# Year of 2023

	2023												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<b>sales</b>													
Product sale (no) 85%	12300	12500	12700	12900	13100	13300	13700	13900	14100	14300	14500	14700	162000
\$500/box	\$6,150,000	\$6,250,000	\$6,350,000	\$6,450,000	\$6,550,000	\$6,650,000	\$6,850,000	\$6,950,000	\$7,050,000	\$7,150,000	\$7,250,000	\$7,350,000	\$81,000,000
sub fee 15%	8,200	8,364	8,531	8,702	8,876	9,053	9,235	9,419	9,608	9,800	9,996	10,196	\$109,979
\$132/sub	\$1,082,400	\$1,104,048	\$1,126,129	\$1,148,652	\$1,171,625	\$1,195,057	\$1,218,958	\$1,243,337	\$1,268,204	\$1,293,568	\$1,319,440	\$1,345,828	\$14,517,246
	\$7,232,400	\$7,354,048	\$7,476,129	\$7,598,652	\$7,721,625	\$7,845,057	\$8,068,958	\$8,193,337	\$8,318,204	\$8,443,568	\$8,569,440	\$8,695,828	\$95,517,246
<b>less: COGS</b>	\$1,845,000	\$1,875,000	\$1,905,000	\$1,935,000	\$1,965,000	\$1,995,000	\$2,055,000	\$2,085,000	\$2,115,000	\$2,145,000	\$2,175,000	\$2,205,000	\$24,300,000
<b>Gross profit</b>	\$5,387,400	\$5,479,048	\$5,571,129	\$5,663,652	\$5,756,625	\$5,850,057	\$6,013,958	\$6,108,337	\$6,203,204	\$6,298,568	\$6,394,440	\$6,490,828	\$71,217,246
<b>Other income</b>													
Commission income add on 2%	\$123,000	\$125,000	\$127,000	\$129,000	\$131,000	\$133,000	\$137,000	\$139,000	\$141,000	\$143,000	\$145,000	\$147,000	\$1,620,000
Advertisement income add on 3% fund raising	\$184,500	\$187,500	\$190,500	\$193,500	\$196,500	\$199,500	\$205,500	\$208,500	\$211,500	\$214,500	\$217,500	\$220,500	\$2,430,000
	\$307,500	\$312,500	\$317,500	\$322,500	\$327,500	\$332,500	\$342,500	\$347,500	\$352,500	\$357,500	\$362,500	\$367,500	\$4,050,000
<b>less: Expenses</b>													
Marketing \$100,000/mth	\$340,000	\$350,000	\$360,000	\$370,000	\$380,000	\$390,000	\$400,000	\$410,000	\$420,000	\$430,000	\$440,000	\$450,000	\$4,740,000
Wages and salaries	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$4,860,000
Admin staff	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$290,400
Human resources staff	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$217,800
Admin cost	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$1,068,000
start up cost													\$0
product listing fee	\$2,460,000	\$2,500,000	\$2,540,000	\$2,580,000	\$2,620,000	\$2,660,000	\$2,740,000	\$2,780,000	\$2,820,000	\$2,860,000	\$2,900,000	\$2,940,000	\$32,400,000
App listing fee \$82.5/mth	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$792
Misc exp	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$75,600
Patent fee	\$9,000												\$9,000
distribution cost \$30/box	\$369,000	\$375,000	\$381,000	\$387,000	\$393,000	\$399,000	\$411,000	\$417,000	\$423,000	\$429,000	\$435,000	\$441,000	\$4,860,000
	\$3,720,716	\$3,767,716	\$3,823,716	\$3,879,716	\$3,935,716	\$3,991,716	\$4,093,716	\$4,149,716	\$4,205,716	\$4,261,716	\$4,317,716	\$4,373,716	\$48,521,592
profit before tax	\$1,974,184	\$2,023,832	\$2,064,913	\$2,106,436	\$2,148,409	\$2,190,841	\$2,262,742	\$2,306,121	\$2,349,988	\$2,394,352	\$2,439,224	\$2,484,612	\$26,745,654
Tax - 15%	\$296,128	\$303,575	\$309,737	\$315,965	\$322,261	\$328,626	\$339,411	\$345,918	\$352,498	\$359,153	\$365,884	\$372,692	\$4,011,848
<b>Net profit</b>	\$1,678,056	\$1,720,257	\$1,755,176	\$1,790,470	\$1,826,147	\$1,862,215	\$1,923,331	\$1,960,203	\$1,997,490	\$2,035,199	\$2,073,340	\$2,111,920	\$22,733,806

# Year of 2024

	2024												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<b>sales</b>													
Product sale (no) 85%	5600	5800	6000	6200	6400	6600	6800	7000	7200	7500	7800	8100	81000
\$500/box	\$2,800,000	\$2,900,000	\$3,000,000	\$3,100,000	\$3,200,000	\$3,300,000	\$3,400,000	\$3,500,000	\$3,600,000	\$3,750,000	\$3,900,000	\$4,050,000	\$40,500,000
sub fee 15%	3752	3886	4020	4154	4288	4422	4556	4690	4824	5025	5226	5427	54270
\$132/sub	\$495,264	\$512,952	\$530,640	\$548,328	\$566,016	\$583,704	\$601,392	\$619,080	\$636,768	\$663,300	\$689,832	\$716,364	\$7,163,640
	\$3,295,264	\$3,412,952	\$3,530,640	\$3,648,328	\$3,766,016	\$3,883,704	\$4,001,392	\$4,119,080	\$4,236,768	\$4,413,300	\$4,589,832	\$4,766,364	\$47,663,640
<b>less: COGS</b>	\$840,000	\$870,000	\$900,000	\$930,000	\$960,000	\$990,000	\$1,020,000	\$1,050,000	\$1,080,000	\$1,125,000	\$1,170,000	\$1,215,000	\$12,150,000
<b>Gross profit</b>	\$2,455,264	\$2,542,952	\$2,630,640	\$2,718,328	\$2,806,016	\$2,893,704	\$2,981,392	\$3,069,080	\$3,156,768	\$3,288,300	\$3,419,832	\$3,551,364	\$35,513,640
<b>Other income</b>													
Commission income add on 2%	\$56,000	\$58,000	\$60,000	\$62,000	\$64,000	\$66,000	\$68,000	\$70,000	\$72,000	\$75,000	\$78,000	\$81,000	\$810,000
Advertisement income add on 3% fund raising	\$84,000	\$87,000	\$90,000	\$93,000	\$96,000	\$99,000	\$102,000	\$105,000	\$108,000	\$112,500	\$117,000	\$121,500	\$1,215,000
	\$140,000	\$145,000	\$150,000	\$155,000	\$160,000	\$165,000	\$170,000	\$175,000	\$180,000	\$187,500	\$195,000	\$202,500	\$2,025,000
<b>less: Expenses</b>													
Marketing \$100,000/mth	\$220,000	\$230,000	\$240,000	\$250,000	\$260,000	\$270,000	\$280,000	\$290,000	\$300,000	\$310,000	\$320,000	\$330,000	\$3,300,000
Wages and salaries	\$202,500	\$202,500	\$202,500	\$202,500	\$202,500	\$202,500	\$202,500	\$202,500	\$202,500	\$202,500	\$202,500	\$202,500	\$2,430,000
Admin staff	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$264,000
Human resources staff	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$198,000
Admin cost	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$1,068,000
start up cost													
product listing fee	\$1,120,000	\$1,160,000	\$1,200,000	\$1,240,000	\$1,280,000	\$1,320,000	\$1,360,000	\$1,400,000	\$1,440,000	\$1,500,000	\$1,560,000	\$1,620,000	\$16,200,000
App listing fee \$82.5/mth	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$792
Misc exp	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$75,600
Patent fee	\$9,000												\$9,000
distribution cost \$30/box	\$168,000	\$174,000	\$180,000	\$186,000	\$192,000	\$198,000	\$204,000	\$210,000	\$216,000	\$225,000	\$234,000	\$243,000	\$2,430,000
	\$1,853,366	\$1,900,366	\$1,956,366	\$2,012,366	\$2,068,366	\$2,124,366	\$2,180,366	\$2,236,366	\$2,292,366	\$2,371,366	\$2,450,366	\$2,529,366	\$25,975,392
profit before tax	\$741,898	\$787,586	\$824,274	\$860,962	\$897,650	\$934,338	\$971,026	\$1,007,714	\$1,044,402	\$1,104,434	\$1,164,466	\$1,224,498	\$11,563,248
Tax - 15%	\$111,285	\$118,138	\$123,641	\$129,144	\$134,648	\$140,151	\$145,654	\$151,157	\$156,660	\$165,665	\$174,670	\$183,675	\$1,734,487
<b>Net profit</b>	\$630,613	\$669,448	\$700,633	\$731,818	\$763,003	\$794,187	\$825,372	\$856,557	\$887,742	\$938,769	\$989,796	\$1,040,823	\$9,828,761

# Year of 2025

	2025												Total
sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Product sale (no) 85%	12300	12500	12700	12900	13100	13300	13700	13900	14100	14300	14500	14700	162000
\$500/box	\$6,150,000	\$6,250,000	\$6,350,000	\$6,450,000	\$6,550,000	\$6,650,000	\$6,850,000	\$6,950,000	\$7,050,000	\$7,150,000	\$7,250,000	\$7,350,000	\$81,000,000
sub fee 15%	8200	8364	8531	8702	8876	9053	9235	9419	9608	9800	9996	10196	\$109,979
\$132/sub	\$1,082,400	\$1,104,048	\$1,126,129	\$1,148,652	\$1,171,625	\$1,195,057	\$1,218,958	\$1,243,337	\$1,268,204	\$1,293,568	\$1,319,440	\$1,345,828	\$14,517,246
	\$7,232,400	\$7,354,048	\$7,476,129	\$7,598,652	\$7,721,625	\$7,845,057	\$8,068,958	\$8,193,337	\$8,318,204	\$8,443,568	\$8,569,440	\$8,695,828	\$95,517,246
less: COGS	\$1,845,000	\$1,875,000	\$1,905,000	\$1,935,000	\$1,965,000	\$1,995,000	\$2,055,000	\$2,085,000	\$2,115,000	\$2,145,000	\$2,175,000	\$2,205,000	\$24,300,000
Gross profit	\$5,387,400	\$5,479,048	\$5,571,129	\$5,663,652	\$5,756,625	\$5,850,057	\$6,013,958	\$6,108,337	\$6,203,204	\$6,298,568	\$6,394,440	\$6,490,828	\$71,217,246
Other income													
Commission income add on 2%	\$123,000	\$125,000	\$127,000	\$129,000	\$131,000	\$133,000	\$137,000	\$139,000	\$141,000	\$143,000	\$145,000	\$147,000	\$1,620,000
Advertisement income add on 3% fund raising	\$184,500	\$187,500	\$190,500	\$193,500	\$196,500	\$199,500	\$205,500	\$208,500	\$211,500	\$214,500	\$217,500	\$220,500	\$2,430,000
	\$307,500	\$312,500	\$317,500	\$322,500	\$327,500	\$332,500	\$342,500	\$347,500	\$352,500	\$357,500	\$362,500	\$367,500	\$4,050,000
less: Expenses													
Marketing \$100,000/mth	+10K \$340,000	\$350,000	\$360,000	\$370,000	\$380,000	\$390,000	\$400,000	\$410,000	\$420,000	\$430,000	\$440,000	\$450,000	\$4,740,000
Wages and salaries	X2 \$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$405,000	\$4,860,000
Admin staff	+10% \$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$24,200	\$290,400
Human resources staff	+10% \$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$18,150	\$217,800
Admin cost	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$89,000	\$1,068,000
start up cost													\$0
product listing fee	\$2,460,000	\$2,500,000	\$2,540,000	\$2,580,000	\$2,620,000	\$2,660,000	\$2,740,000	\$2,780,000	\$2,820,000	\$2,860,000	\$2,900,000	\$2,940,000	\$32,400,000
App listing fee \$825/mth	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$66	\$792
Misc exp	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$6,300	\$75,600
Patent fee	\$9,000												\$9,000
distribution cost \$30/box	\$369,000	\$375,000	\$381,000	\$387,000	\$393,000	\$399,000	\$411,000	\$417,000	\$423,000	\$429,000	\$435,000	\$441,000	\$4,860,000
	\$3,720,716	\$3,767,716	\$3,823,716	\$3,879,716	\$3,935,716	\$3,991,716	\$4,093,716	\$4,149,716	\$4,205,716	\$4,261,716	\$4,317,716	\$4,373,716	\$48,521,592
profit before tax	\$1,974,184	\$2,023,832	\$2,064,913	\$2,106,436	\$2,148,409	\$2,190,841	\$2,262,742	\$2,306,121	\$2,349,988	\$2,394,352	\$2,439,224	\$2,484,612	\$26,745,654
Tax -15%	\$296,128	\$303,575	\$309,737	\$315,965	\$322,261	\$328,626	\$339,411	\$345,918	\$352,498	\$359,153	\$365,884	\$372,692	\$4,011,848
Net profit	\$1,678,056	\$1,720,257	\$1,755,176	\$1,790,470	\$1,826,147	\$1,862,215	\$1,923,331	\$1,960,203	\$1,997,490	\$2,035,199	\$2,073,340	\$2,111,920	\$22,733,806

<b>Wages and salary</b>		<b>Administrative expenses</b>	
	\$		\$
Software development	1,080,000	Office rent	588,000
Customer service hotline	540,000	Insurance	480,000
	1,620,000		1,068,000
1st year: (x1)	\$1,620,000		
2nd year: (x1.5)	\$2,430,000		
3rd year: (x2)	\$3,240,000		
<b>Miscellaneous expenses</b>		<b>product listing fee on ecommerce</b>	
	\$ (per mth)	= \$50000 + salesof boxes per year*40%	
Phone lines (HKT industry plan)	3,000		
Stationary	1,000		
Maintenance	500		
Water, electricity bill	600		
Chatbot fee	200		
Patment gateway handling fee	1,000		
	6,300		
per year:	75600		

<b>Startup cost</b>		<b>App listing fee</b>	
	\$		\$
Company registration fee	1,720	IOS (per year)	790
Business registration fee	250	Google play (one-time payment)	200
Office construction	10,000		990
App development fee	500,000		
Research startup budget	50,000		
	561,970		

<b>Fund sources</b>	
Angel investor I	800,000
Gerontech funding	200,000
	1,000,000

# Risks Management

## Plagiarism

- Functions in application being copied
- Design of medicine box being copied

-> apply patent for the design and technology of the medicine box as well as the application

-> develop new designs and functions of the box yearly

-> require our employees to sign non-disclosure agreements to prevent leakage of technology

## User Data Privacy

- Leakage of user data
- Malicious attack from hackers

-> encrypt sensitive data from users

-> maintain server security and undergo regular checks on intentional hackings and attacks of firewall

-> use reliable and high-security cloud servers such as AWF and Google Cloud

## Error

- Application breakdown and unable to respond to instructions (e.g. system error)
- Medicine box is not functioning properly

-> application: we will conduct server maintenance, back-up system and perform regular checks on application system to identify possible loopholes and mistakes

-> medicine box: we will provide maintenance and repairing services, warranty and replacement of product with valid purchasing receipts

## Administration and operation risk

- Supplier failure
- Sudden rise in operating costs

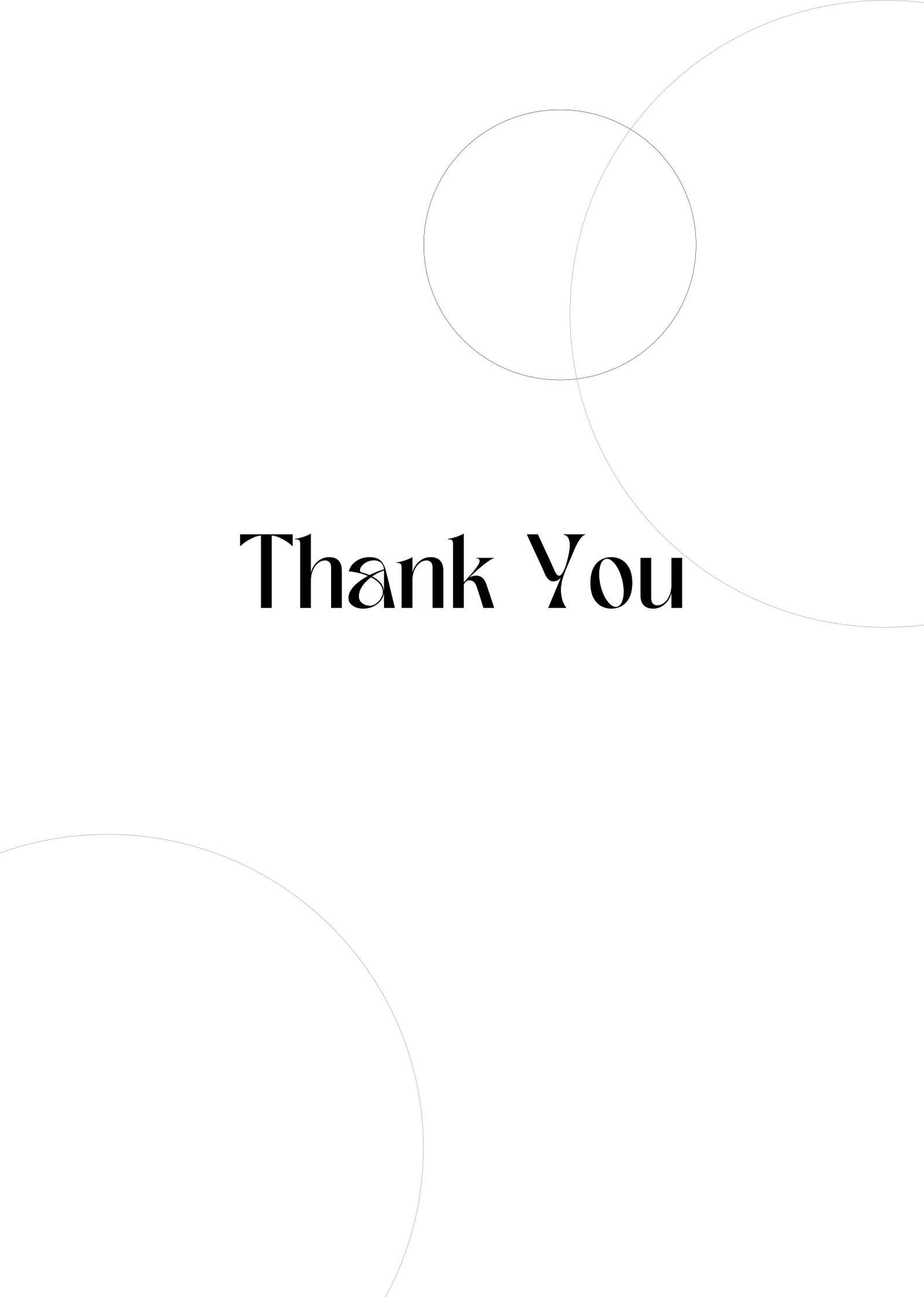
-> sign cooperation contracts indicating the production cost and amount of products that have to be manufactured with multiple producers to ensure that we do not rely solely on single manufacturer and reduce the risk

-> keep an extra 10% of products as backup to maintain our supply to the customers even supplier failure occurs

# Reference

- Population ageing trend of Hong Kong:  
<https://www.hkeconomy.gov.hk/en/pdf/el/el-2019-02.pdf>
- Health Facts of Hong Kong:  
[https://www.dh.gov.hk/english/statistics/statistics\\_hs/files/Health\\_Statistics\\_pamphlet\\_E.pdf](https://www.dh.gov.hk/english/statistics/statistics_hs/files/Health_Statistics_pamphlet_E.pdf)
- Hong Kong's Brain Drain Worsen as expats, locals flee city:  
<https://www.bloomberg.com/news/articles/2022-01-10/hong-kong-s-brain-drain-worsens-as-expats-locals-flee-city>
- 驚！老人家吃錯藥的機率是一般人的7倍:  
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- ILC Singapore Tsao Foundation:  
<https://tsaofoundation.org/what-we-do/research-and-collaboration/issues-in-population-ageing/gerontechnology>
- Population of Singapore as of June 2021, by age group:  
<https://www.statista.com/statistics/624913/singapore-population-by-age-group/>



The page features three large, thin-lined circles. One circle is positioned in the upper right quadrant, another in the lower left quadrant, and a third, larger circle is partially visible on the right edge, overlapping the other two.

**Thank You**