CertPod

Manage your professional certifications seamlessly

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Executive Summary

CertPod is founded to address the pains of IT professionals and corporates with certificates management needs who are currently suffering from CPE updating and auditing process. With the tremendous growth of IT and the demand for IT professionals, Many IT professionals choose to take up certifications to enrich their experience and pursue a better job. Research shows that having an IT certificate does help IT professionals bring home a big paycheck, which is one of the reasons why more and more people choose to grow their career in an IT industry. However, with the fast-paced lifestyle, many IT professionals require a more efficient and time saving way to manage their certificates. A further research on the numbers of IT professionals holding certificates from different certification bodies shows that there are millions worldwide and growing.

Once achieved, the certifications will have to be renewed after a certain period to maintain their validity. The renewal process most commonly requires the IT professional to obtain a minimum number of continuous professional education (CPE) learning hours. IT professionals are frequently bored down with the time consuming and tedious task of manually updating their CPE in the web portals of multiple certification bodies (CB). Most IT professionals are also not good at keeping requirements records, which leaves them scrambling and struggling to pass the audits. Serving this unmet need, CertPod lets IT professionals instantly update their CPE to all certification bodies in a seamless manner. By leveraging Robotic Process Automation (RPA) technology and blockchain technology, CertPod securely keeps evidence for systematic and convenient audits.

Subsequently, to reach out to more IT professionals in bulk, we intend to reach out to companies with a large number of IT professionals. These companies are required to maintain a minimum number of certified IT professionals to serve their business objectives and they face the challenge of tracking the professional certification status of their employees. Some of them rely on primitive tools like Excel while others hire third party professionals that manually keep track of the records for them. This manual way of working, combined with the face that employees are constantly failing to update their records, results in inaccurate professional certification records. The Certpod platform resolves these pains as professional tracking can be done much more efficiently than before.

Since CertPod can acquire customers directly online as well as through other companies, internet marketing and B2B sales will be important key activities. Leveraging the team's strong expertise in internet marketing and business development, Certpod will deploy both an online and offline approach covering both internet marketing strategy and partnership strategy to reach out to the target customers.

Certpod's current revenue model consists of subscription fee to each user and for corporates' packages, it will be based on a tier pricing approach.

Finally, Certpod seeks to raise an initial capital of SGD 70,000 of funding for the development of the platform and to spearhead marketing efforts in the next 12 months focusing on the initial market where there is a high concentration of IT professionals.

Value Proposition and innovation

Value proposition

The problem: Under the current situation, IT professionals are frequently bored down with the time consumption and tedious efforts to update their CPE for multiple certification bodies. What's worse, if any certification body would like to audit the CPE earning activity, IT professionals need to provide a list of materials and facilitate the auditor. Many rounds of emails and calls are usually inevitable during this process and failure to provide necessary proof will lead to CPE forfeit. The whole process gives many IT professionals big pain. As a result, they look forward to a solution that can address this problem and allow them to focus on their career development. The CertPod team is driven by this opportunity, devoted to relieving IT professionals of their pain.

Our value: CertPod is a certificate management platform that helps IT professionals who suffer from CPE updating and auditing processes. We devote ourselves to providing the most efficient way for IT professionals to manage their certificates and we give them a seamless way to update their CPE to certification bodies, saving valuable time and effort.

Innovation

In the current marketplace, there are a few platforms that help IT corporations track certification status of their employees, which target mainly to increase efficiency of their HR representatives. However, there is no platform available targeting to help IT individuals to manage their own certificates and subsequent CPE updating and auditing process. CertPod provides these critical certificate management services that create new value for IT professionals.

We offer innovative features that do not exist in the market to our customers. Cutting-edge technologies including RPA and AI analytics will also be used to enhance customer experience with CertPod.

The four innovative features that CertPod offers are listed below. The details of these are described in the Company Products and Services section.

1. CPE Updating Service

2. CPE Audit Compliance Service

3. CPE Earning Training Referral Service

4. Blockchain Verified CPE Compliance Service

Market Identification and Analysis

Market and Industry

Nowadays, IT is playing a key role in supporting major activities and functions in corporations as well as people's daily life. More and more companies increase their spendings on IT to accelerate their development and enhance competency. According to Gartner, worldwide IT spending totaled $3.8 trillion in 2019. This is an increase of 3.2 percent from 2018, with IT services and communication services as the main drivers (Appendix A1, Table A1-1). For the past 10 years, the global IT industry has demonstrated continuous growth of 3-4 percent every year (Appendix A1, Figure A1-1). Looking forward, this trend is highly likely to continue with market shaking technologies such as AI and ML on the rise. 52% of this trillion dollar industry comes from the American and European markets, with 32% and 20% respectively. The Asian market accounts for about 32% and China provides 14% on its own. The SEA countries show great potential with 11% and 7% comes from Korea and Japan (Appendix A1, Figure A1-2). More details can be found under A1 - Market and industry.

Benefiting from the blooming IT industry, there is a huge demand in the marketplace for IT professionals. According to the Annual Survey on Infocomm Media Manpower, published by Infocomm Media Development Authority, the total demand for IT professionals in Singapore has increased to 198,200 in 2016 and was projected to grow by another 42,300 (21%) between 2017-2020 (Source: NTUC this week). In the UK, the demand for IT professionals has risen 28 percent in 2019 compared to 2018 according to a report by Vacancysoft. These examples show us the trend of huge IT professional demand increment in the past few years and highly likely in the future.

Targeting segment

Our team fully understands that having a sizable market is vital to the success of CertPod. We analyzed the total available market, serviceable available market and arrived at our target market. CertPod aims to attract IT professionals above 35 years old who own certificates that require CPE updating. The customer segment will be expanded from Singapore to all of Asia and lastly globally. Detailed descriptions can be found in the Expansion segment. Detailed figures can be found under A2 - Targeting segment.

Total available market: Our total available market will be all IT professionals with or without certificates. The global number of IT professionals is estimated to be 104 million, based on a report from the U.S. Department of Commerce. Those with certificates can benefit more from the certificate management and CPE updating features; while those without can still use CertPod's training referral feature to get free online training recommendations.

Serviceable available market: Our serviceable available market will be IT professionals who own certificates that require CPE updating. Using a few of the most popular IT certification bodies, we estimated our potential market in different geographical regions by the number of members (Appendix A2, Table A2-1). There are more than 1.3 million potential CertPod users worldwide.

Target market: Our target market will be IT professionals above 35 years old whose certificates require CPE updating. They are most likely working as senior leaders in the industry with multiple certificates from different certification bodies and they are struggling to achieve a balance between busy work and family life. We identify them as target customers that really need CertPod to help manage their certificates and save CPE updating efforts, so that they can spend the valuable time on other things. Research shows that more than 70% of IT professionals in

the United States are more than 35 years old (Appendix A2, Figure A2-1). Our target market is estimated to be about 0.94 million IT professionals in total.

Market share: Our target market share planned to achieve is 15 percent in 5 years as per our financial projects, which translates to 200,000 users. Since there is no company providing certificate management service with CPE updating features for IT individuals yet, CertPod will be the first in the market. We will work towards maintaining a market share of more than 15 percent if any competitor shows up in the future.

Market expansion: At the beginning stage, we will target Singapore as our initial market. In 2022, we will expand our market to Asia, which will increase our customer base to 40,000. After evaluating the market size based on estimation of the number of IT professionals in other geographies, we decide to expand to the UK, US and Canada next. Our customers will be around 100,000 to 200,000 at that time.

Competition

Upon researching, there is no other company that provides a solution that enables CPE updating automated for IT professionals, so CertPod will be the first in this neglected market addressing this unmet need. This gives CertPod a first mover advantage. Although there is no current competitor serving this market, CertPod still needs to be easy to use to attract existing and new IT professionals to adopt this solution rather than doing it the manual approach.

As CertPod grows and is ready to utilize the strategy of acquiring more IT professionals via their corporates, CertPod will face competition from existing solutions serving corporates who require to manage their IT professionals' certifications. However our product differentiators explained in product competitive analysis will allow CertPod to have an edge over them.

The competitive analysis will be split into phase 1 when we target only individual IT professionals as our customers and phase 2 when we merge in more features to serve corporates as well. Price competitive analysis is also included here to show the price difference between CertPod and other competitors.

1. Competitive Analysis Phase 1 – Consumer Service Target at Individual IT Professional

CertPod has no direct competitor for product features offered in phase 1 but indirect competition exists. An IT professional can input his CPE by himself as a status quo. He can also engage a third party to do it on his behalf. Table 1 below lists the competitive advantages for CertPod against them.

Product Features	CertPod	IT Professional	Engage 3rd Party
CPE Updating Service	- Seamlessly update multiple certificates	- Tedious process - Time consuming	- High cost - Support issue
CPE Audit Compliance Service	- Audit compliance assistance	- Tedious record keeping	- High cost - Support issue
CPE Earning Training Referral Service	- Free CPE earning training referral	- Efforts to look for CPE earning events	- High cost - Intensive human efforts
Block chain Verified CPE Compliance Service	- Seamlessly validate Block chain verified training	- Tedious record keeping	- High cost - Support issue

Table 1. Competitive analysis for CertPod phase 1 consumer services

In summary, CertPod provides IT professionals with a seamless experience maintaining their professional certifications. The cost incurred from using CertPod is much lower as compared with engaging a third party performing concierge services. The rationale is that concierge service is personalised while CertPod is a platform providing shared services to serving many IT professionals.

2. Product Competitive Analysis Phase 2 – Corporate Service Target at Enterprise with Certified IT Professionals

CertPod has a few competitors in the corporate market space to roll out Professional Certification Tracking Service in phase 2. The more established players are TalentGuard, VAIRKKO, Convergepoint, and AgencyWeb. They provide a comprehensive suite of service in Talent Management, Workforce Management and Learning & Development market space. CertPod is more specialized in delivering seamless professional certificate management experience for IT professionals and corporates. Therefore, Table 2 below compares features within Professional Certification Tracking Service between CertPod and its competitors.

Features	Product				
	CertPod	TalentGuard	VAIRKKO	Convergepoint	AgencyWeb
Active Certification Tracking	Yes	X	X	X	X
Certification Audit Support	Yes	X	Yes	X	X
Threshold Alert	Yes	Yes	Yes	Yes	Yes
Dashboard Viewing	Yes	Yes	Yes	Yes	Yes
Reporting	Yes	Yes	Yes	Yes	Yes

Table 2. Competitive analysis for CertPod phase 2 corporate services

Figure 1 below shows the competitive positioning matrix for CertPod as compared with its competitors. It is the only product that provides Active Certification Tracking, pulling data from CPE updating services. Employees will use CertPod CPE updating services as it does not incur cost on their part and helps them to update CPE to multiple certification bodies. All other competitors rely on the employees to manually update their certification details through an inbuilt self-service portal. This approach produces inaccurate certification status when the employee fails to update their training with latest details regularly. VAIRKKO provides certification audit support, but does not support Active Certification Tracking. To conclude, CertPod stands out from a list of competitors.
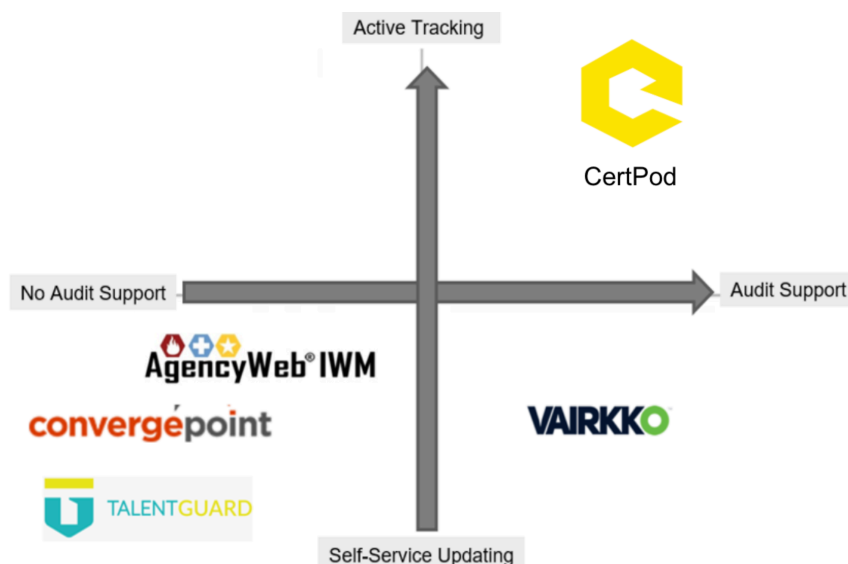
Figure 1. CertPod Competitive Positioning Matrix on corporate services

3. Pricing Competitive Analysis

CertPod serves the IT certification community with an affordable price and subscription model in Table 3 below. CertPod charges each IT professional $10/ month for phase 1 consumer services on a subscription basis. None of our competitors offers these services in the current market.

For corporate subscription that starts in phase 2, CertPod offers multiple charging tiers. The lowest pricing tier starts at $3/ month for each IT professional under a corporate subscription, which is comparable with our competitor TalentGuard.

This pricing appears to be much higher than VAIRKKO, which offers $1.43 per IT professional per month. The rationale is that the lowest pricing tier for VAIRKKO starts at more than 10,000 IT professionals targeted at the North Americas market. The lowest pricing tier for CertPod is more than 1000 IT professionals whose target market start is Singapore and expands into subsequent markets following its expansion plan. It is therefore feasible for CertPod to start with the lowest pricing tier for a smaller number of IT professionals.

	Product				
	CertPod	TalentGuard	VAIRKKO	Convergepoint	AgencyWeb
Consumer Services	$10/ month	NA	NA	NA	NA
Corporate Services (Lowest Pricing Tier)	$3-7/ month (Tier based)	$4.28/ month	$1.43/ month	Unknown	Unknown

Table 3. CertPod Pricing Competitive Analysis

Marketing and Sales Strategy

Introduction

In approaching our marketing and sales strategy, we considered the fact that an online business like CertPod requires a concrete internet marketing strategy. This engages internet users and increases the visibility of CertPod on the internet, which is an important distribution channel. Having expertise in internet marketing gives an additional competitive strength. The campaigns will be carefully planned with implementation of marketing messages based on our value proposition. The keywords will firstly target individual sign ups, before also targeting corporates associated with the key demographic.

A referral scheme will be implemented for individual sign ups to encourage viral marketing through word of mouth. Moreover, a partnership strategy will be deployed to promote CertPod's services and could also allow some platforms to serve as a distribution channel. Partnership strategy enables us to reach out the target audience with enhanced brand awareness among the IT professionals.

A B2B sales strategy will be implemented to reach out to the corporate accounts. The reason for this is because corporates usually already have a number of IT professionals with them. Instead of targeting only individual sign ups, we can also plan to target these corporates. One deal closed will help boost the number of sign ups on the platform.

The B2B sales will strictly only focus on closing deals with corporates and not individual sign ups. A key tagline used to represent the solution would be "manage your professional certifications seamlessly".

Finally a proper marketing timeline is required to measure the tasks to be done in an orderly fashion with the emphasis of achieving the targets set.

Internet Marketing Strategy

The internet provides many opportunities for marketing a service and choosing the right marketing efforts are key to draw more traffic to CertPod's website. This section describes our intended internet marketing strategy and more details can be found under A3 - Internet Marketing Strategy.

1. SEO (Search Engine Optimization)

The quality and volume of traffic are essential to CertPod's website and Search Engine Optimization (SEO) will be deployed to increase search engine results, ultimately driving traffic to CertPod's website and creating leads (IT Professionals). The strategy of SEO is also important so that the right set of skills can be applied to increase the ranking of CertPod's website to major search engines.

The SEO Campaign will target a variety of online resources such as web 2.0 social media sites that help build the page rank, natural organic search engine results and brand awareness. This will result in better reach out for CertPod's website to IT Professionals.

SEO Website design: SEO Website Design includes optimizing CertPod's website via keyword density check, anchor texts and internal link building. This will be done with proper organization of the website's links conforming to the major search engines such as Google's Guidelines. All this will be seamlessly blended with the overall look of the website. More importantly the relevance of pages, the relationship between pages and the value of pages are clearly understood by the search engine.
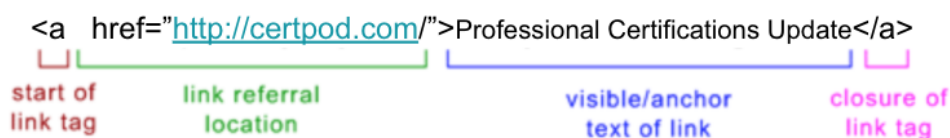

Figure 2. Anchor text example

An analysis of the keywords enables us to determine the popular keywords available for CertPod to use in tags and writings required for multiple relevant submissions, and also discover niche keywords that can be used strategically to improve search engine rankings. This research is constantly on-going, improved and updated as the web is constantly changing.

Targeted Link Building: Quality targeted link building will begin by screening for quality and relevant sites in the first week. Links development from trusted sites will commence in the subsequent week and spread over three months to produce a definite improvement in ranking of and traffic to CertPod's website. The results of traffic and ranking will be recorded and reviewed.

Blog on CertPod's Website: Fresh and quality content on relevant topics/CertPod matters that have rich keywords will be updated on a blog in CertPod's website. This builds CertPod's website authority on the related topics and

rankings for the different keywords. The content serves to convey information to CertPod's customers (IT Professionals). This implementation will be constantly ongoing.

Press release submission: Part of CertPod's SEO Campaign implementation will include relevant press release submissions and the targeted link building will be realized over the first three months upon embarking of the project. Optimized writings are based on the keyword research and analysis as above-mentioned.

2. SMM (Social Media Marketing)

There are three major uses of SMM for CertPod's business and social media in the interactive nature of social networking. Online communities for people who share interests and activities, or who are interested in exploring the interests and activities of CertPod, are built. The purpose is to improve CertPod's brand awareness, manage its online reputation, and bridge to generate leads (IT Professionals) by intercepting potential prospects (IT Professionals) with the driven traffic.

Research on Popular Social Networking Channels: In major social networking channels, research will be done on relevant channels for example IT Professional or IT industry influencers and on who the people following them are. These channels will be used to launch strong web promotions to build up CertPod's traffic and the number of quality followers (such as on Facebook fan group), who will make an impact in the mouth-to-mouth marketing aspects of the business.

Profile Building: Profile building is a continuous process and it has to be consistent in posting latest updates of the company. Content development has to be well planned and feedback or comments have to be well handled especially for those users who have well intentions.

Professional Reviews: CertPod increases its website's presence in reputable business platforms and networks by receiving positive reviews by professionals to improve the business's outlook. These high traffic platforms will maximize the exposure for strong brand recognition.

Video Creation / Marketing: To entice audiences, CertPod uses videos where sounds, lightings and motion images come together. CertPod will constantly create abundant attention from these videos of relevance. Using the created videos as an advertising tool, CertPod attracts audiences and drives traffic to the website. Examples of content for the video includes professional advice from IT professionals and case studies of users. Some of the case studies could be form and individual perspective and others can be from a corporate perspective.

3. Pay Per Click (PPC)

PPC (PayPerClick) advertising is one of the fastest ways to get immediate traffic to CertPod's site. PPC management involves selecting appropriate keywords and bidding for them so that when a person searches for that particular keyword, the results will be shown on the sponsored listing in the search engine page.

PPC Implementation: The PPC campaign will first be run using Google Adwords and Facebook Ads which will be implemented constantly with the minimum bid per click to be within our allocated campaign budget at the start. The results will be monitored and adjusted constantly to achieve constant marketing all year round to optimize the cost and ROI (Return of Investments) for every campaign.

Both Google Adwords and Facebook ads require an opening of an advertising account with them and thereafter, keywords research analysis will be done together with proper selection of niche keywords and relevant descriptive writings to get the optimum results of click conversions with the lowest bid price possible.

Landing Pages and e-book Content Creation: Instead of the use of main pages that provides consistent information, landing pages can be created as per campaign context. The context can include an e-book special that shares important IT industry trends or tips to grow in their professional careers. For targeting the corporates, the e-book content can be on best HR practices. The e-book can consist of a series of different chapters and each time a person wants to download an ebook, the person has to subscribe to the mailing lists. Via the mailing lists, there are warmer leads for further conversion to sign ups.

4. Referral Scheme

As part of encouraging more users to sign up and also to recommend to fellow users, a referral scheme can be implemented. The mechanism of the referral scheme can change accordingly to see which is more effective. At the start we can set that for every new user a current user brings in, the current user will get additional 3 months of usage for free. Each current user can retrieve a referral link and this referral link is used to send out to the current user's friends or network. Any new user who signs up via this link, the referrer will be notified and the company will update his or her subscription accordingly for the use of the platform.

Partnership Strategy

IT Professional Organisations: There is a strong connection to the IT professional organisations such as Singapore Computer Society, as they aim to upgrade the skill sets of individuals to better match the industry needs. Our product enables individuals to update their professional certification requirements easily, thus reducing maintenance and allowing them to focus on skill sets they can gain. Our product also helps to recommend relevant and personalised learning competency which further advocate the organisation's aim in an easier approach.

These organisations often have events for IT Professionals and this is also an avenue to further promote our product. It can be a joint partnership, where we co-host events and workshops on related and relevant topics, or we can be a sponsor for some of the related events to establish the presence that connects with the IT professionals. Moreover, we can conduct webinars where audiences from overseas also can be involved.

Certification bodies: For certification bodies, it is also to their benefit that IT professionals continue to keep track and update their requirements for their certifications. Our product provides such a tool to update and also for verification. There is a clear synergy between our product and the certification bodies. Promotion efforts can be carried out to share with the existing customers and new customers of the certification bodies. Some of these promotion efforts can include additional notice in their reminder emails for requirements updates sent to the database, co-workshops and webinars. Our product can also help to recommend relevant certification to our users.

Training Academy: Similar to the approach with IT professional organisations, due to a win-win proposition both organisations can have, we can also establish a partnership with them and conduct co-promotion efforts. With these partnerships established, we are continuing to build our presence and branding to the IT professionals which is our key audience.

HR Consultancy Firms: When looking to get corporate accounts, we can work with HR consultancy firms where they can help upsell our solution as it complements their solution. Our solution helps corporates manage their staff's IT

Professional certifications with more ease and is currently unique in the market. Therefore it also helps HR consultancy firms to target new clients or existing clients with a new value.

Sales Strategy

The sales cycle for CertPod started during the product development phase. This approach ensures just-in-time sales, which means the customer is ready to pick up the product when it is ready. No time is wasted waiting for the customer to come onboard. Our initial sales effort focuses on consumer sales matching the product development roadmap. The rationale is that the consumer sales cycle is shorter as the consumer acceptance rate for new products and services is higher as compared with the corporate customer. We subsequently follow up with corporate sales efforts aligned with the product development roadmap. CertPod then has an established base of paying consumer customers, where it can be used to justify its value easing the selling cycle for corporate sales.

B2B Sales

Lead Generation: For any B2B sales process, lead generation is an important approach to gather warm leads, these leads can come from three approaches.

First, it can come from the marketing side, be it from our website (inbound leads) where companies are interested in our solution as they realise the hassle to manage certification updates for their staff and inorganic SEM campaigns run specifically target corporate accounts.

Secondly, it can come from lead generation service we can outsource to since these services generally have expertise in securing appointments and more importantly they may already have the database of these corporate accounts.

Thirdly, it could be referrals from existing networks.

Closing of sales and after sales: We plan to have key in-house sales agents and when we recruit them, it is preferable if they have prior sales experience. Sometimes, the sales agent would already have existing clients which they can reach out to. Besides closing, it is important to provide a support channel if clients have any feedback or encounter any difficulties in using CertPod. Though the product should be relatively easy to use, we have to prepare for clients who may have questions and also potential bugs they encountered. We can implement an online chat system or email support where depending on the issues, they will be handled by relevant departments in the company.

Training and Preparation: Even though the sales agent recruited may have prior experience, training is still required as it involves a new solution. Value proposition, product training and development of sales decks are all important to a successful closing. The sales team will also be given a target to achieve according to the financial projections in this proposal.

Marketing phases and Timeline Approach: Certpod marketing will be done in three key phases mainly for launch, growth and expansion. Each of the key activities will be properly mapped according to the phase as shown in Fig 4.

Task	Status	Week 1 15 JUL - 21 JUL	Week 2 22 JUL - 28 JUL	Week 3 29 JUL - 4 AUG	Week 4 5 AUG - 11 AUG	Week 5 12 AUG - 18 AUG	Week 6 19 AUG - 25 AUG	Week 7 26 AUG - 1 SEP	Week 8 2 SEP - 8 SEP	Week 9 9 SEP - 15 SEP	Week 10 16 SEP - 22 SEP
SEO											
Keywords research anlysis											
Internal Links Building											
External Links Building											
SMM											
Profile building											
Professional reviews											
Video Creation											
INORGANIC SEO											
Keywords research analysis											
Campaign 1											
Campaign 2											

Figure 3. Example of Marketing Gantt Chart to track timeline

Figure 4. Marketing Phases - Launch, Growth and Expansion

As there are various marketing and partnership tasks to be done, it is important to have a clear direction and also tracking to see which activities are of priority and the expected timeline to complete the tasks. It is relevant to also include ongoing processes, so that everyone in the company understands what has been done. This gives the marketing team proper guidance on what is required to be completed, as well as what they need to measure in google analytics (Appendix A3, Figure A3-1).

Sustainable Competitive advantage

Competitive Strategies - Product Differentiation

CertPod selects a Differentiation Focus competitive strategy. It pursues strategic product differentiation within an IT certification market. It offers differentiating features from other certification tracking and management platforms in the market. These unique product features addressed the pain points for IT professionals and corporate customers, offering a unique and seamless user experience. CertPod aims to make its platform sticky to the customer, building exceptional brand loyalty amongst their customers. This competitive strategy, combined with first-mover advantage, makes this niche markets segment less attractive to competitors.
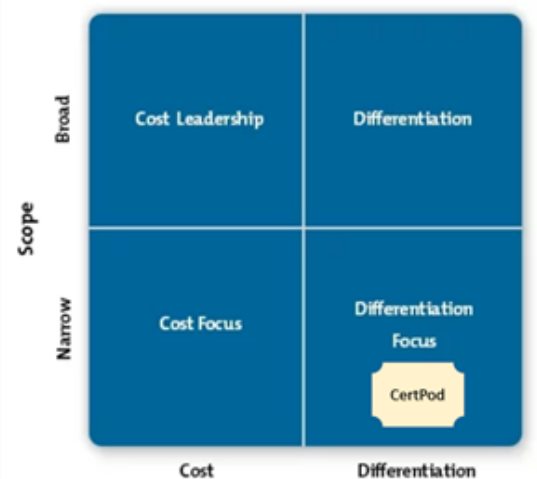

Figure 5: CertPod product differentiation

Network Effects / Barriers to Entry

CertPod is a platform that grows by acquiring more IT professionals and corporate customers as subscribers. Its operating model is asset-light using cloud services. Therefore it incurred a minimum cost for increasing its customer base. The additional cost incurred of serving one more customer is close to nothing with its technology platform developed and deployed. CertPod aims for exponential growth capturing the market quickly through its expansion plan. It improves its value proposition with more users, and a bigger network illustrated in Figure 6 on the right. This position creates a high barrier of entry to deter new entrants in the same market space.
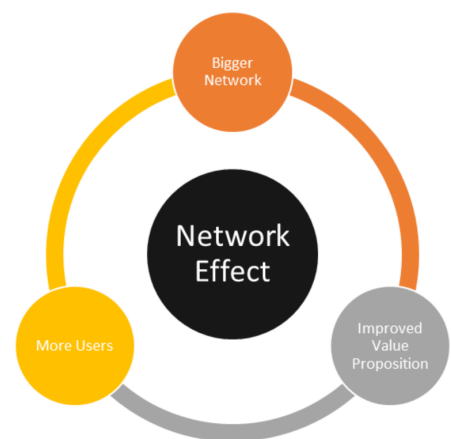

Figure 6: Network effects of CertPod customers

Adapting Product Line

CertPod's ability to quickly go from idea to implementation, as well as the ability to swiftly alter the details of implementation, sets CertPod apart from the big players in a similar field. These companies need to adhere to an internal operational process, resulting in slow development and an inability to target niche markets. CertPod's agile deployment includes dividing its product roll out into phase 1: target at individual IT professional and phase 2: target at corporate customer. CertPod has a readied product roadmap to cater for further market demands. As usual, it will seek customer feedback and fine tune this roadmap along the way.

Phase Number	Target Customer	Service Offering
1	Individual IT professional	CPE Updating Service CPE Audit Compliance Service CPE Earning Training Referral Service Blockchain Verified CPE Compliance Service
2	Corporate customers	Professional Certification Tracking Service

Table 4. CertPod product features offered in phase 1 and 2

Tacit knowledge

CertPod is designed and built with in-depth knowledge to integrate seamlessly with multiple CBs web portals. The application is built with detailed knowledge of the process, workflow, interface, format, up to the details of the fields used to support CPE update and CPE audit compliance. A competitor without detailed process and technical knowledge is unable to compete in the same market. They will build an inferior product which will not provide a seamless CPE update and CPE audit compliance experience to customers. A competitor will need to invest in significant resources and time to study and build similar applications as CertPod. This constraint will deter them from competing in this market space.

Switching Cost

CertPod targets to provide a seamless experience for customers using its services. They input data into CertPod for once and there is no further action required from them. CertPod specifically designs its user interface (web and mobile platform) for ease of use as compared with the current interface for CBs. The purpose of this designed workflow and interfaces is to get customers comfortable and used to using this platform. When they are getting used to CertPod, it is extremely hard for them to switch to a competitor platform with the same or similar services. The rationale is they do not want to go through the hassle of learning to use a new platform and risk using a new interface even though the subscription cost of the competitor may be much lower. This strategy mimics the iPhone strategy. The customer stays with using an iPhone even though an Android phone is much cheaper. The rationale shared by these users is they are used to the iPhone interface and not keen to switch to an Android phone equipped with another interface not familiar to them.

Strong Working Relationship

CertPod targets to build a strong working relationship with CBs easing their administration efforts to conduct the audits on CPE submitted by IT professionals. This is a win-win partnership to benefit both the CBs and CertrPod. The value contributed by CertPod serves as a foundation to build a strong working relationship. The CBs have no incentive to work with competitors offering similar service as CertPod. The competitors are unable to offer the same suite of services as CertPod without a partnership with CBs.

Company Products and Services

This section lists the detailed product features offered by CertPod. High growth is obtained by creating new value to the existing professional certifications management market. CertPod adopts an agile model for product development. It can ill afford a prolonged product development cycle that gets all services ready before selling. The product development strategy is to roll out product features targeted at IT professionals in phase 1 and corporate customers in phase 2.

Phase 1 - Products and Services for IT Professionals

The product features listed within this section target IT professionals. They are rolled out at phase 1, which are a list of unique features targeted to ease multiple pain points for IT professionals managing their professional certifications.

1. Continuous Professional Education (CPE) Updating Service:

The IT professionals acquire relevant professional certifications to demonstrate their skill set justifying their worth to their employers. These professional certifications are valid for a period subject to renewal to maintain their validity. Most of the professional certifications required the submission of a minimum number of continuous professional education (CPE) learning hours for renewal. Table 1 below listed the minimum amount of CPE hours needed for some professional certifications.

Professional certifications	Min number of CPE hours / year	CPE hours required for renewal	Renewal period
Certified Information Systems Auditor (CISA)	20	120	3 years
Certified Information Systems Security Professional (CISSP)	40	120	3 years
Project Management Professional (PMP)	Nil	60	3 years
Certified Ethical Hacker (CEH)	40	120	3 years

Table 5. CPE hours required for Professional Certifications renewal

When an IT professional updates his CPE in CertPod, those details are propagated to multiple CB seamlessly. CertPod built a feature to relay this SMS code back to IT professionals so that they will continue to receive this code and use it for non-CPE related matters.

Figure 7. CPE update workflow without CertPod

CertPod set up Bots to propagate CPE to multiple CB seamlessly without human interaction using Robotic Process Automation (RPA) technology. Figure 2 below illustrated the with workflow.
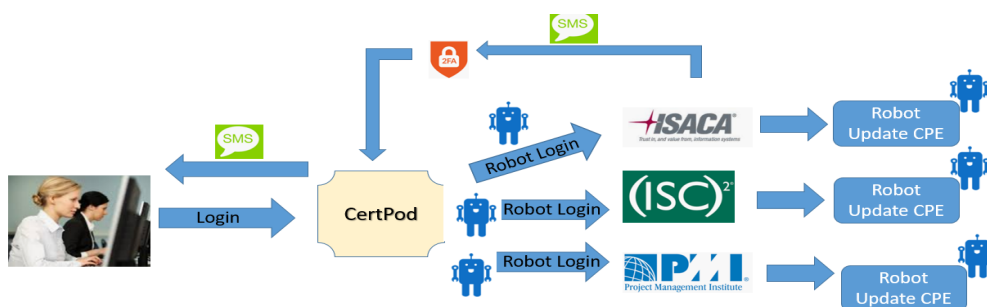

Figure 8. CPE update workflow with CertPod

2. Continuous Professional Education (CPE) Audit Compliance Service:

CB randomly selects CPE submissions by IT professionals for audit. The purpose is to verify if submitted CPE are authentic and comply with renewal requirements. Most IT professionals are not competent in the retention of records. They tend to scramble and struggle to pass this audit. They have to gather required evidence in the form of a certificate of completion to validate that they have attended a training, an entry pass to verify that they have participated in a conference or a student attendance list to confirm for delivering teaching. The CPE hours submitted will be forfeited if the selected IT professional is unable to pass the audit. An IT professional might lose the credential of professional certifications due to failure to meet the CPE requirement as listed in Table 5.

CertPod resolves this pain point for the IT professionals. It obtains evidence of CPE hours at the time of completion and securely stores them within the platform. CertPod requests IT professionals to provide evidence even though these are not required by the CB at the time of CPE submission. In the event of an audit, the IT professional will login to CertPod to select those CPE submissions subjected to the audit. The product uses RPA bots to securely pull the evidence, arrange and sort them in the format demanded by the CB. This data is then sent as an email attachment to the CB to complete the audit process. This workflow is illustrated in Figure 9 below.
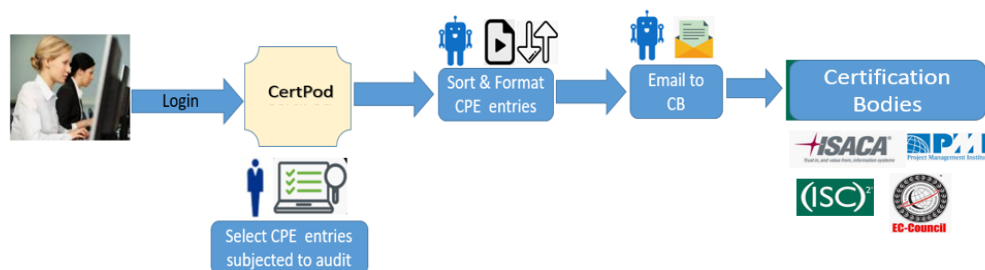

Figure 9. CertPod workflow for audit compliance service

3. CPE Earning Referral Service:

CB periodically provides endorsed CPE for IT professionals taking their supported surveys and webinars. CPE is automatically credited to IT professional account upon completion of registered survey and webinar.

Many IT professionals are unaware of these events, which are the most accessible avenue for them to earn CPE without incurring a cost, hence they lose valuable opportunities to earn CPE. CertPod is continuously scraping the Internet to collate a list of CB supported events. It configures RPA bots to sort and categorize these events belonging to different professional certifications. The RPA bots then notify IT professionals and register the event on their behalf if they are available. Figure 10 below illustrates the detailed workflow.
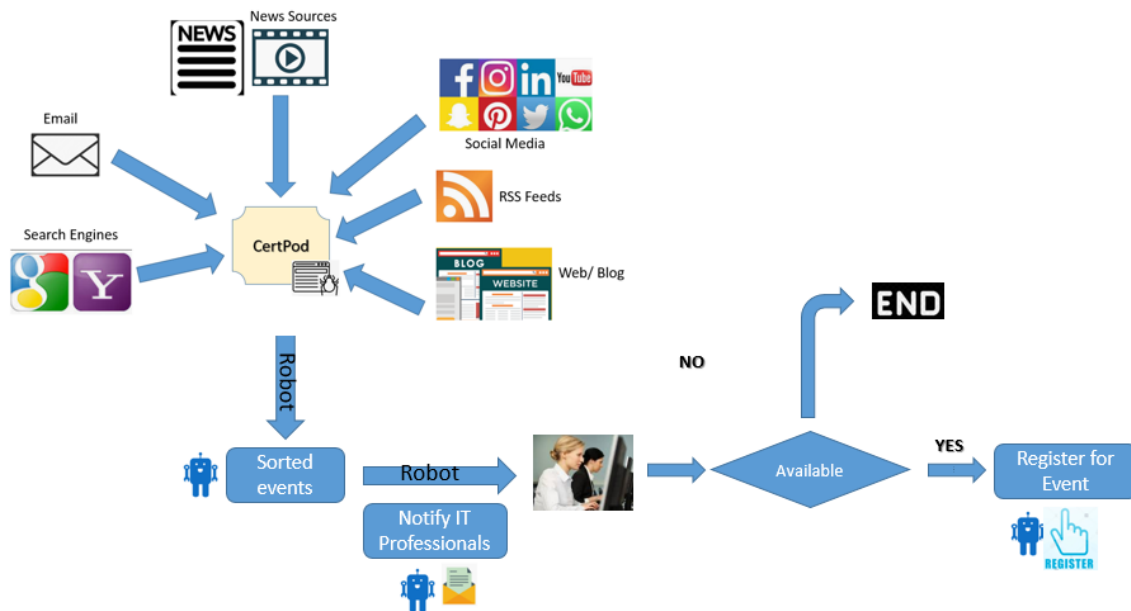
Figure 10. Web Scraping & CPE Event Registration Service

4. Blockchain Verified CPE Compliance Service:

CBs randomly conduct audits for selected CPE submissions by IT professionals. These compliance checks add administrative overhead for CB as well as workload for IT professionals, as they have to supply the required evidence to pass the specific audit.

CertPod resolves this pain point by using OpenCerts platform (opencerts.io). IT professionals attending training from 18 government institutions and agencies in Singapore will receive a digital certificate upon completion of their training posted on OpenCerts platform. These institutions include ITE qualifications, diploma and degree qualifications from polytechnics, LASALLE College of the Arts (LASALLE), Nanyang Academy of Fine Arts (NAFA), Autonomous Universities (AUs) and the National Institute of Early Childhood Development (NIEC), as well as Singapore Workforce Skills Qualifications (WSQ).

Each digital certificate has a unique cryptographic proof embedded within for secure verification stored on the blockchain. CertPod will verify the authenticity of these digital certificates if selected for audit. It will then update CB, thus easing the administrative workload for CB. It saved time and effort for IT professionals to support the audit process. They no longer need to obtain certified true copies of their education and training. Figure 11 below illustrates this workflow.
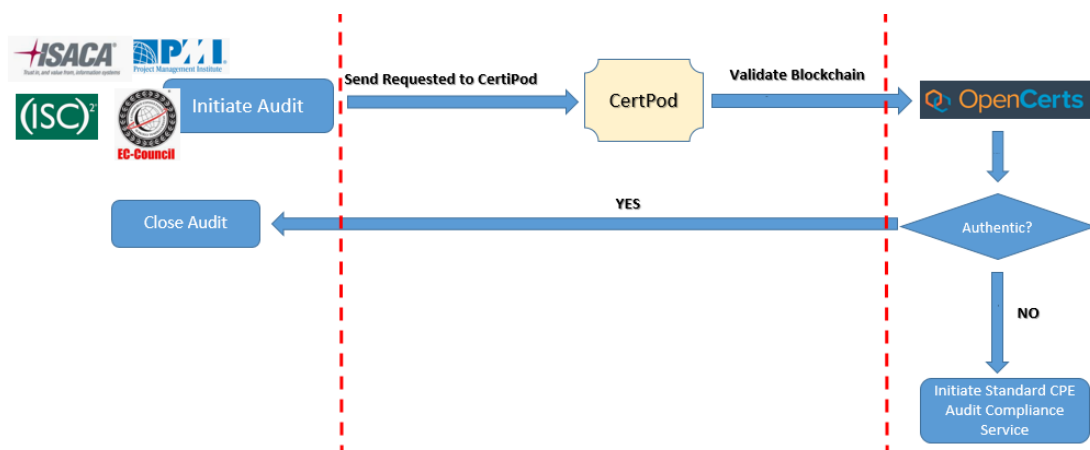

Figure 11. CPE Audit Process using OpenCerts

Phase 2 - Corporate Products and Services

The unique product features listed within this section target corporate customers. It is rolled out at phase 2, which eases the pain point for corporate managing professional certifications for their employees, who are certified IT professionals.

Professional Certification Tracking Service:

Many companies have a mandatory requirement to maintain a minimum number of certified IT professionals to serve their business objectives. More certified IT professionals can bring the company to a higher partnership level, which means better pricing, better marketing support and more sales leads.

These companies have a challenge in tracking the professional certification status of their employees. Many of them rely on a primitive tool like Excel spreadsheet stored on SharePoint. Some companies purchased or subscribed to a system depending on employees to manually update their professional certification status. This approach is ineffective, taking up too many working hours from their employees. Another issue is that the system provides inaccurate professional certification records if employees fail to update it regularly, even with multiple repeated reminders.

CertPod resolved this pain point for companies. When a company signs up, its employees have access to all product features developed in phase 1. The employees will update their CPE via CertPod, which captures their latest professional certification status. CertPod seeks consent from the employees to pull these details and propagate them to CertPod's corporate module. This approach ensures that the latest and accurate certification status is presented to Human Resources (HR), Departmental and Team lead.

In this way, a team lead can quickly answer how many certified IT professionals he has in his team during an RFP bidding. He no longer has to collect this data from a system or spreadsheet where the accuracy of the details is questionable. Figure 12 below shows how HR or a team leader extracts the professional certification status of employees from an Excel spreadsheet or system.

Figure 12. HR/ Team Lead extract certification details without CertPod

Below shows the process where HR or a team leader extract the professional certification status from CertPod. These details are updated and accurately derived from CertPod's CPE Updating Service. The employees will use this service to update their CPE since it resolves the pain points of updating multiple CB web portals separately.
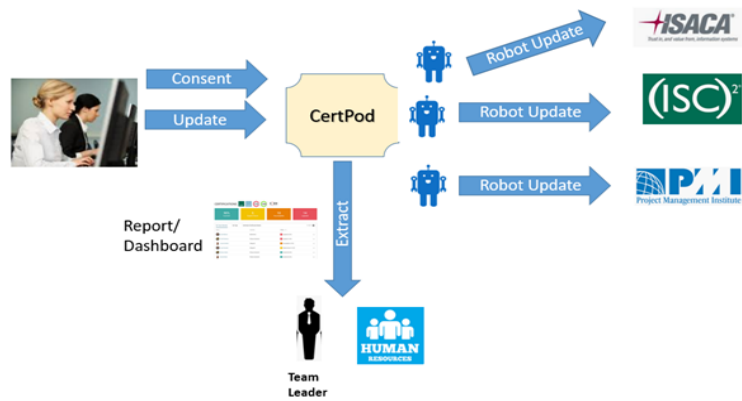
Figure 13. HR / Team Lead extracting certification details with CertPod

CertPod provides a dashboard that enables HR, Team Lead, and project managers to have clear visibility of the employee certification status. This dashboard provides functionality to break down the employee certification status by function unit, department and individual team. If an employee fails to meet the required CPE threshold CertPod will send an alert to the employee, as well as the Team Lead. Figure 14 on the right shows a simple dashboard.
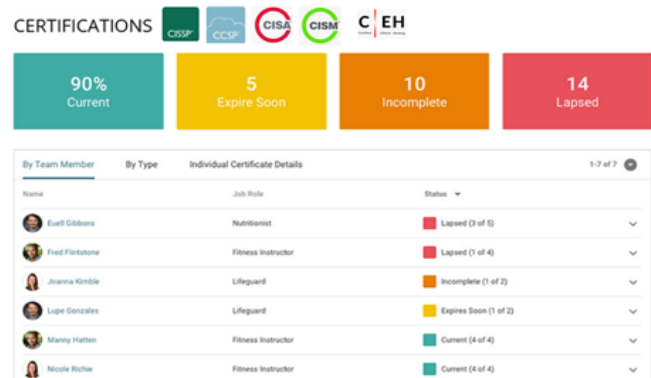

Figure 14. CertPod platform dashboard

Product Development Roadmap

The product roadmap for CertPod is depicted in Figure 15 below. CertPod targets to release Phase 1 services after the first quarter, Phase 2 services and mobile support after the second quarter. The AL Certification Recommendation feature is targeted to release at the end of fourth quarter. The development effort for this feature to support non-IT certifications will start in mid of third quarter. The release date for this feature is not finalized.
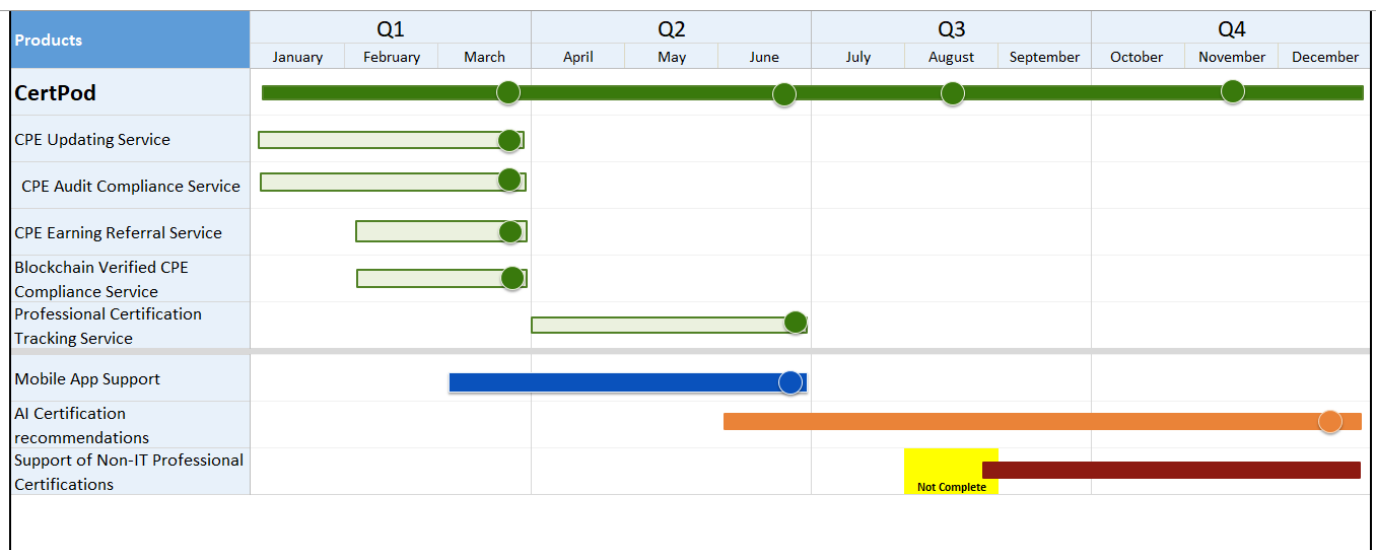

Figure 15. CertPod Product roadmap

Team

Chief Strategy Officer - Dickson

Dickson is the Co-founder and CEO of an ecommerce software startup, invested by prominent angel investor, NUS enterprise, Red Dot Ventures and National Research Foundation. The company was acquired by PLDT, listed in NYSE and PSE.

His role includes co-founding the business and developing the business model, which allows businesses to conveniently conduct online sales across multiple platforms via its proprietary online store builder software. He also played a key role in setting the overall strategic direction of the company and building the team. He initiated and led investment rounds to further fuel the growth of the company. He went on to establish strategic partnerships and key deals that generated significant revenue and expanded the user base. He led the team to win several key accolades, both locally and internationally, and he spearheaded further innovation. After the acquisition, he was hired to run Voyager Innovations Singapore and was appointed as the Board of Director in Voyager Innovations. Subsequently, Voyager Innovations was bought out by Tencent.

Being interested in education and as part of contributing to the community, he holds several key appointments and one of them includes sitting on the board of a tertiary institution in Singapore. He is also currently a PhD candidate in National University of Singapore.

Chief Technology Officer - Beibei
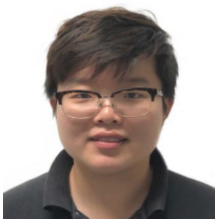
Beibei earned her B.E. in Engineering Product Development from Singapore University of Technology and Design (SUTD) under Singapore government full scholarship. She has valuable experience on the product development cycle in collaboration with Zhejiang University in China and MIT in the US. Beibei also has 5 years of professional experience as a Senior Hardware Engineer in the Networking R&D department of HP Enterprise. Other than excellent product design skills, she has also led multiple complicated issue debugging and mentored junior engineers with her expertise. Beibei is currently pursuing Masters of Information Systems in NUS School of Computing.

Chief Operations Officer - Niklas

Niklas holds a B.Sc. in physics and is currently pursuing a M.Sc. in Engineering mathematics and computational science. He has conducted research on applying machine learning to quantum computers and he has experience with developing nonlinear optimization algorithms. His model building skills and theoretical knowledge are useful for uncovering causal relationships between new features and overall quality of the product.

He led the development of a collision avoidance system for an institutional client in the United States. During the project he maintained close contact with the customer to ensure proper product market fit. He made sure the project adhered to budget restrictions and maintained communications with third party suppliers to ensure smooth operations. He is therefore acquainted with the procedure of iteratively developing and improving a product. Moreover, his programming background leaves him capable of understanding fine details of the product's software implementation.

Chief Financial Officer - Sakari

Sakari has a BSc. in industrial engineering and management and is conducting his MSc. in industrial engineering and management, majoring in strategy and venturing. Sakari has developed skills in finance through various company projects and by taking multiple finance modules during his studies. He has also experience in data visualization which will help us when analysing our financial data.

If there is a need for Microsoft Office professional or database management, Sakari can step up and handle those problems due to his working experience as a data analyst at Granlund Consulting. Moreover, Sakari is used to solving any type of business problems with knowledge and experience gained during his studies. Sakari has done multiple business projects with large Finnish companies ranging from marketing to operations and strategic transformations.

Chief Executive Officer - Max Neo

Max holds the role of the Account Manager for the only (ISC)² official training provider in Singapore. He worked closely and established a strong working relationship with The International Information System Security Certification Consortium (ISC)², a prominent Certification Body. He has detailed insights of the cybersecurity and professional certification industry. He served as a Senior Consultant and Trainer within Asia Pacific Region with more than 15 years of experience providing security consulting to his corporate clients as well as training and coaching to his students.

Max is the recipient of National Cybersecurity Postgraduate Scholarship and a few outstanding candidates nominated and attended International Education & Research Industry Program (ZERIP) chaired by Zhejiang University in Hangzhou, China. He is a local chapter member for (ISC)², PMI, and ISACA Certification Bodies. He holds a Bachelor of Information Technology (Data Communications) and earned multiple professional certifications to his credit including PMP, CISSP, CCSP, CISM, CISA, CEH, ECSA, GCFA.

Board of Advisors

Business Advisor - Clayton Jones

Clayton is the Regional Managing Director, Asia-Pacific (ISC)². He is based at (ISC)² regional headquarters in Hong Kong responsible for the overall operations of (ISC)² in the region and supporting the organization's vision. He works with government agencies and corporates providing advisory on workforce development within the cybersecurity profession. He advises the ingredients to create a win-win partnership from the perspective of a Certification Body.

Business Advisor - Max Foo

Max is the Regional Director and Chief Operation Officer at Netpoleon Group, a leading Value-Added Distributor (VAD) of Cyber Security & Network solutions across Southeast Asia region. He executes business strategies and manages the business operations. He oversees a group of IT professionals across Southeast Asia, who needs to upkeep their professional certifications status to keep the company competitive in bidding for projects. He brings in the expectation and the demanded support from a corporate perspective.

Technical Advisor - YU Chen Kuang

Chen Kuang is the Principal Lecturer & Consultant at NUS-ISS. He is the subject matter expert and brings with him a wealth of knowledge for design and implementation of technology in Robotic Process Automation (RPA), Business Processing Reengineering (BPR), and Business process management (BPM). He holds a M.S. Computer Science from Stanford University and previously worked in Deloitte and Arthur Andersen Consulting. He provides invaluable advisories for technological design and implementation for the platform.

Operation Plan

Business Canvas

The picture below shows the business canvas of CertPod. It helps us to understand our business better and gives us a big picture of how CertPod will operate.
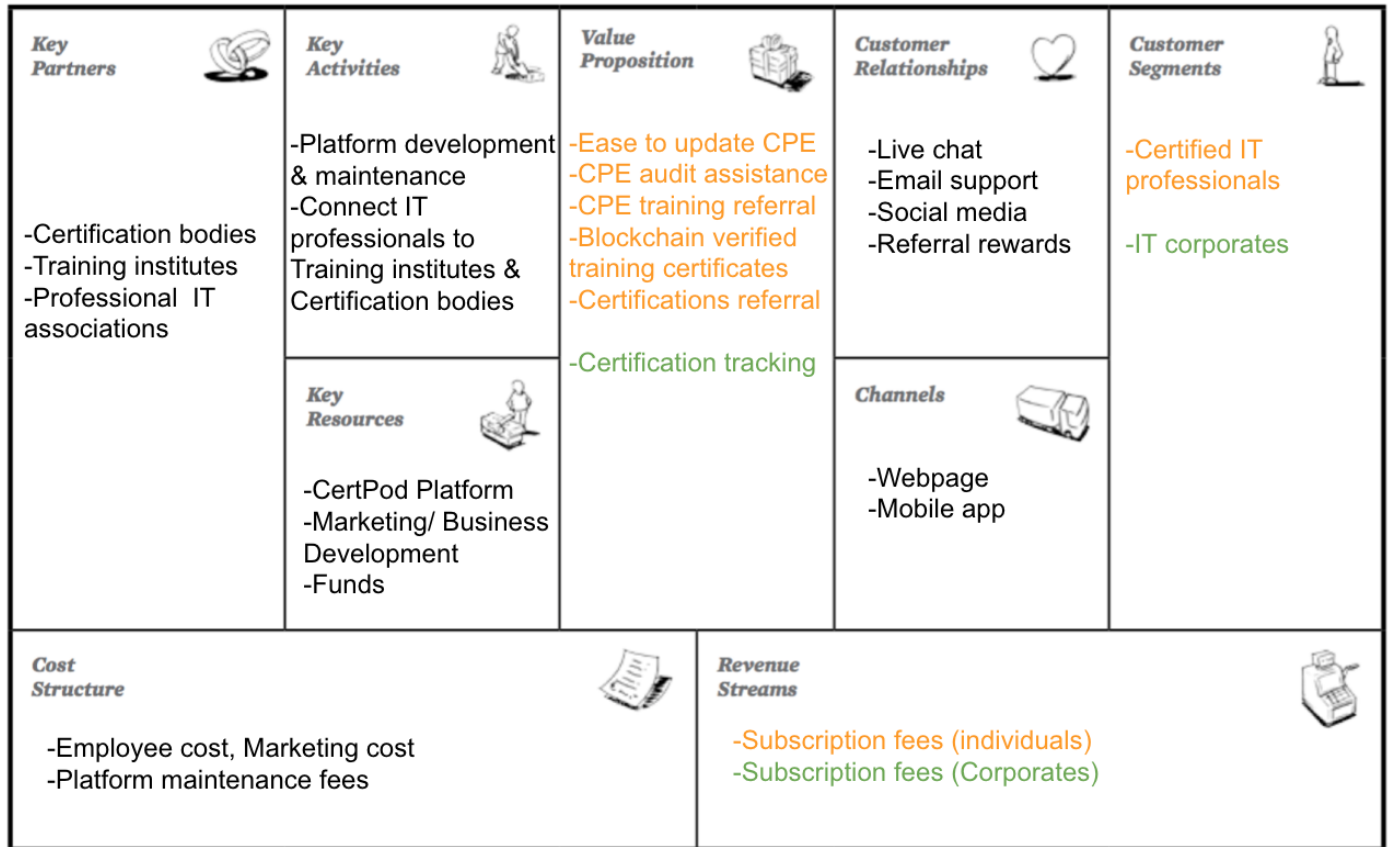

Figure 16. CertPod business canvas

Timeline and Milestones

We have to be agile and develop our product based on feedback from our customers. This is essential for survival and vital in order to establish a reputation of a high quality functioning platform providing exceptionally client services promptly. Timeline and key milestones for the first year are shown in Figure 17.
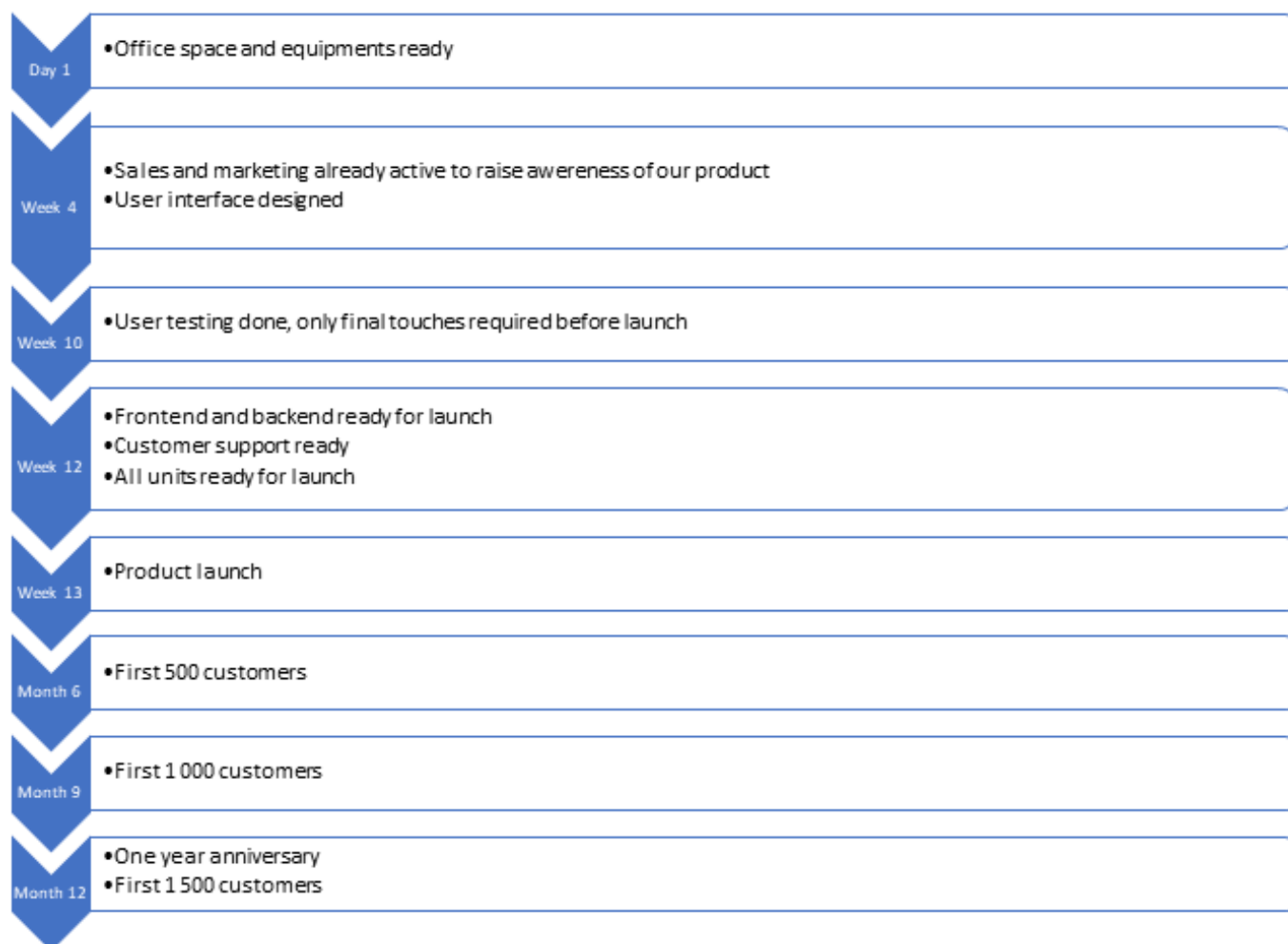
Figure 17. Timeline and milestones for the first year

Day-To-Day Operations

We will start offering our service hosting CertPod using cloud services instances in Singapore. We selected Singapore as the strategic location due to close proximity to our development and operations team. This arrangement allows them to quickly customize, deploy and resolve any service outages with the cloud service provider (CSP). Singapore is chosen also due to its compliance with cross border data transfer agreement with many countries across the Asia Pacific including our target expansion countries Hong Kong, China and Korea. This means that these countries permit the hosting of the personal identifier information (PII) of their citizens in Singapore due to the strong data protection framework she has in place. CertPod instances hosted in Singapore will serve customers in Hong Kong, China and Korea. We will subscribe to new cloud services instances locally for expansion into China and Korea, as they do not permit hosting PII of their citizens in Singapore.

Technology Operations - We seek to keep all technology operations in Singapore to ensure that we can supervise all operations activities easily as we need to make sure that our technology operations are high quality, agile, and synchronized. They will support platform development, deployment and maintenance on CertPod cloud instances. Their job scope will expand to support Android and iOS on mobile platforms aligned to our product development roadmap. One of them will double up as Data Protection Officer to ensure proper protection in place to secure customer PII.

Sales & Marketing - We will set up local representative offices when we expand overseas and hire only sales headcounts with in country contacts and proven track records to close sales driving revenues. We will engage marketing agencies driving the marketing initiatives locally for overseas markets. They will work closely with our marketing team in Singapore.

Customer Support - We will engage contact centers that support a Pay-as-You-Use model, as we do not need all support features initially. They must have the capability of supporting multiple languages to serve our customers whose English is not their native language. Our channels of support include our website form, email, hotline, and WhatsApp. They will be operating 8 X 5 on weekdays initially and extend to 7 X24 when the demands pickup.

Human Resources & Finance - Our Human Resources headcount will double up as Finance to settle all payments to CSP, marketing agencies, contact centers, and employees. They will also be in charge of in country tax filing and compliance to local manpower regulatory requirements.

Required Labor

We need 2 developers and 1 service designer, a sales and marketing team of 2, a finance team of 1 and our executive board to kick-start our business venture. We will set up our incubation office in BLOCK71 as a technology start-up making free use of hot-desks and co-working spaces for three months. We will have abundant networking opportunities, avenues seeking for grants and funding and access to a community where developers can collaborate at BLOCK71.

When expanding to new markets after the first year, we need to increase the size of our software development unit. The key skills required for our operations team include system administration, software development, network administration, cloud security, and quality assurance and testing as well as RPA knowledge. Our employees have to be able to multi-task working with different skill sets requirements in a start-up. We estimate that 9 new hires will be required for software development and marketing units in total during the second year. When starting our global expansion in the year 2023, we will need to hire 5 new people to the marketing and sales units.

Risks and Risk Mitigation

Platform/ Software development Risk - This is the biggest risk for our business venture. We may encounter prolonged software development periods missing the product development roadmap. We have to make sure that our product is ready for launch at the end of the first quarter of 2021. We need to hire the correct headcount with the correct skill set promptly to mitigate this risk. The usage of cloud platforms for CertPod permit rapid development and testing further reduce this risk. In a situation where we lack behind development, we will perform critical path analysis and realign our resources to complete those critical activities. We will also explore hiring temporary headcounts to catch up with project delivery if the situation is justified.

Product Functionality Risk - CertPod will fail to perform CPE update and support CPE audit when the format and data fields used do not align with the format and data fields used by CB. This incident happened when a CB altered their format and data fields used once in a couple of years to reflect the latest industry requirements. We will mitigate this risk by performing on-going monitoring of the interface and format used by CB for CPE submission and CPE audit. We will update our format and data fields used in CertPod to mimic the change done by CB thereby continuing to support our customer.

Regulatory/ Union risk - We expect to work in a fast paced environment with rapid development as a technology start-up. We expect frequent overtime and long working hours. This working schedule may violate local regulations in some countries where law stated no more than 10 overtime hours per week. We mitigate this risk by operating the majority of our headcounts in Singapore, where regulations are business friendly with no such restriction.

Third Party Risk - We reduce our overhead by engaging CSP, marketing agencies and contact centers to support our operations. We are subjected to their risk exposure. Our customer data may be subjected to data leakage if a CSP was hit by a security incident. Our objective to provide seamless customer experience failed if contact centers hire unqualified professionals to serve our customers. We mitigate this risk by specific exit clauses in contract, conducting stringent evaluation reviewing their track records, speaking to their existing customer, audit report (SOC1, SOC2),

and financial status prior to awarding the service to them. When the contract is in service, we have periodic meetings to address any concerns from either party.

Expansion Plan

In order to skillfully manage the expansion of CertPod, it is vital to carefully document the required steps and procedures. The following timeline gives an overview of the expansion plan.
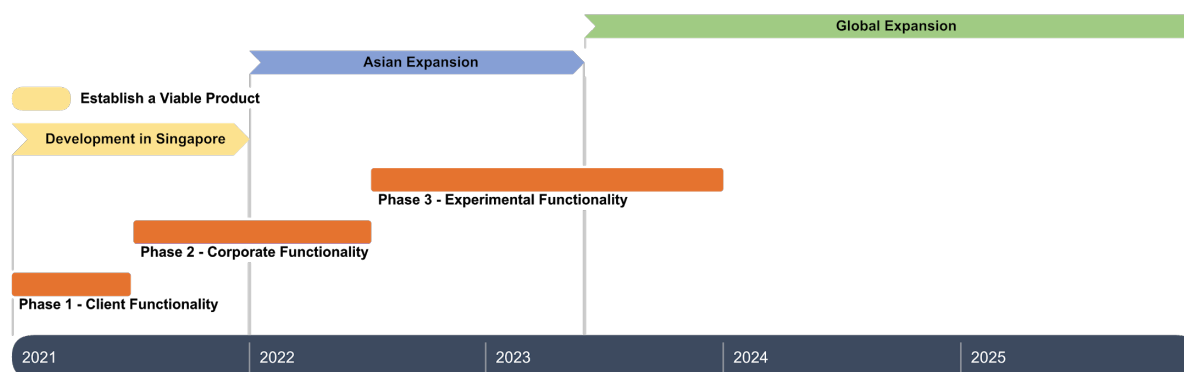
Expansion Timeline

Figure 20. Timeline for CertPod's expansion

Note that the expansion process can be divided into 3 sections. Firstly, CertPod finds it's archetype customer and refines an MVP within Singapore. The operations are then strategically expanded to key markets, allowing for dominance throughout the Asian region. Lastly, CertPod turns to global expansion, focusing on big markets such as the US, UK and Canada. The details for each stage of expansion are examined in the preceding sections.

Geographical expansion

The first year of development will be conducted in domestic markets. During this time the business is focused on validating the MVP and establishing a customer segment. Keeping complexity and competition at a minimum is important at this early stage, which is why we only target one market. After this year, CertPod will expand to international markets. However, before expanding it's important to consider whether the region already has a demand for the service. This demand will need to be combined with a lack of competitors in order for it to be a viable point of expansion. These markets must also offer geographical proximity as well as cultural similarities. Cultural similarities are important because the MVP has a higher chance of effectively being transferred if the foreign customer segment has similar dynamics.

By considering the number of CISSPs and PMPs across major markets, one can gauge the demand for our service. CISSP and PMP are some of the most popular professional certifications among IT professionals and the assumption is that other certificates are following a similar distribution. The figures, which can be found under A4 - Expansion Plan, make it clear that Singapore is the only country in the SEA-region with a significant number of IT certifications. However, a promising first point of expansion is Hong Kong. It has a high density of CISSPs in combination with a close geographical proximity, as well as a similar business climate to that of Singapore. China and Korea will be the preceding markets for expansion. These are homogeneous markets where language is an entry barrier. CertPod will

therefore roll out a local version, with a native user interface. This version of CertPod, which supports double bytes character sets, is capable of supporting Simplified Chinese, Korean and Traditional Chinese language.

The majority of business execution for the Asian expansion will be run through Singapore. Potential legislative issues regarding data persistence and manipulation might spark the need for storing and managing data locally. These issues can be resolved, without the need to set up regional offices, by subscribing to different cloud services. In this way, CertPod manages to expand its operations without becoming fragmented with this mode of operation.

After 1.5 years of expansion to key hubs in Asia, CertPod will have established dominance in the region. It is then time to proceed with global expansion. The biggest international markets for certified IT professionals are in the US, UK & Canada. CertPod will set up regional representative offices with minimum headcount to reduce operational cost over this phase of global expansion. Due to the legislative model in the US, the complexity of setting up office varies depending on state. Taxation policies also vary, sparking the need to wisely plan where to register the business. As a conclusion, the markets we plan to enter are listed in the table below.

Phase Number	Target Expansion Region	Countries
1	Local	Singapore
2	Asia	Hong Kong, China, Korea
3	Global	United States, United Kingdom, Canada

Table 6. CertPod's geographical expansion plan

Expanding the Customer Segment

The need to acquire and maintain CPE hours for certification purposes is not restricted solely to the IT sector. Supply Chain professionals need to maintain CPE for *Certified Supply Chain Professional* (CSCP) and *Certified in Production and Inventory Management* (CPIM) certifications. Accounting professionals need to maintain CPE for *Certified Public Accountant* (CPA) certification. Once a dominant market position is acquired within the IT sector, CertPod could further overtake these customer segments.

Expanding the Product Functionality

The majority of CPE related activity is done via computer and a web service will therefore serve as a sufficient MVP. The MVP will offer the essential features outlined in Phase 1 - Products and Services for IT Professionals. New features will be tested to establish whether or not they add value to the core business of Certpod. Two key branches of expansion that CertPod will investigate are mobile applications and certificate recommendations.

1. Mobile Applications:

Certpod will expand its operating platform to mobile apps once the business model is verified and a customer base is established. The mobile app rollout is a must as the number of mobile users have exceeded the number of users for personal computers, laptops and tablet devices. The process of filing for CPE is greatly simplified with the usage of a mobile phone. An IT professional can take a photograph of his conference pass, which is then used as proof of attendance. He no longer has to scan his conference pass and upload into his laptop for filing. Certpod further offers push notifications within this mobile platform, which warns users in case their CPE hours are running too low. The app contains a calendar view that lists upcoming training opportunities. This allows users to find relevant opportunities at a glance, rather than personally searching for them on the web.

2. Certificate Recommendations:

Many IT professionals start their career by taking an IT certificate - and acquiring the right certificate is crucial to set you on the right path. Since the IT sector is largely unregulated, there is generally not a set of universal certificates required for a certain position. Many IT professionals are therefore clueless about what certificate they should get in order to maximize their attractiveness on the job market. CertPod position itself to solve his career puzzle for IT professionals. By utilizing an AI engine, CertPod evaluates an IT professionals current portfolio of certifications and gives tailored feedback on what certificates will likely increase his/her attractiveness towards employers. In order to achieve even better recommendations the user can choose to answer a set of questions that help the AI determine the most appropriate certificates.

Resources needed for Expansion

During the first year we seek to raise SGD 70k in funding, which is extensively detailed in the Financials section. These early funds will be used to fuel the creation of our MVP, as well as raise awareness of the product. The next round of funding will aim to raise SGD 700k. This will allow CertPod to recruit professionals throughout Asia and gain wider coverage. According to our revenue models, we can then choose to pursue organic growth. We may however decide to raise additional funding to accelerate the global expansion process. Our expansion-related expenses can largely be categorized into the following.

1. Marketing:

A large part of the capital will be invested in targeted marketing, as a way of boosting the interest in our product, upon moving into new markets. CertPod will conduct marketing campaigns through social media platforms, such as LinkedIn and Facebook, as well as direct marketing to big corporations that possess a large number of IT professionals. Further details regarding our marketing strategy can be found under Marketing and Sales Strategy.

2. Platform Development:

Our product will be introduced as a web service. However, our enterprise system will be developed with expansion in mind. It will be built using a multitier architecture to facilitate efficient integration with third party certificate bodies. This also enables IT professionals to interact with our service through several interfaces, such as mobile applications. Due to the uniform nature of the certificates, this system will also be able to handle an increase in the number of certificates we support. The modular design also allows additional product features, such as AI engines, to be added incrementally. Along with expanding the enterprise platform comes the expansion of the associated hardware.

3. Human Capital:

The preferred way of expanding into a new market is to locate and recruit professionals with knowledge of the certificates that have primary importance in the region. During phase 3 of the expansion, CertPod will open business in countries far from its headquarters. This creates a need for a remote sales team. As far as marketing is concerned it would be viable to either set up a marketing office, or trust a local agency to handle it.

It is vital to maintain a coherent business structure throughout the expansion. In the event that a remote office is established it's therefore advisable for a core group of employees to transfer from the local office. This group would facilitate high-level administration of the new office - and would be responsible for the local recruitment process. The local know-how is especially important in homogeneous markets like China and Korea. In these markets it would be helpful to first locate an advisor with knowledge of regulation requirements, where to look in terms of hiring and what the local customs are when doing business. A business partner may also be required in markets where 100% foregin ownership of a company is prohibited.

Risks and Risk Mitigation Strategies

A potential risk is early introduction of too many features into the service. To mitigate the amount of competition in an early stage of development it's important to first establish a customer segment where you are offering a truly unique service. In light of this, CertPod will focus its early efforts on providing IT professionals with the services outlined in phase 1. The niched strategy avoids competition, but it also puts CertPod in a position of high concentration risk - and a change in consumer behaviour will have a big impact on generated revenue. By slowly expanding the customer segment to not only include IT-professionals, but also corporations, CertPod will acquire multiple streams of cash flow - limiting the concentration risk. The move to also serve corporations will expose us to Counterparty risk. However, payments from the counterparties would be received on a frequent basis. This does not fully alleviate counterparty risk, but it does limit the extent to which an unreceived payment affects cash flows.

As CertPod sets up global operations it will be exposed to FX risk as well as additional political risk. Moreover, maintaining a D/E ratio of 0.5 - 1 will expose CertPod to Interest rate risk. Through the purchase of appropriate derivative instruments, such as FX swaps, the effect of exchange rate fluctuations can be hedged. Similarly, the interest rate risk can be hedged with the use of interest rate swaps. Alleviating political and regulatory risk is harder. It can however be minimized by strategically expanding to countries with stable governments and maintaining operations in multiple countries.

The technical nature of the software service puts high demand on employees. CertPod will need to hire software engineers, experts within business enterprise development as well as mobile app developers. The introduction of high-tech features like AI certificate matching also demands a team of experts in machine learning. Finding the right employees will therefore be a constant concern. By strategically placing the headquarters of CertPod in Singapore close to academic centers and maintaining good relations with universities, CertPod can make this hiring process an integrated part of the daily operations.

Financials

Sources of Revenue and Cost Drivers

We are offering a subscription-based product with an average SGD 7 monthly fee per user (IT professional). Individual users will pay a monthly fee of SGD 10, while corporate customers will pay SGD 3-7 per employee depending on the number of employees.
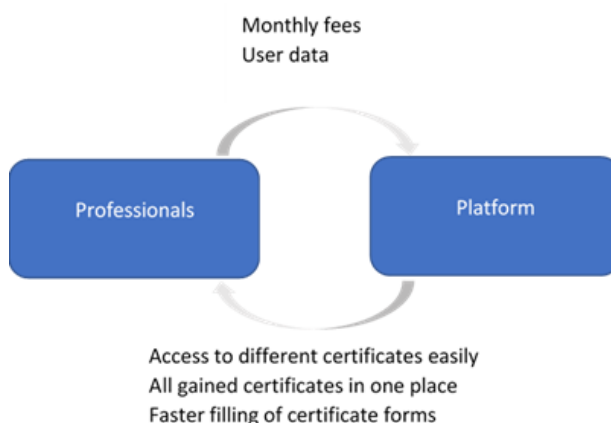

Figure 21. Revenue streams between stakeholders

Our key costs are employee costs, marketing costs, and platform maintenance fees to the server provider. Our main source of revenue is subscription fee while we are also considering gathering revenues from referral fees. We are seeking an investment of SGD 70k, which will be used to cover our first-year expenses. An additional 700k is needed after the first operational year to cover growth costs including costs of marketing and new hires.

Financial Model and Investor Returns

Due to a lack of data from comparables we see the DCF method as the best way to estimate our enterprise value. In our financial model, we estimated the number of users for each quarter for the first two years from which we derived sales for each quarter. From the year 2023 onwards sales were estimated on a yearly basis based on the number of users. Costs were estimated on a yearly basis. For the first two years, costs were estimated by taking into account the key cost drivers as well as equipment costs. From the year 2023 onwards, the cost structure is estimated as a percentage of sales. We used WACC of 80% and the exit multiple of 7.0. This gives us a terminal value of SGD 53M, whose present value is SGD 2.8M. Thus, the enterprise value of our company is SGD 3.6M. By investing SGD 70k with a 5% equity stake, your investment's value in exit will be SGD 2.6M. This will give you a return on investment of 3680%, a cash-on-cash of 37.8 and an internal rate of return of 28%. After the first year, we will raise a second round of funding to cover our expansion in Asian. In this round, we will be seeking SGD 700k. We estimate that the expansion to the US, UK, and Canada can be done organically, without the need for further investments. However, this will be revised upon the end of the first 6 quarters. Financial models made can be found in the attached Excel file. As the market is segmented and global, an exit through a trade sale to another company or private equity fund is possible. And as IPO is significantly more expensive and ties investors' money longer, a trade sale is preferable.

Sales generated during the first five years are shown in Figure A6-1. As one can see, we are estimating exponential growth, and we assume that we have a great chance to exceed these numbers by using your connections to get our message into the best marketing channels. Figure A6-2 presents the gross profits for the first five years. After the first year's losses, gross profits are estimated to grow exponentially. Finally, in Figure A6-3, one can see the cumulative present value of free cash flows and burn rate. We estimate that we will become cash flow positive in autumn 2023 after which we estimate to have solid growth.

Detailed finance calculations can be found in appendix A6, Table A6-1 to Table A6-3.

Critical Success Factors

In conclusion, it can be said that CertPod's operations are dependent on three critical success factors. These success factors must be well nurtured by every decision the board takes, at all stages of business development. These factors are:

1. Ease of Use: CertPod needs to be easy to use so that existing customers have a high satisfaction rate on the easy procedure and more customers will be attracted to use CertPod.

2. Accurate Transactions: CertPod needs to be able to process the CPE credits input by the users and update it accurately to the certification bodies. Failure to do so will potentially cause distrust from our customers.

3. Secure Data Protection: As a digital platform, CertPod must be resilient to cybersecurity risks and be able to protect user information.

Appendix

A1 - Market and Industry

The following table shows growth rates of different IT segments between the years 2017 - 2019. Note that the worldwide IT spending increased with 3.2 percent between 2018 and 2019. The primary factors driving this change were IT services and communication services.

	2017 Spending	2017 Growth (%)	2018 Spending	2018 Growth (%)	2019 Spending	2019 Growth (%)
Data Center Systems	181	6.4	192	6.0	195	1.6
Enterprise Software	369	10.4	405	9.9	439	8.3
Devices	665	5.7	689	3.6	706	2.4
IT Services	931	4.1	987	5.9	1,034	4.7
Communications Services	1,392	1.0	1,425	2.4	1,442	1.2
Overall IT	**3,539**	**3.9**	**3,699**	**4.5**	**3,816**	**3.2**

Table A1-1. Worldwide IT Spending Forecast (Billions of U.S. Dollars). Source: Gartner (October 2018)

The following figure shows the growth of the global IT industry over the past 8 years. The growth has reliably stayed between 3% - 5% per year.
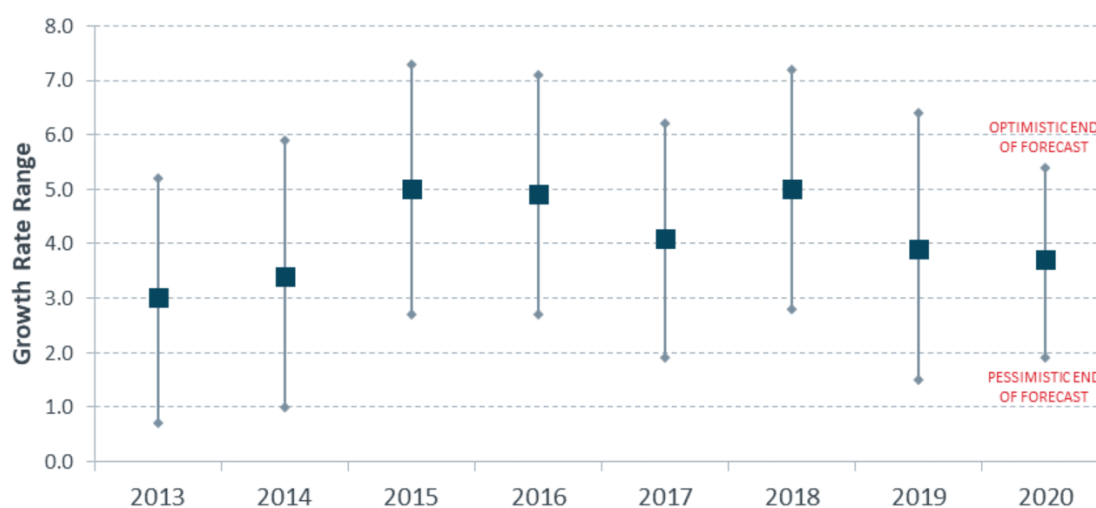

Figure A1-1. Global IT industry growth from 2013 to 2020 .Source: ComPIA (November, 2019)

The following figure shows market demographics for the IT industry, grouped by geographical region.
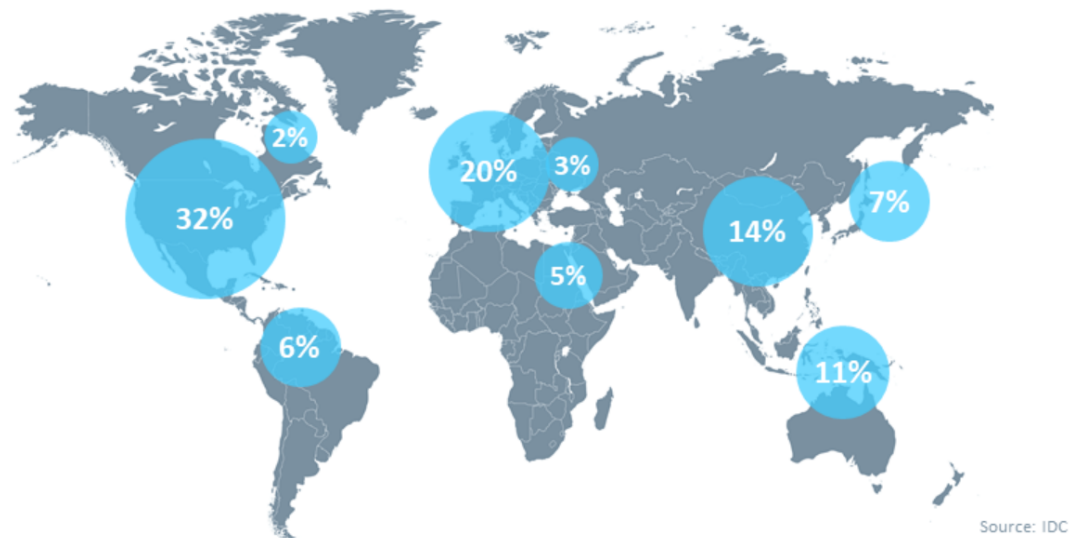

Figure A1-2. The global IT industry grouped by geographical region. Source: IDC

A2 - Targeting segment

The following table shows the number of members of different certification bodies, as per geographical region.

Certification Bodies	Members worldwide	Members in Singapore	Members in Asia	Members in UK, USA, Canada
ISC2	140,000	2191	15,615	103,975
ISACA	140,000	2000 (approx.)	15,000 (approx.)	100,000 (approx.)
EC-Council	220,000	3000 (approx.)	20,000 (approx.)	130,000 (approx.)
PMI	500,000	11,196	390,634	60,000 (approx.)
GIAC	144,000	2000 (approx.)	16,000 (approx.)	100,000
IIA	200,000	2500	18,000 (approx.)	130,000
Total	1,344,000	22,887	475,249	623,975

Table A2-1. Total members of different certification bodies in different regions. Source: ISC2, IIA, Wikipedia

The following figure shows the age distribution of IT professionals in the United States. The IT market is further divided into subcategories. More than 70% of the total It professionals are more than 35 years old.
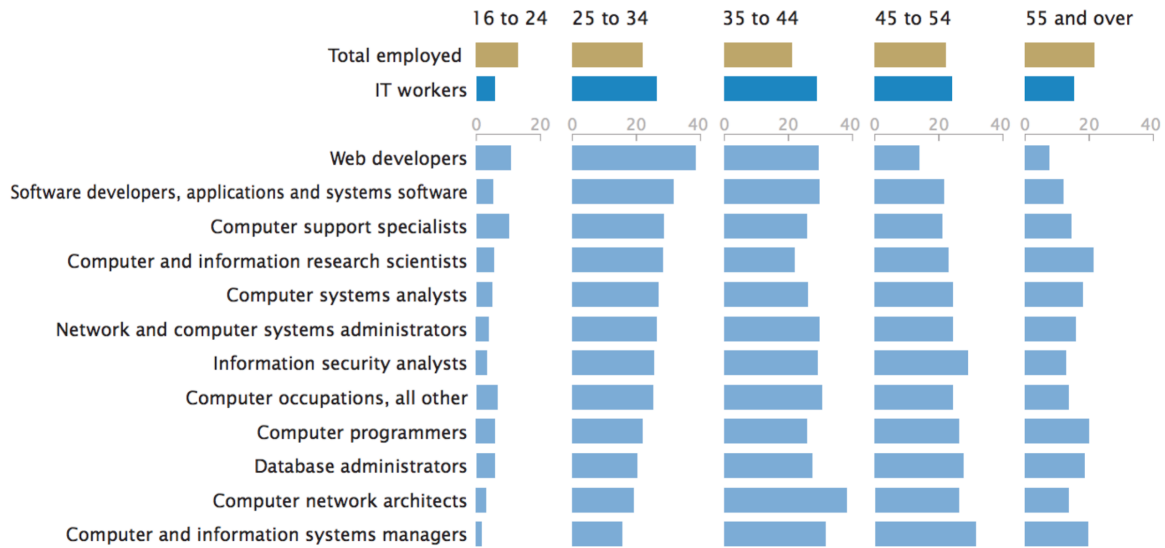
Figure A2-1. Distribution of IT workers by age. Source: U.S. Census Bureau (2014)

A3 - Internet Marketing Strategy

Google Analytics: While setting up the various internet marketing strategies, it is imperative to set up analytics to understand the traffic and how each channel is working. Without analytics, we will not be able to understand what needs to be further improved and whether conversions to sign ups is optimised.
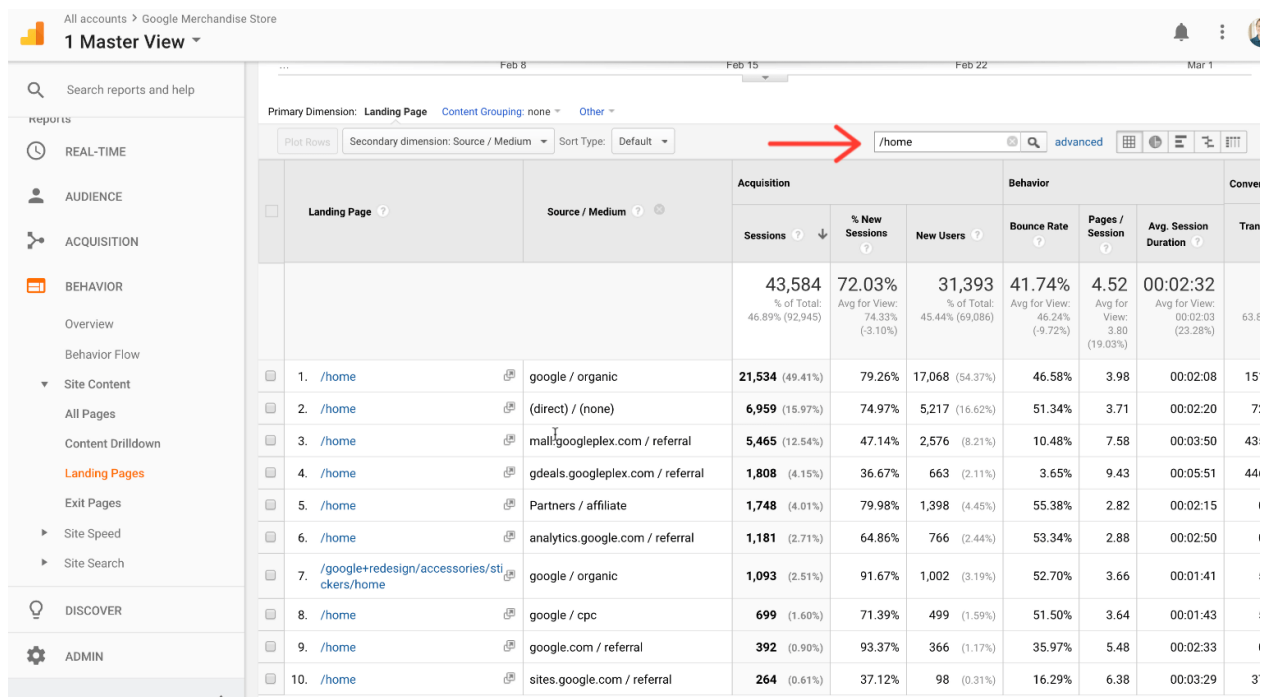

Figure A3-1. Google analytics setup. Source: Google analytics

From Fig A3-1 we can see the various sources for the landing pages and can understand better which campaigns actually draw attention. Further analysis can enable us to see the keywords that are working well and to continue maintaining the relevancy of these keywords that get us most traffic.

We can also understand how the behaviour of a visitor is like and which path did they drop off or what leads them to better sign up. This has significant importance as it could be an error link on the site or the user interface of the site has to be more intuitive that can facilitate the conversion.

Subsequently It is important to set up key metrics such as churn rate, conversion rate of sign ups and these can be more readily when we already have analytics in place.

A4 - Expansion Plan

This table shows number of members of CISSP and PMP certifications by country. Figures of PMP members in some countries are not available. These figures are accurate as of January 2020. It is published by (ISC)² on bi-annual basis.

Country	Number of CISSP[1]	Number of PMP[2]
Singapore	2191	11,168
Other SEA countrie	911	7466
Hong Kong	1827	
India	2506	72,000
Australia	2696	
China	2870	300,000
United Kingdom	7562	
United States	90,514	500.000
Netherlands	2734	
Korea, Republic of	2744	
Japan	2566	
Germany	2429	
France	1141	
Canada	5899	

*Table A4-1. CISSP and PMP members by countries. Source: ISC2, PMI*

A5 - Customer Testimonials and Endorsements

We collected some feedbacks from potential users of CertPod to understand if they are interested in using CertPod's services. We received positive feedbacks from them, which gives us more confidence to get CertPod out to the market.

Shermane Toh - Regional Associate HR Director, LIXI
"This is a great product to allow my functional heads and my department to track the latest certification status of our IT professional to allow us to formulate a training and development road map for them."
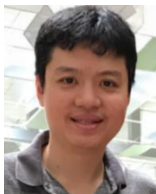
Ong Chee Wee - Associate Director, NCS
"We constantly bid for projects as an info-communications technology (ICT) service provider. It is crucial to have the exact number of certified IT professionals at finger tip. This product just does that."

Neo Koon Seng - IT Infrastructure Lead Asia, Lagardére Travel Retail
"It is tedious to manage CPE for my IT certifications. It is a nightmare when selected for a CPE audit. I am glad that there is finally a product that helps to ease this effort."

A6 - Financial charts

The figure below shows five years projection of sales for CertPod.

37

The figure below shows five years projection of gross profit for CertPod.
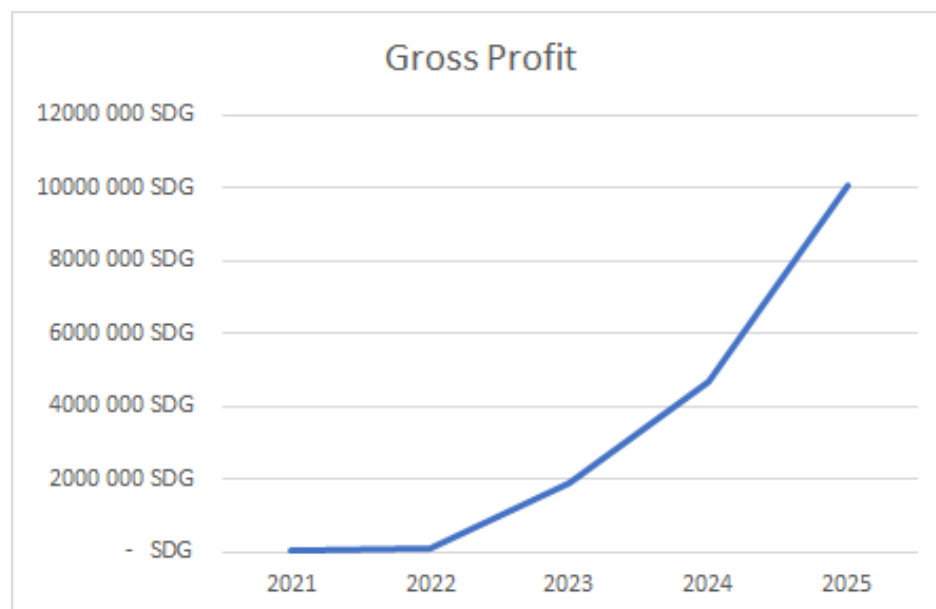

Figure A6-2. Five years gross profit projection for CertPod

The figure below shows five years projection of burn rate and cumulative PV of FCF of CertPod.
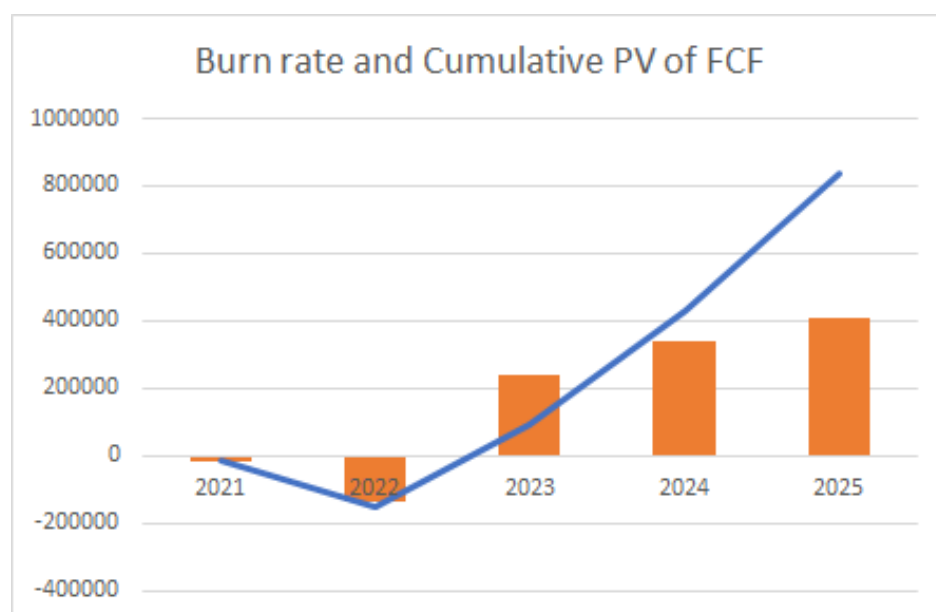

Figure A6-3. Five years burn rate and cumulative PV of FCF projection for CertPo

The tables below include detailed finance calculations of CertPod.

First year	Month	3	6	9	12	15	18	21	24
	Number of customers	0	500	1000	1602	3200	6400	9600	16634
	Average monthly subscription fee	7 SDG							
	Revenue per customer per month	7.0 SDG							

		Projected period				CAGR	
		2021	2022	2023	2024	2025	('21-'25)
	Operating data						
	Sales	48,322 SDG	594,676 SDG	2,378,616 SDG	5,880,000 SDG	12,600,000 SDG #NAME?	#NAME?
	% growth		1231%	300%	150%	150%	
	COGS	10,000 SDG	475,723 SDG	475,723 SDG	1,176,000 SDG	2,520,000 SDG	
	% sales	21%	80%	20.0%	20.0%	20.0%	
	Gross Profit	38,322 SDG	118,953 SDG	1,902,893 SDG	4,704,000 SDG	10,080,000 SDG	
	% margin	79.3%	20.0%	80.0%	80.0%	80.0%	20,858,616 SDG
	SG&A	60,000 SDG	475,723 SDG	475,723 SDG	1,176,000 SDG	2,520,000 SDG	
	% sales	124%	80%	20.0%	20.0%	20.0%	
	EBITDA	- 21,678 SDG	- 356,770 SDG	1,427,170 SDG	3,528,000 SDG	7,560,000 SDG	
	% margin	-44.9%	-60.0%	60.0%	60.0%	60.0%	
	D&A	966 SDG	11,894 SDG	47,572 SDG	117,600 SDG	252,000 SDG	
	% sales	2.0%	2.0%	2.0%	2.0%	2.0%	
	EBIT	- 22,644 SDG	- 368,664 SDG	1,379,597 SDG	3,410,400 SDG	7,308,000 SDG	
	% margin	-46.9%	-62.0%	58.0%	58.0%	58.0%	
17.0%	Taxes @ 17%	- 3,850 SDG	- 62,673 SDG	234,532 SDG	579,768 SDG	1,242,360 SDG	
	EBIAT	18,795 SDG	- 305,991 SDG	1,145,066 SDG	2,830,632 SDG	6,065,640 SDG	
	Plus: D&A	966 SDG	11,894 SDG	47,572 SDG	117,600 SDG	252,000 SDG	
	Less: Capex	966 SDG	- 11,894 SDG	- 47,572 SDG	- 117,600 SDG	- 252,000 SDG	
	Less: Inc. In NWC	- SDG	- 27,318 SDG	- 89,197 SDG	- 175,069 SDG	- 336,000 SDG	
	Unlevered Free Cash Flow	- 18,795 SDG	- 333,309 SDG	1,055,869 SDG	2,655,563 SDG	5,729,640 SDG	
	Discount period	0.5	1.5	2.5	3.5	4.5	
	Discount factor	0.75	0.41	0.23	0.13	0.07	
	PV of FCF	- 14,009 SDG	- 138,019 SDG	242,901 SDG	339,393 SDG	406,819 SDG	
	Capex	966 SDG	11,894 SDG	47,572 SDG	117,600 SDG	252,000 SDG	
	% sales	2.0%	2.0%	2.0%	2.0%	2.0%	
	Net working capital	2,416 SDG	29,734 SDG	118,931 SDG	294,000 SDG	630,000 SDG	
	% sales	5.0%	5.0%	5.0%	5.0%	5.0%	
	(Increase)/Decrease in NWC		-27317.7	-89197.0	-175069.2	-336000.0	
	Invesment	- 1,000,000 SDG					
	Value of equity at exit					2,646,000 SDG	
	Total cash flows, exit 2025	- 1,000,000 SDG	0	0	0	2,646,000 SDG	
	Cash on cash					2.65	
	IRR					28%	
	Cumulative PV of FCF	- 14,009 SDG	- 152,028 SDG	90,873 SDG	430,266 SDG	837,085 SDG	
	PV of FCF	-14008.91366	-138018.73	242900.6489	339392.9437	406818.8452	
	COGS and SG&A	70,000 SDG	951,446 SDG	951,446 SDG	2,352,000 SDG	5,040,000 SDG	
	Required number of employees (excluding founder team	1	10	15			

Right-side panel:

WACC	80.0%
Exit multiple method	
Exit multiple	7.0
Terminal value	52,920,000 SDG
Terminal year FCF	5,729,640 SDG
Implied perpetuity growth rate	57.2%
Perpetuity growth rate method	
Perpetuity growth rate	5%
Terminal value	8,021,496 SDG
Implied exit multiple	1.4
Discount factor for terminal year	5.3%
PV of terminal value	2,800,640 SDG
Enterprise value	3,637,725 SDG
Investment	70,000 SDG
Equity stake offered	5%
Value in exit	2,646,000 SDG
Cash-on-cash	37.80
IRR	28%
ROI	3680%

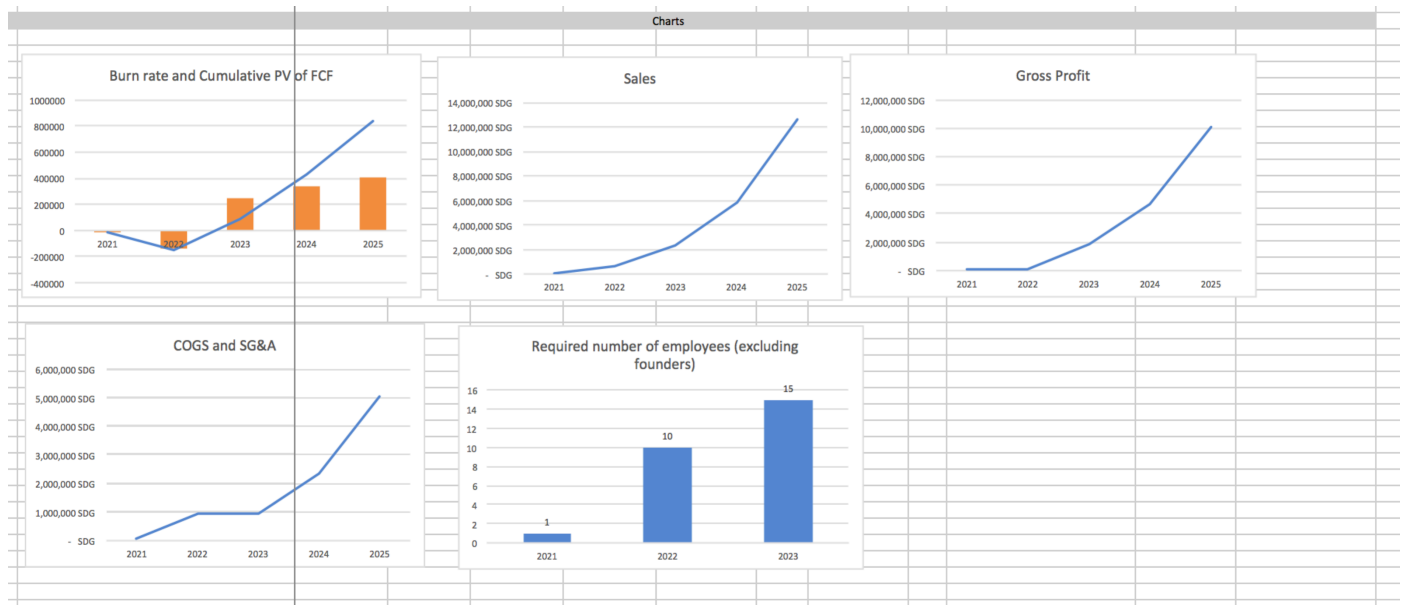*Table A6-1. Valuation calculation for CertPod*

Table A6-2. Valuation visualization for CertPod

Certification Bodies	Members worldwide	Members in Singapore	Members in Asia (+SG)	Members in UK, USA, Canada	
ISC2	140000	2191	15615	103975	
ISACA	140000	2000 (approx)	15000 (approx)	100000 (approx)	
EC-Council	220000	3000 (approx)	20000 (approx)	130000 (approx)	
PMI	500000	11196	390634	60000 (approx)	
GIAC	144000	2000 (approx)	16000 (approx)	100000	
IIA	200000	2500	18000 (approx)	130000	
Total	**1344000**	**22887**	**475249**	**623975**	
Target market (70%)	940800	16021	332674	436783	
10% share of target market	94080	1602	33267	43678	
Approximation for the end each year					
Year	2021	2022	2023	2024	2025
Number of users	1602	16634	40000	100000	200000

Table A6-3. Market size for CertPod

A7 - References

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