

GLASSJAR LIMITED

The Development and Launch of Glassjar

A review of the start-up process.

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This report is submitted in partial fulfillment of the requirements for the award of Master of Engineering Management at the University of Canterbury

PROJECT REPORT

Project Title: The Development and Launch of Glassjar Limited.

Company: Glassjar Limited.

Focus Area: Small Business Development and Entrepreneurship.

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DISTRIBUTION CONTROL

Version	Date	Name	Title	Change Description
3.0	31/1/2014	Rachel Wright	Project Supervisor	Comments and Changes Suggested
5.0	6/2/2014	Piet Beukman	Project Supervisor	Final Comments
6.0	8/2/2014	Piet Beukman	Project Supervisor	Final Submission

VERSION CONTROL

Version	Date	Author	Description of Work
1.0	29/10/2013	George Smith	Created Document Plan
2.0	15/1/2014	George Smith	Project Plan Formulation & Implementation
2.0	17/1/2014	George Smith	Introduction, Conclusion & Recommendations
2.0	22/1/2014	George Smith	Personal Reflection & Appendices
2.0	25/1/2014	George Smith	Executive Summary and Proof Read
3.0	30/1/2014	George Smith	Full Review and Check
4.0	3/2/2014	George Smith	Supervisor's Adjustments
4.0	4/2/2014	George Smith	Final Review
5.0	5/2/2014	George Smith	Extended Literature & References
6.0	7/2/2014	George Smith	Incorporated Supervisor's Comments

ABSTRACT

Glassjar Limited produces cloud based software for tenants and landlords to manage their rental properties and finances. This project focused on implementing the Glassjar business plan in the lead up to the product's launch at the end of the project period. The report summarises the planning processes involved in the project, reports the results and makes comparisons between the two.

ACKNOWLEDGEMENTS

Developing and launching a new business requires input from a wide range of people. Accordingly there are a number of people who I would like to acknowledge as the success of Glassjar to date would not have been possible without them.

First and foremost, I would like to thank my mentor and project supervisor Rachel Wright who has been amazing in her support and guidance throughout the year. Rachel has been so generous in sharing her time, knowledge and experience and for that I am incredibly grateful.

I would also like to thank Chris Harty and the entire team at Harvey Cameron advertising. As our assigned mentors through the entré competition they went well beyond what could have been expected and were amazing in their support.

Glassjar's progress would not have been possible without our current team of Matthew Galloway and Duncan Keall who have worked tirelessly to develop the software program. In addition it is important to acknowledge Bjorn Arndt and Michael Norrie who helped develop the concept throughout the entré competition.

I would also like to thank Piet Beukman for being an amazing source of advice, experience and guidance. I am very grateful that he allowed me to take on Glassjar as my final project and for the support he offered me throughout the year.

MEM would not be the same without Beverly Hall, so Bev thank you so much for everything you have done to make the year as enjoyable as it has been.

Finally I would like to thank the MEM class of 2013. It has been an awesome year and I have thoroughly enjoyed getting to know and work with you all.

EXECUTIVE SUMMARY

Glassjar is a rental management company that produces software products for tenants and landlords to manage their rental properties and finances. It was founded in 2013 by George Smith, the student undertaking this MEM project.

Project Background

During 2013 Glassjar was entered into Entre, the student run business competition at the University of Canterbury. By the end of the competition Glassjar had created a business plan to launch its first product. The student's intention for this MEM project would be to implement this business plan and launch Glassjar's product. This report details the progress made and lessons learnt from this development.

Project Plan Formulation

To achieve the objective of launching Glassjar, the project was broken down into the sub-projects identified and described below:

1. **Establish Glassjar as a Company:** Glassjar must be established as a legal entity with accounts, employees, office space and protected IP.
2. **Form Partnerships with Businesses:** A number of businesses were highlighted as being capable of advancing the quality of Glassjar's product, assisting its launch and promotion, and making contributions to its funding. The scope of this deliverable was to form such partnerships.
3. **Solidify Business Model:** Assumptions made in the business model submitted to entr  needed to be validated and corrected throughout the project period.
4. **Landlord Market Validation:** Validate the assumptions behind landlord behaviour, pain points, desired solutions and inclination to purchase Glassjar's products.
5. **Seek Angel Investment:** Additional funding will be required to continue Glassjar's development beyond the project period and this deliverable focused on securing such investment.
6. **Marketing:** An appropriate marketing plan must be developed and enacted to support Glassjar's product launch.
7. **Create the Site Framework:** The process for how users interact with the site must be defined and developed.
8. **Create Tenant Financial Tools:** Market research conducted during the entr  competition highlighted financial management as the most pressing pain point for tenants. Products to solve this problem must be designed and developed.
9. **Product Testing and Security:** Glassjar holds substantial user data and as such the software must be thoroughly tested for bugs and certified to appropriate security standards.
10. **Guides:** Developing guides was seen as a way to advance Glassjar's brand image though strengthening its commitment to helping tenants.
11. **Launch the Site:** Following the completion of the required sub-projects listed above, Glassjar would be in a position to launch its first product. This sub-project was created to ensure it happened and to have a date fixed for its completion.

Project Plan Implementation

The following deliverables were then attributed to each sub-project forming a complete work breakdown structure. The planned completion of these deliverables was then compared to the actual progress made throughout the project period and is summarized in Table 1 below.

Sub-Project	Deliverables	Planned Completion	Actual Completion	Comparison
1	1.1 Produce Legal Agreements 1.2 Register Company and Directors 1.3 Establish Team 1.4 Find Office Space 1.5 Organise Finances 1.6 Protect IP	31 st Oct	1 st Dec	- All deliverables were achieved. - Completion of 1.3 differed from that planned through losing Bjorn Arndt's involvement.
2	2.1 Structure relationship with NZ Post 2.2 Form a relationship with a Bank 2.3 Form relationships with power companies 2.4 Conduct market research on deals/forums 2.5 Create strategy for launching deals site 2.6 Approach small business partners	31 st Jan	NA	2.1 and 2.2 were completed by 31st January. - The relative importance of 2.3, 2.4, 2.5 & 2.6 was reduced and subsequently they were not completed.
3	3.1 Update revenue model 3.2 Verify model (banks) 3.3 Update business plan	31 st Nov	31 st Jan	3.2's reliance on Kiwibank caused the delay.
4	4.1 Create survey/questionnaire for discussions 4.2 Make contact and conduct research	31 st Jan	31 st Jan	Both deliverables were achieved however this research will be continued throughout the coming months.
5	5.1 Contact Angel Investors 5.2 Create elevator pitch document	31 st Dec	11 th Dec	- Deliverables completed ahead of schedule. - Glassjar accepted into the Lightning Lab
6	6.1 Create marketing plan for students 6.2 Implement marketing plan	28 th Feb	NA	Harvey Cameron are assisting the completion of these deliverables.
7	7.1 Create the login process 7.2 Create programming platform 7.3 Define general look and feel of the site	6 th Nov	22 nd Dec	Completion was behind schedule however the quality achieved was stronger than planned.

8	8.1 Importing data into Glassjar 8.2 Create circular debt algorithm 8.3 Tie in with YouPost 8.4 Direct feeds from Kiwibank 8.5 Define UI	31 st Nov	31 st Jan	- Significant delays for each deliverable. - Reliance on Kiwibank and NZ Post also slowed completion.
9	9.1 Implement Security 9.2 Thoroughly test for bugs 9.3 Release to flats for use 9.4 Iterate design	31 st Jan	31 st Jan	9.2, 9.3 & 9.4 completed as scheduled. 9.1 delayed.
10	10.1 Write guides for flatting	7 th Feb	NA	This deliverable was postponed.
11	11.1 Launch the site	7 th Feb	Est. 17 th Feb	Delayed due to software development taking longer than expected.

Table 1: Planned Completion vs. Actual Completion of Deliverables

Project Review

Glassjar's development has progressed strongly over the project period and Glassjar will launch its first product on the 19th of February. Whilst a number of planned deliverables were not achieved, this was not through significant failings within the project period but instead due to;

- The inexperience of the student in initially planning a project of this nature and size,
- A change in the relative importance of each deliverable as new opportunities arose or insights were gained,
- A change in the revenue model adopted by Glassjar, and
- Glassjar's interaction with outside businesses.

The deviations from the project charter exemplify the need for adaptability when undertaking a project of this nature and risk. Initially stating a clear and solid objective provides high level direction for the project that can then be broken into various sub-projects and deliverables. These sub-projects can then be removed, amended, or reduced in importance as the project evolves without detriment to the overarching goals of the project.

The project has served as an excellent application of theory learnt throughout the MEM coursework. In addition the project experience provided many new opportunities for gaining insight into the tasks and techniques required to successfully launch a start-up business. It has allowed the student to explore current literature and accepted theory regarding start-up enterprises, technology based companies and the investment process, and to apply it in a real life setting. For these reasons the project has been a very strong learning exercise for the student.

Glassjar's acceptance into the Lightning Lab validates the effort invested during the project period and presents a perfect transition from MEM that will allow Glassjar to continue the progress made to date.

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1. INTRODUCTION

The project entitled 'The development and launch of Glassjar Limited' came out of the requirement to undertake no less than 700 hours on a business related project in order to complete the Master of Engineering Management (MEM) program.

George Smith, the student undertaking this MEM project, founded Glassjar during the 2013 academic year and successfully entered the concept into the University of Canterbury students' business competition. During the course of the competition the Glassjar team developed a business plan for the launch of Glassjar's first product. The student's intention for this MEM project was to enact this plan and launch Glassjar.

This report details the progress made and lessons learnt throughout the project period and will:

- Provide a background of the Glassjar concept and the team developing it.
- Provide an overview of planned course of action for the project period.
- Describe the funding available to support the project.
- Compare the planned course of action to reality and investigate reasons for the differences.
- Provide conclusions and recommendations that could be useful for anyone planning to launch a start-up enterprise under similar circumstances.
- Provide an overview of Glassjar's planned future development.
- Provide a personal reflection on the project period and the MEM year.

The appendices will:

- Provide an overview of market research that supported conclusions reached in the report.
- Present screen shots of the software package.
- Provide an overview of the Lightning Lab program.
- Present the one page investment summary developed during the project period.
- Analyze Glassjar's strategic plan and highlight critical success factors that influence it.
- Present an overview of the work breakdown structure from the Project Charter.

2 BACKGROUND

2.1 Glassjar Concept

The concept for Glassjar was first developed in 2011 in response to issues George Smith's flat faced with managing collective finances. An initial software version allowed his flat to monitor their central flat bank account, to split and assign costs to those flatmates who incurred them, and to have a running ledger of exactly who owed what to, or was owed what from, the central flat account. Once developed, this initial software worked perfectly in giving both transparency and accountability to their finances. With that George Smith became convinced that the software could help other flats in similar situations.

At the start of 2013 George Smith decided to commercialise the concept with the primary driver being the ability to compete in *entré*, the University of Canterbury student's business competition. The Glassjar team came second in this competition and won twenty thousand dollars' worth of cash and business services. However, the most valuable outcome was a full business plan comprising product scope, customer validation and a launch strategy.

2.2 Glassjar Company

Glassjar currently consists of:

George Smith – the founder and major shareholder of Glassjar Limited. George completed his Undergraduate Degree in Civil Engineering at the University of Canterbury in 2012 and subsequently enrolled in the 2013 MEM course for which Glassjar became his project.

Duncan Keall - shareholder and software developer. Duncan completed his Undergraduate Degree in Natural Resource Engineering at the University of Canterbury before completing a year's graduate work at Abbley Transportation Consultants. Duncan left Abbley to join the Glassjar team full time at the start of December 2013.

Matthew Galloway – shareholder and software developer. Matthew completed his Undergraduate Degree in Computer Science at the University of Canterbury in 2013. Matthew joined the Glassjar team in November 2013 having been recommended by a mutual friend.

Glassjar has also received the mentoring and support of:

Rachel Wright – In her role as Manager of UC Innovators, Rachel mentors and supports student entrepreneurs at the University of Canterbury. Rachel mentored Glassjar throughout the *entré* period and became the key supervisor for the project period.

Harvey Cameron Advertising – Harvey Cameron Advertising were Glassjar's assigned mentors throughout the *entré* competition. Thankfully Glassjar also won additional time with the company as part of the *entré* prize pool.

PricewaterhouseCoopers – Glassjar won \$5000 worth of PWC advisory time through the *entré* competition. They have since been engaged in an advisory and mentoring role.

3 PROJECT PLAN FORMULATION

3.1 Overview

In preparation for the project period the broad objective of launching Glassjar was broken down into a variety of sub-projects and key deliverables.

In essence the project would focus on two key areas; software development and business development. Software development, led by Matthew and Duncan, would focus strictly on the development and testing of the desired software features. Whereas business development, led by George, would complete the actions required to successfully commercialize this software.

The following table shows the planned sub-projects:

Project Area	Sub-Project	Overview
Business Development	1	Establish Glassjar as a Company
	2	Form Partnerships with Businesses
	3	Solidify Business Model
	4	Landlord Research Validation
	5	Seek Angel Investment
	6	Marketing
Software Development	7	Create the Site Framework
	8	Create Tenants Financial Tools
	9	Product Testing and Security
	10	Guides
	11	Launch the Site

Table 2: Planned Sub-Projects

These sub-projects were in turn broken down into more detailed descriptions of the tasks required to be completed. This is illustrated in the work breakdown structure (WBS) presented in Appendix 11.7.

Assigning completion dates was perhaps the hardest part of planning the project period. This was largely due to the uncertainty of most deliverables whether external e.g. business partners or internal e.g. the inexperience of the team completing such a project. For this reason the project charter advised flexibility and a control process for approving changes to the plan.

An additional difficulty was confirming the relative importance of each sub-project and deliverable. This was again overcome by remaining flexible to changing circumstances and through seeking advice and input from as many advisors and mentors as possible.

These plans were developed to the best of the ability of the student with limited experience in leading a project of this scale and uncertainty. The next main section, Project Plan Implementation,

will provide insight into how well the project was planned by comparing the actual outcome of these sub-projects to that planned.

3.2 Funding

The funding for Glassjar has come from a variety of sources as detailed in the table below:

Source	Amount	Description
entré Competition	\$1,650 Cash \$2,800 Harvey Cameron \$5,000 PWC	The percentage of prizes won by George in the entré competition was reinvested into Glassjar.
UC Innovators	\$5,000	UC Innovators Summer Scholarship.
UC Innovators	\$1,000	Seed funding.
Owners Capital	\$20,000	Additional capital injected into Glassjar by George.
Total	\$34,500	

Table 3: Funding Sources for Glassjar

This budget represented the maximum limit for Glassjar's development throughout the project period. In reality it was hoped that much less would be spent in order to preserve capital for continued development post MEM.

4 PROJECT PLAN IMPLEMENTATION

In order to compare the actual course of action to that planned, each of the various sub projects have been analyzed as follows:

- **Sub-Project Outline** – an overview of the deliverables specified in the Project Charter that were thought necessary to achieve the various sub-projects.
- **Outcome** – a description of the results achieved of each sub-project.
- **Plan vs. Reality** – a comparison of the actual course of action to that planned and an analysis of reasons behind any difference.
- **Lessons learned** – identifies the lessons that were learnt by the student through undertaking each of the sub-projects and compares this supporting literature.

4.1 Establish Glassjar as a Company

Sub Project Outline

This involved formally establishing Glassjar as a company and forming a solid foundation for its continued growth.

Outcome

All of the deliverables were achieved for this sub-project.

- 1.1 Produce Legal Agreements:** Lane Neave were engaged to draft a shareholders agreement and a constitution for the company.
- 1.2 Register Company and Directors:** Glassjar Limited was registered with the Companies' Office on the 8th of October 2013 as was sole director George Smith. PWC was used to register the company for tax, GST and as an employer.
- 1.3 Establish Team:** Glassjar Limited now comprises George Smith, Matthew Galloway and Duncan Keall.
- 1.4 Find Office Space:** Office space was established at Matthew Galloway's flat. Additional space was utilized in the UC Innovators room at Dovedale campus.
- 1.5 Organise Finances:** Accounts were set up with ANZ, these were then linked with Xero. PWC has been engaged to oversee the finances of the company.
- 1.6 Protect IP:** The application for the Glassjar Trademark was accepted by the Intellectual Property Office on the 7th of November 2013. Glassjar sought and followed advice from Robert Snoep of Create IP and Matthew Adams of AJ Park Intellectual Property and decided against applying for software patents. This was due to Glassjar's software being an improvement on current methods and not a novel invention. Furthermore Glassjar was advised that there would substantial cost in applying for such patents and also great difficulty and cost if ever required to defend them in court.

Plan vs. Reality

Whilst the planned deliverables were achieved the exact completion deviated from what was expected in establishing the team.

It was originally hoped that the current team would include Bjorn Arndt who worked with Glassjar throughout the entré competition. Unfortunately a suitable agreement for his continued involvement with the project could not be reached and he withdrew from the company.

Lessons Learned

Protecting equity and seeking smart investment money is important for a startup business (Christensen, 2003). However, releasing equity during the start-up process can be a very effective strategy for securing key individuals. This is as “the people you want to attract to your business are the people who want equity” (Harris, 2013) and as offering stock involves no cash outlay for the startup.

If offering equity in return for effort, it is very important to form formal agreements at the point when individuals cement their involvement with the company “[make] sure your equity deal is clearly stated in writing” (McAlister, 2012). As was the case with Glassjar, delaying this can lead to a rift forming in the minds of those committing to the company. Once such a division occurs bridging/resolving the issues can be very hard particularly when money and time is at stake.

4.2 Form Partnerships with Businesses

Sub Project Outline

A number of businesses were highlighted as capable of advancing the quality of Glassjar’s product, assisting its launch and promotion, and making contributions to its funding. Securing such partnerships would thus be of great assistance to the launch of Glassjar.

Outcome

The deliverables for this sub-project were more difficult to achieve given the interaction with and reliance on outside businesses. A number of these deliverables were not achieved given a reduction in their perceived importance in the lead up to product launch.

2.1 Structure Relationship with New Zealand Post: New Zealand Post will support Glassjar’s marketing efforts throughout its launch and in addition will help Glassjar approach the next round of business partners. Discussions are still underway regarding the funding and technical support required to incorporate RealMe logins and the YouPost platform into Glassjar.

2.2 Form a Relationship with a Bank: Kiwibank were successfully engaged as an initial launch partner. They will support Glassjar’s marketing efforts throughout its launch and provide access to their API¹ for Glassjar.

2.3 Form Relationships with Power Companies: It was decided to delay Glassjar’s discussions with power companies to instead focus on first structuring the relationships with Kiwibank and New Zealand Post. This is as these relationships were more critical for Glassjar’s initial product development and subsequent launch.

¹ An API or Application Programming Interface specifies how software components should interact with each other. Linking with Kiwibank’s API will allow Glassjar users to access their account information in real time through the Glassjar platform.

2.4 Conduct Market Research for a Deals Site: The importance of this deliverable was reduced when Glassjar decided to follow a Software as a Service (SaaS) model (Refer to Sub-Project 4.3) as the main revenue stream for the business. Furthermore it became apparent that such a site could not be developed prior to launch without first expanding Glassjar's current development capacity.

2.5 Create Strategy for Launching a Deals Site: For the above reasons this deliverable was also not achieved.

2.6 Approach Small Business Partners: Following the decision to adopt a SaaS model the need to partner with small businesses was reduced.

Plan vs. Reality

The completion of these deliverables differed significantly from what was planned due to Glassjar strongly focusing on establishing the relationships with Kiwibank and New Zealand Post. Structuring these two relationships was a significant achievement for Glassjar and the gains made by doing so will greatly advance the strength of Glassjar's launch.

Lessons Learned

"Any company that has a large enough user base to make a partnership worthwhile will always move slower than [a start-up] company needs" (Balfour, 2013). This was the case with Kiwibank and New Zealand Post and particularly over the December-January period. Furthermore the interaction with a small start-up is often a relatively less important project for a large enterprise (Goodall, 2013) or an experiment that will have little impact on their business should it fail (Balfour, 2013). These factors combine to delay the progress that can be made in establishing a relationship between small and large businesses. As a consequence it is important to maintain an awareness of this potential problem and to include it when preparing the risk section of the Project Charter.

When structuring partnerships it is also important to maintain leverage over the potential partner (Reid, 2014) and to ensure that "if the partnership tanks, it won't tank your company with it" (Balfour, 2013). Glassjar maintained this through making its software applicable to all banks and by avoiding exclusivity agreements with the two companies.

Bureaucracy and multiple management layers are two factors that can act to slow a company as it grows and establishes itself (Ante, 2013) and these were both evident with New Zealand Post. Start-up companies should avoid these pitfalls and strive to maintain their fast moving culture as "moving fast enables [companies] to build more things and learn faster" (Zuckerburg, 2013). This is particularly important in the technology scene where "the ready flow of capital to high-potential returns suggests that high market pain opportunities won't be there long" (Adams 2010). Whilst it was out of line with its business partners, this sub-project highlighted to the Glassjar team that it's fast moving pace was an asset worth protecting.

4.3 Solidify Business Model

Sub Project Outline

At the start of the project period Glassjar still needed to decide its exact revenue model. This had remained incomplete as Glassjar had not yet conducted enough market research to select the most appropriate revenue model.

Outcome

The deliverables for this sub-project were achieved in their entirety.

- 3.1 Update Revenue Model:** Glassjar changed its core revenue model from being advertising and partnership based to instead focus on SaaS² subscriptions.
- 3.2 Verify Model (banks):** Despite discussions having been held between Kiwibank and Glassjar this deliverable still requires additional work before its completion. It is hoped that a license agreement can be reached between Glassjar and Kiwibank whereby Kiwibank will purchase software subscriptions on behalf of its customers.
- 3.3 Update Business Plan:** The business plan submitted to entrée was updated significantly throughout the project period in order to reflect the progress made and the validation of earlier assumptions made by Glassjar. A one page summary of this business plan's executive summary can be found in Appendix 11.5.

Plan vs. Reality

This process took significantly longer than expected and was due to the large amount of market research that was conducted.

Lessons Learned

A company must always be prepared to pivot, i.e. shift their strategy, to focus on greater customer demand and/or more lucrative business opportunities (Ries, 2011) (Christensen, 2003) (Adams 2010). In order to understand customer demand and where potential opportunities may lay companies must conduct extensive market research and product validation (Blank, 2014) (Khan, 2013) (Wright, 2014) (Adams, 2010). Despite this, the need to do so is initially quite hard for many entrepreneurs to accept and for this reason it is very important to seek mentors and to actually listen to their advice.

4.4 Landlord Market Validation

Sub Project Outline

A wide range of market research was conducted on the tenants' market throughout the entrée competition however little investigation was conducted on the landlords' market. Subsequently this sub-project sought to establish the problems faced by landlords, what an appropriate solution may entail and whether such a solution is likely to be profitable enough to warrant its development.

Outcome

- 4.1 Create a Survey for Landlords:** A survey was created and made live on a landing page hosted at www.glassjar.co.nz. This landing page was promoted through Google AdWords and through landlords known by the Glassjar team.
- 4.2 Conduct Face to Face Research:** In addition to the landing page personal contact was made with a range of landlords and property managers. An overview of this research and the conclusions drawn from it can be found in Appendix 11.1

² SaaS or Software as a Service is "a software delivery model in which software and associated data are centrally hosted on the cloud" (Wikipedia, 2014).

Plan vs. Reality

Whilst some market validation was conducted by the planned completion date, Glassjar became aware that much more needs to be completed. Subsequently Glassjar will continue to conduct market research throughout the upcoming months.

Lessons Learned

It is important that market validation work occurs at the start of such a project and before development effort is potentially wasted (Khan, 2013) (Wright, 2014) (Blank, 2013) (Adams, 2010). Glassjar's delay of this work effort served only to delay the receipt of insights that eventually gave certainty to a number of assumptions and helped to revoke numerous others.

The focus of a market validation should be geared toward actually approaching and talking to customers face to face as doing so affords a much greater level of understanding to the party conducting research (Khan, 2013).

Utilising Google AdWords in conjunction with a landing page is a way to receive additional feedback from potential customers who are unable to be interviewed. This technique also quantifies the number of potential customers actively searching for the proposed solution (Bonney, 2013). That being said it can be a costly exercise when testing or using commonly used search phrases.

4.5 Seek Angel Investment

Sub Project Outline

Additional funding will be required to continue Glassjar's development beyond the project period. To secure it potential investors had to be contacted and supporting material namely the business plan and investor pitches had to be created and refined.

Outcome

5.1 Contact Angel Investors: The search for angel investors focused on the Lightning Lab, a business accelerator based in Wellington (Refer to Appendix 11.4), and the IceHouse, a business incubator located in Auckland. Glassjar was successful in its application to the Lightning Lab.

5.2 Create Investment Pitch and Supporting Document: A 30 second elevator pitch, a more detailed 90 second pitch and a full 5 minute investment pitch were prepared during the project period. The business plan was also updated in accordance with deliverable 3.3. A one page summary of this business plan's executive summary is included in Appendix 11.5.

Plan vs. Reality

These deliverables were achieved in their entirety and Glassjar's acceptance into the Lightning Lab represents a fabulous achievement for the project period.

Lessons Learned

The process for raising investment money is long and complex (Payne, 2013) and unfortunately there is no way to accidentally secure such investment. Nonetheless undertaking the process served as a brilliant way for Glassjar to expand its network, meet other start-up business, and receive

additional input and advice on the development of the company from those experienced in the industry.

4.6 Marketing

Sub Project Outline

This sub-project involved preparing the marketing plan for Glassjar and enacting it in the lead up to, and throughout, the product launch.

Outcome

The results for this sub-project exceeded those that were expected due to the support received from Harvey Cameron Advertising and Glassjar's main business partners, Kiwibank and New Zealand Post.

6.1 Create Marketing Plan for Students: A marketing plan focusing on social media presence and partnerships with Universities, Students Associations and supporting business was developed. Kiwibank will promote Glassjar through their website, email database, Facebook page and YouTube channel.

6.2 Implement Marketing Plan: Glassjar's social media presence is performing strongly with Glassjar's Facebook page receiving nearly 650 likes by the end of the project period. All other marketing will be conducted closer to Glassjar's launch date.

Plan vs. Reality

The support and expertise received from a range of businesses and mentors allowed Glassjar to develop a marketing plan of high quality. The success of the Glassjar Facebook page shows good initial engagement with the target market.

Lessons Learned

Early stage marketing as well as market validation is important for a start-up business as it helps to engage a potential market through which product validation can initially occur. This allows a company to test the size of the market, their responsiveness to the product offering and their inclination to purchase the planned solution before any development is actually undertaken (Khan, 2013) (Bonney, 2013) (Wright, 2013) (Blank, 2013) (Reifer, 2002).

Once a minimum product set is developed a company can then target their early stage/beta customers as early adopter customers. This strategy acts to target the most engaged customers and ensures that the marketing budget is efficiently spent.

4.7 Design the Site

Sub Project Outline

This sub-project focused on establishing the core architecture of the site and involved selecting the programming language and how information should be stored and accessed within the software's database.

Outcome

The results for this sub-project were completed as follows.

- 7.1 Create the Login Process:** The login process was defined and successfully programmed. A key part of this deliverable was streamlining and simplifying the user sign up process whilst still allowing Glassjar to gain as much user data as possible.
- 7.2 Create Programming Platform:** Significant programming effort was invested to design the site as a platform onto which additional features could be added with little adjustment to the underlying code base. Because of this the technical debt³ of Glassjar's site is very low.
- 7.3 Define General Look and Feel of the Site:** Glassjar's user interface was redesigned during the project period and screenshots of it are included in Appendix 11.3.

Plan vs. Reality

The quality of results exceeded that initially planned however the time taken to complete these deliverables was longer than expected. This was due to the effort invested in reducing the technical debt³ of the site which has set the foundation for easy expansion of the site.

Lessons Learned

Good software code requires substantial thought, iteration, effort and time to complete. Despite this, the investment is worth it if it can prevent unnecessary delays or code re-writes in the future (Vial, 2013). It is also important to ensure that software collects as much user data as possible in order to strengthen the company's market position, sustainability and value to outside businesses (Davis, 2013) (Blandy, 2005) (McClure, 1994). This was particularly important for Glassjar as it began to establish itself as a company.

4.8 Create Tenants' Financial Tools

Sub Project Outline

Financial management was highlighted as the most pressing consumer pain point in Glassjar's research of the tenant market. In line with current literature on, and accepted best practice for, product development, Glassjar focused on developing this minimally accepted feature set, satisfying the chosen submarket before moving on to the next development set (Christen, 2013) (Ries, 2011).

Outcome

- 8.1 Importing Data into Glassjar:** Glassjar can import Comma-Separated Values (CSV) files for ANZ, Kiwibank, BNZ and Westpac. Glassjar is also working with Kiwibank to integrate their API into the Glassjar's software.
- 8.2 Create Circular Debt Algorithm:** Initially Glassjar thought that a separate algorithm would be required to track and assign costs not facilitated by the central bank account. However, following the redesign of Glassjar's accounts system this feature was no longer required.
- 8.3 Tie in with YouPost:** At the time of writing this deliverable had not been achieved however New Zealand Post has offered both funding and technical support to assist with integration of RealMe logins and the YouPost platform.
- 8.4 Direct Feeds from Kiwibank:** This deliverable was not achieved during the project period but is expected to be completed in the coming months.

³ Technical Debt is a metaphor that refers to the eventual consequences of poor software architecture. It can be thought of as work that needs to be done to complete a specific project. If debt is not repaid, interest is accumulated on it making it continually harder to implement further changes (Wikipedia, 2013).

8.5 Define UI: The manner in which information produced by our financial algorithms is displayed on the site was designed and programmed by Duncan Keall. An example of this display can be seen in Appendix 11.3.

Plan vs. Reality

This sub-project took significantly longer than initially expected and this was due to a number of factors;

- Duncan and Matthew were not sufficiently involved in preparing the Project Charter. This resulted in incorrect assumptions and deadlines being presented in the original project plan.
- The fact that Duncan Keall was only able to work on Glassjar fulltime from the 6th of December and not from the start of the project period.
- Deliverables 8.3 and 8.4 required involvement from outside businesses.
- Considerable effort was first invested in completing sub-project 7 'Create the Site Framework'.

Despite the time taken, the results achieved were of very good quality and this stands as testament to the skill and efforts of Duncan Keall and Matthew Galloway.

Lessons Learned

Glassjar found it very difficult to accurately predict software completion dates due to the uncertainty involved with the novel design process. For this reason Glassjar followed agile development principles which are typically adopted on complex projects "where accurate estimates, stable plans and predictions are often hard to get in early stages" (Wikipedia, 2014). The difficulty in planning completion dates was compounded by the interaction with outside businesses and the associated issues highlighted in Sub-Project 4.2 'From Partnerships with Businesses'. As a consequence of both these reasons it is important to include a large float in the project plan for future software developments.

4.9 Product Testing and Security

Sub Project Outline

Glassjar holds substantial user data, a large amount of which relates to user's bank accounts and financial positions. Such "data is a two-sided coin: it creates business value, but it also represents a significant potential liability" (Milman, 2013). In order to protect itself against this liability this sub-project sought to incorporate comprehensive data security.

Outcome

- 9.1 Bring in Data Security Expertise:** It was planned to seek external expertise in order to find faults in our site and program design. At the time of writing this had yet to be organised. However, our internal programming effort had put in place a number of security features.
- 9.2 Thoroughly Test for Bugs:** Glassjar's programmers undertook a test-driven development pathway. This involved writing tests into the code base that return alerts if incompatible or faulting code is uploaded to the main depository. This has given confidence to the Glassjar team that the software will work properly when released.

9.3 Release to Flats for Use: At the time of writing Glassjar's software had been released to flats for their use however this has not been done on a large scale due to development still occurring with the core product features.

9.4 Get Feedback and Implement Improvements: The development to date has focused strongly on the market research conducted and as a consequence initial feedback has supported the solution developed by Glassjar. The programming effort now focuses on enhancing certain software elements that will allow more unique flatting situations to also benefit from the software. For example developing solutions for flats that have had a large number of tenants move in and out over a short period of time.

Plan vs. Reality

Apart from employing external data security expertise this sub-project was completed by the planned completion date shown in the Project Charter.

Lessons Learned

Test driven development, whilst initially slow, helps to maintain the functional integrity of software and also acts to advance the pace of future software releases or iterations (Wikipedia, 2014). Constantly seeking user feedback is crucial for developing future software releases and for ensuring that the development to date is on track with customer expectations (Vial, 2013) (Ries, 2011).

4.10 Guides

Sub Project Outline

Developing guides was seen as a way to advance Glassjar's brand image though strengthening its commitment to helping tenants. This was based on Richard Branson who states "whatever your brand stands for, you have to deliver on the promise. Don't promise what you can't deliver and deliver everything that you promise" (Branson, 2008).

Outcome

10.1 Write Guide for First Time Flatting: At the time of writing this had not been completed. However, Glassjar is working with Ray White Property Management to prepare this document which will be ready by the 28th of February 2014.

Plan vs. Reality

The inclusion of this deliverable was deemed realistic when initially planning the project period. However, as the project evolved Glassjar's efforts shifted to instead focus on completing more critical sub-projects. This was done to maximize the likelihood of successfully launching Glassjar at the planned date.

Lessons Learned

The incompletion of this sub-project is unlikely to affect product uptake by Glassjar's early adopter customers. These customers are technology enthusiasts or those that have the "insight to match an emerging technology to strategic opportunity" (Moore, 1999) which in this case is for a better managed flat. However, in the long run it may present a barrier to more pragmatic customers who look to buy an augmented 'whole' product. Such customers seek products that will "provide the

maximum chance of achieving the buying objective” (Moore, 1999). Customers who purchase Glassjar’s software do so with the intention of creating conflict free flats, subsequently guides that assist this objective are a necessary ancillary product for more pragmatic customers. Accordingly, Glassjar will ensure this deliverable is completed and the partnership with Ray White represents a good opportunity to do so.

4.11 Launch the Site

Sub Project Outline

Following the completion of the required sub-projects listed above, Glassjar would be in a position to launch its first product. This sub-project was created to ensure it happened and to have a date fixed for its completion.

Outcome

4.1 **Launch the Site:** Glassjar is scheduled to launch with the support of Kiwibank at the University of Canterbury orientation day on the 19th of February 2014.

Plan vs. Reality

There is a delay between the planned launch date and that which has since been scheduled. Whilst this is unfortunate the revised launch date is still acceptable as it ties in with Canterbury’s orientation day and as it will be supported by Kiwibank’s marketing efforts.

Lessons Learned

It is important to be conservative and realistic when planning a project of this novelty and scale. It is also important to constantly refer to the original plan in order to stay on top of any deviations from planned progress.

When initially planning the project period, Glassjar should have included contingencies to account for possible delays to the launch. Such plans would have had a greater focus on marketing through social media to account for the lost opportunity of a physical launch on campus during orientation week. Thankfully, the University of Canterbury’s orientation week was pushed back a week this year thus mitigating the consequence of Glassjar’s delayed launch.

5 CONCLUSION

Overall the project period has returned sound progress with respect to achieving the goal of successfully launching Glassjar. Whilst a number of planned deliverables were not achieved, this was not through significant failings within the project period but instead due to;

- The inexperience of the student in initially planning a project of this nature and size,
- A change in the relative importance of each deliverable as new opportunities arose or insights were gained,
- A change in the revenue model adopted by Glassjar, and
- Glassjar's interaction with outside businesses.

The deviations from the project charter exemplify the need for adaptability when undertaking a project of this nature and risk. Initially stating a clear and solid objective provides high level direction for the project that can then be broken into various sub-projects and deliverables. These sub-projects can then be removed, amended, or reduced in importance as the project evolves without detriment to the overarching goals of the project.

Following the completion of this project a number of recommendations have been provided for both future MEM students and entrepreneurs embarking on a similar piece of work. These recommendations (provided in the coming section) reflect the experience and knowledge gained by the student that would have been incredibly valuable when initially planning for, and embarking on, this project.

The project has served as an excellent application of theory learnt throughout the MEM coursework. In addition the project experience provided many new opportunities for gaining insight into the tasks and techniques required to successfully launch a start-up business. It has allowed the student to explore current literature and accepted theory regarding start-up enterprises, technology based companies and the investment process, and to apply it in a real life setting. For these reasons the project has been a very strong learning exercise for the student.

Glassjar's acceptance into the Lightning Lab presents the perfect transition from the MEM project period and it is hoped that this program will allow Glassjar to continue the progress made to date.

6 FUTURE PLAN

The Glassjar team will relocate to Wellington at the end February and will be based there from March onward. Glassjar's efforts throughout the 3 month Lightning Lab program will focus on:

- Finding the most lucrative product market fit through continuing market research of the property management market and also through exploring other applications of its group financial software.
- Developing a chosen solution and scaling it throughout New Zealand.
- Preparing for an angel investment round.

The Glassjar team is excited to embark on this next stage of development and believes it is the best opportunity available for continuing the development and growth of the company.

7 RECOMMENDATIONS

7.1 Similar Projects

These recommendations are provided in the hope they may assist anyone who is planning to undertake similar entrepreneurial endeavors.

- Conduct market research and product validation as early as possible. Despite everything that may persuade an entrepreneur to think otherwise, this is the most crucial step.
- As market research should be an ongoing process you must also be prepared to change the plan entirely in the wake of major setbacks or new opportunities and insights.
- Search for and meet as many potential mentors as possible. After doing so your job will switch to filtering this often conflicting advice and applying it successfully to your own venture. To do so, think critically and be prepared to narrow the broad group of mentors down to a couple key advisors.
- Plan for things to take longer than expected particularly when dealing with outside businesses, software developers or investors.

7.2 MEM Specific

Undertaking an entrepreneurially focused MEM project is a brilliant way to cement the lessons learnt in the classroom and to gain an experience which I believe to be far more valuable than those who chose to work for industry. For students wishing to maximize its effectiveness I would recommend that they:

- Compete in the entré competition as a way to explore and validate your concept before committing to it for an MEM project. Furthermore if successful with entré you will win the funds necessary to give your start-up the best chances.
- With the Entre competition in mind make sure you work longer hours than your classmates during the year. Whilst taxing at the time, it is worth doing so as it will greatly advance the pace of progress throughout the project period.
- Leverage being a student at every chance imaginable as people tend to be much more forthcoming with their time and willingness when they are helping out a struggling student.
- As an addition to the previous, make sure to leverage the support and resources offered by the University and in particular UC Innovators.
- Ask MEM lecturers to use Glassjar as an example in their workshops/lectures. Throughout the year this provided Glassjar with an expert opinion of the specific topic and also a class full of ideas and insights.
- Create a solid team of co-founders, mentors and friends who support you and your project. Not only does this advance the pace of progress but it also helps you to maintain motivation.
- Finally make sure to celebrate any successes accordingly but also to reflect upon and learn from any failings.

8 PERSONAL REFLECTION

This project, the MEM course and the entré competition have been a rewarding experience and one for which I am incredibly grateful.

I feel that the strength of this experience has come from the exhilaration that progress provided coupled with the opportunity for learning that this MEM project provided. Opportunities for learning came in a number of forms throughout the project period and included:

- the application of course content,
- the motivation to explore relevant books, blogs, and articles,
- the vast network of mentors that offered their support and knowledge to me throughout the year,
- and through team members explaining their skillset and knowledge

However, it is somewhat bittersweet that the greatest steps in my learning occurred only after failure and upon reflection of such failures. With that it is appropriate to now dwell on the key failures that have thankfully provided the greatest learning throughout the entire MEM program.

Firstly I should have completed market validation a lot earlier in Glassjar's development as this failing led to large delays before key insights were found. The tendency to focus on the product design as opposed to the customer validation is a trait of many inexperienced entrepreneurs. Whilst I hope I have cured myself of this tendency I must humbly acknowledge that Rachel Wright was right when we first met. So Rachel I apologize for not listening when you first told me to do so.

This first failing contributed strongly to the second which is the fact that Glassjar came second in Entré. Winning entré has been a goal of mine since first year and I was devastated that I couldn't achieve the feat this year. Had I defined the consumer problem with greater certainty, refined our product/market fit and delivered a stronger solution then I believe our chances may have been much stronger. That being said I am still very proud of the fact we won two major prizes during the competition. I also acknowledge that I would rather have met and had the opportunity to work with our mentors at Harvey Cameron as well as our entré team than win the entré prize itself. So this wasn't too bad of a failing.

However, what was a bad outcome was the inability to secure Bjorn Anrdt's continued involvement with Glassjar. Out of all Bjorn's good qualities, of which there are a huge amount, perhaps his greatest is his warm and friendly persona. This persona complimented very suitably the intensity of my drive to make Glassjar a commercial success. Due to this complimentary nature, our respective skillsets and our strong friendship we became very strong as a pair throughout the entré period. Unfortunately I was unable to truly appreciate the strength of this pairing and instead let my negotiations be too strongly influenced by past negative entrepreneurial experiences. Should I have the good fortune to work with someone of Bjorn's caliber again in the future I will not be so shortsighted.

That being said I must also celebrate the successes we had with Glassjar.

The relationships formed between our team members, with our mentors, with potential customers and a range of businesses were an awesome by-product of Glassjar and one that made the experience so fun.

But perhaps the greatest success was actually pulling it off. As a team we have grown Glassjar from a simple solution to our flat's problems two years ago into an actual company with what we believe is an awesome product and future vision. I am immensely proud to have made the progress we have made and am extremely grateful to those who have helped us achieve it.

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11 Appendices

11.1 Landlord/Property Management Market Research

Google AdWords Campaign

Two campaigns were launched on Google AdWords with the intention to direct landlords to Glassjar's landing page in the hope they would then fill out the questionnaire.

Both campaigns achieved a high number of impressions i.e. the ads were displayed to a large audience however the number of subsequent clicks were substantially lower. This was also reflected in the number of people who continued to then fill out the questionnaire. For this reason the AdWord campaigns proved to be quite an expensive exercise when compared to approaching landlords face to face. This expense was driven up by the number of property management adverts that drive the price per click skyward for a number of keywords that Glassjar sought to use.

Nonetheless of the responses received on the landing page key issues were the initial selection of tenants and ensuring that rent is paid on time each week.

Face to Face Interviews with Property Management Firms

Glassjar targeted property management firms throughout January and was fortunate to receive very strong support.

From these meetings it became apparent that there are three dominant software packages for Property Managers:

- Rest Professional developed by Rockend Software: <http://www.rockend.co.nz>
- Palace developed by Real Base Live: <http://www.realbaselive.com>
- Console developed by Console New Zealand: <http://www.console.co.nz>

These software packages each performed quite similar tasks and focused on storing information for the tenants, owners, property managers and contractors associated with a property. Based on this information the software packages generate a range of reports that assist property managers in the management of their portfolios. Each package also helps administrators reconcile their accounts and stay on top of any rental arrears.

Despite being so similar in function each of these packages were both loathed and hated by different property managers with each having their respective reasons.

Key issues with software that continually arose were:

- Complexity: The software packages all had unintuitive functionality and poorly designed user interfaces. Each property manager spoken to said they struggled to first learn the packages.
- Support offered: Due to the complexity of the software and perhaps the computer literacy of many of the elder property managers, appropriate customer support was a big issue. Property managers ideally wanted face to face training with skilled software users. Many

property managers were particularly aggrieved with Rest's customer support given that it was based in Australia where there is a time zone difference.

- Integration with other services: Each software package needed to integrate seamlessly with the firm's bank accounts yet none had integrated direct bank feeds.
- Display of information: Property managers were not shown the key information they required when they first logged into the system. Instead they had to plan their day and search for key information pertaining to their planned activities. This did not assist new property managers or those inexperienced with its use.
- Cloud Based: Correct information backups are crucial for property management yet despite this there is no cloud component to any of these packages.

Glassjar met with the managing directors of Brazier's Property Management who had been developing their own software package to address a number of the above issues. Their development had stalled over the last year and they were receptive to partnering with Glassjar to push the program out. Whilst their solution has a number of innovative features there are a number of key issues with the partnership from Glassjar's perspective:

- Key elements of the software are poorly written particularly its use of the Microsoft SQL Server and the .Net Framework. Glassjar's developers indicated they would not want to work with such frameworks given their archaic nature.
- The software would need to be re-written to change the language, to improve its scalability and to make it web based. If this were to happen the rewrite would be a significant and time consuming undertaking that has a huge potential for scope creep.
- Brazier's management team is completely inexperienced with software development with the development to date having been contracted to an independent developer. Should Glassjar take on the project, the constant interference from their management would only impede progress. It is unlikely that Glassjar could free itself from this influence given its estimate that Brazier's must have spent at least \$120,000 developing the software to date.
- Brazier's management are inexperienced with commercializing technology and suffer the same issues as other entrepreneurs in refuting the need for market validation. "We know that this solution is perfect as we want it and a friend in Auckland also wants it" was a statement recorded at one meeting. When told about the need to validate the software more thoroughly they argued they did not want competitors seeing it.

Future Opportunities

Whilst a partnership with Brazier's does offer opportunity for Glassjar there are a number of key issues that need to be overcome. Glassjar will work to resolve these with the hope of developing a suitable proposal over the coming months.

A series of meetings were held with Murray Ireland from Ireland's Property Management. These focused on potential solutions that would help landlords advertise their properties and select the best tenants. At the time of writing these solutions are still being investigated.

Elizabeth Goulding from Ray White has offered to help write guides for tenants that we can post on our site and Facebook pages.

Face to Face Interviews with Landlords

These investigations showed that the main pain points faced by landlords are at the start and end of the tenancy. Providing rent is being paid each week landlords typically have fewer issues during the actual tenancy itself. Key issues highlighted by landlords include

- Advertising properties.
- Selecting the best tenants.
- Educating new tenants on how to be good tenants and managing the property.
- Ending the tenancy and assigning bond refunds.

There are two New Zealand based software packages that are more tailored to private landlords these are:

- Tenansee: www.tenantee.com which has a strong accounting focus.
- PocketRent: www.pocketrent.com which has a stronger focus on storing property and tenant information.

These packages have achieved some popularity amongst private landlords however the majority of landlords are able to manage smaller portfolios through traditional bookkeeping and documentation.

Future Opportunities

Glassjar will continue to explore solutions to the problems faced by landlords. Of these streamlining the application process for tenants is currently seen as the greatest opportunity.

11.2 Tenant Market Research

Tenant market research was conducted in three ways.

Firstly during the course of the entré competition a survey was answered by 174 tenants split between undergraduate, postgraduate and graduate employees. Key findings from the survey concerning financial management are summarized as follows:

- 92% of flats have a collective flat account to pay bills.
- The majority have only one person in charge. 96% of flats said less than 3 people actively managed their flat account.
- 56% said financial management was a big issue in their flat. Problems included ensuring enough money was in the flat account, making sure payments were being made and calculating who owes what.
- 90% of respondents said they want a tool that allowed access to information regarding the flat account and that they would use it at least once a week.
- 83% of respondents owned a smart phone.

In a similar fashion to that conducted for Landlords, Glassjar also established a Google AdWord campaign to target tenants.

This campaign received fewer impressions than the landlord campaign but had a greater percentage of ad viewers click through to the landing page. In total 93 tenants filled out the landing page questionnaire and the results were largely similar to those received from the earlier survey.

- The majority of people used a collective flat account.
- One respondent said they used Flatmin's site (one of Glassjar's competitors) however they stated they were unimpressed by the service provided.
- A number of Flats used Facebook to communicate financial information with their flatmates indicating a need for transparency.

When asked to describe what problems they have managing flat finances responses included:

- Ensuring flatmates pay their share.
- The time consuming nature of copying transactions from bank statements to programs like Flatmin or Excel.
- Ensuring accountability between flatmates for expenses.
- Knowing exactly who owes what, particularly when people are away from the flat.
- People using the flat card for personal spending.
- Not having access to information regarding the flat account i.e. a lack of transparency.
- Forgetting to pay bills on time particularly when discounts are offered for prompt payments.

When asked what would solve their problems tenants suggested:

- Making bill splitting easier and recording who has paid what.
- A Xero style package tailored for a flatting situation.
- Assistance with creating a flat budget.
- An easy to interpret interface that summarizes key information and helps show where money is being spent as well as each flatmates individual contributions.
- Provide a communication platform for tenants and landlords.
- Automatic bill payments and direct debits from people's accounts.
- Notifications when bills and rent are due.

In addition to the Google AdWord campaign Glassjar also established a Facebook page and in the four weeks that the page was live it received nearly 650 page links. This helped to validate the interest in the Glassjar concept as well as providing a pool of beta stage users.

The final part of tenant's market validation comprised face to face interviews with a number of flats throughout Christchurch. This served to confirm the above observations.

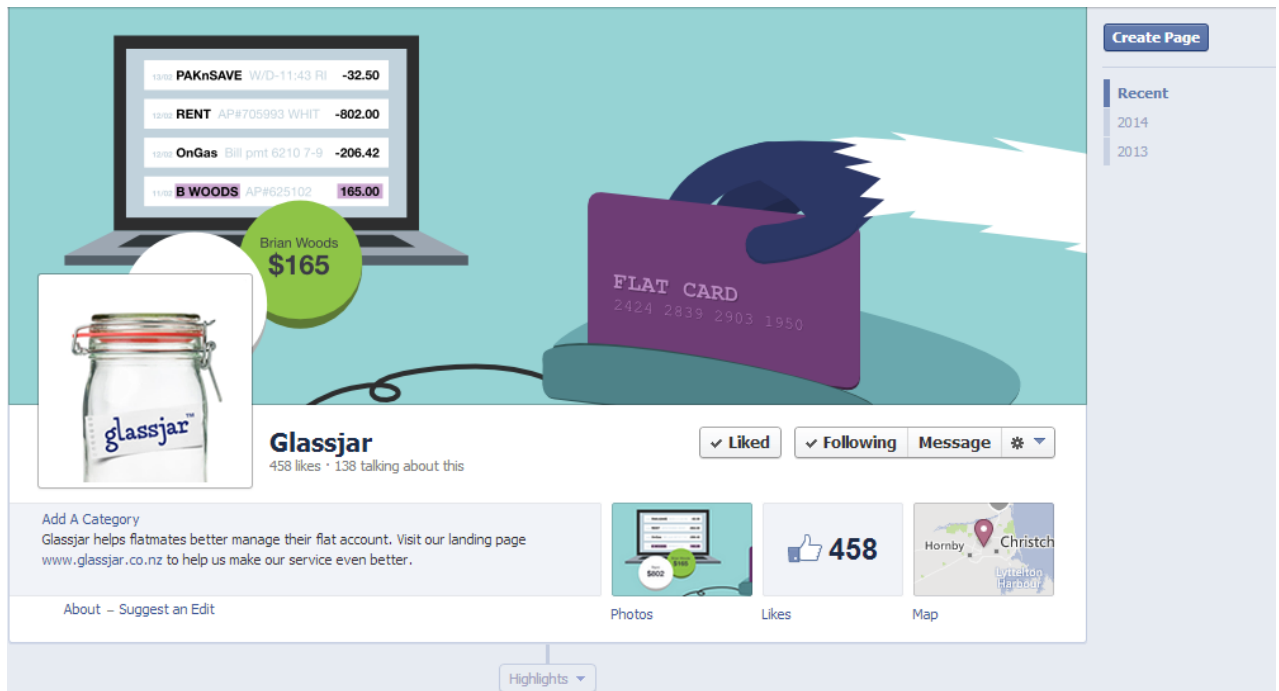


Figure 1: Glassjar Facebook Page

11.3 Glassjar Website Screen Shots

The following screen shots display sections of Glassjar's website as the user would see them when first signing up to the service.

The screenshot shows the Glassjar website homepage. At the top, there's a green header with the 'GLASSJAR' logo on the left and 'Sign up' and 'Sign in' buttons on the right. Below the header, the main content area has a light blue background. On the left, there's a large illustration of a hand holding a purple 'FLAT CARD' with the number '2424 2839 2903 1950'. A white cord connects the card to a laptop screen. The laptop screen displays a list of transactions: 'PAKSAVE WID-11-43 RE -32.50', 'RENT AP8705993 WHST -802.00', 'OnGas 38 pent 6210 7-9 -206.42', and 'B WOODS AP8525102 165.00'. Below the laptop, there are two circular callouts: a white one for 'Rent \$802' and a green one for 'Brian Woods \$165'. To the right of the laptop, the text 'Easily import bank statements' is followed by a paragraph: 'You've got better things to do than reconcile transactions one-by-one. Glassjar imports from Kiwibank, Westpac, BNZ and ANZ.' Below this, there's a section titled 'Split payments between flatmates automatically' with a paragraph: 'Glassjar recognizes transactions on the flat account, splits the cost between flatmates and shows who is falling behind.' To the left of this text is an illustration of four glass jars filled with coins. At the bottom left, there's an illustration of a white dog (Dawkins) sitting on a pile of papers. To the right of this, the text 'Prevent drama by keeping the books transparent' is followed by a paragraph: 'That time when Dawkins stopped paying rent for 6 weeks then left for Australia before anyone noticed? Doesn't happen with Glassjar.' At the very bottom, there's a dark grey footer with the text 'TERMS OF SERVICE'.

GLASSJAR

Sign up Sign in

Finances for flat bank accounts

FLAT CARD
2424 2839 2903 1950

NAME	DESCRIPTION	AMOUNT
PAKSAVE	WID-11-43 RE	-32.50
RENT	AP8705993 WHST	-802.00
OnGas	38 pent 6210 7-9	-206.42
B WOODS	AP8525102	165.00

Brian Woods
\$165

Rent
\$802

Easily import bank statements

You've got better things to do than reconcile transactions one-by-one. Glassjar imports from Kiwibank, Westpac, BNZ and ANZ.

Split payments between flatmates automatically

Glassjar recognizes transactions on the flat account, splits the cost between flatmates and shows who is falling behind.

Prevent drama by keeping the books transparent

That time when Dawkins stopped paying rent for 6 weeks then left for Australia before anyone noticed? Doesn't happen with Glassjar.

TERMS OF SERVICE

Figure 2: Glassjar's Homepage

GLASSJAR

[BLOG](#)
[CONTACT](#)
[FEEDBACK](#)

Duncan Keall

Sign out

Welcome to Glassjar!

Here are two simple steps to get started

1

Who lives in your flat?

Enter their names here

Add flatmates

2

Download the flat's bank statement

Drop a CSV or OFX file here

[BLOG](#)
[CONTACT](#)
[FEEDBACK](#)

Figure 3: Glassjar’s Sign Up Process

GLASSJAR

BLOG

CONTACT

FEEDBACK

Duncan Keall

Sign out

Flat account

\$600

Duncan

\$200

George

\$200

Matt

\$200

+

This week

\$750

Rent

F

→

D

G

M

13 Jan

\$165

Payment

G

→

F

12 Jan

\$165

Payment

M

→

F

11 Jan

Last week

\$750

Payment

D

→

F

10 Jan

\$32

Groceries

F

→

D

G

M

9 Jan

\$1550

Power

F

→

D

G

M

8 Jan

\$165

Payment

G

→

F

7 Jan

\$165

Payment

M

→

F

6 Jan

BLOG

CONTACT

FEEDBACK

Last week

\$750

Payment

D

→

F

10 Jan

\$32

Groceries

F

→

D

G

M

9 Jan

\$1550

Power

F

→

D

G

M

8 Jan

\$165

Payment

G

→

F

7 Jan

\$165

Payment

M

→

F

6 Jan

Figure 4: Flat Account Dashboard

11.4 Overview of the Lightning Lab

Background

The Lightning Lab was founded in 2012 by start-up incubator Creative HQ in conjunction with private investors and the Ministry of Business, Innovation and Employment. The program was first run in 2013. The Lightning Lab is based on the American TechStars model and is the only New Zealand member of the Global Accelerator Network which includes the five TechStars hubs in the United States as well as Springboard in the United Kingdom, JFDI in Singapore and the Start Up Boot Camp in Europe.

Overview

At the start of the program teams are given \$18,000 of seed investment for an 8% equity stake in the company. Throughout the 3 month program they are connected with a range of technical and business mentors and gain access to a huge range of workshops. The three months are loosely broken into the following stages:

1. Teams analyse their market and proposed solutions and then select the best product-market fit.
2. Teams then develop and scale their proposed solution aiming to get as much market traction as possible.
3. Based on the results of the first two months teams then develop their business cases and prepare for pitching their concept to Angel Investors on what is called Demo Day.

Demo Day affords teams the opportunity to pitch for the investment money required to truly develop the concept and business. Of the nine teams that entered the program in 2013, four were successful in raising a total \$2.2 million dollars (Lightning Lab, 2014).

The Lightning Lab is seen as a brilliant next step for Glassjar and the team is very excited that our application was successful.

11.5 One Page Investor Document

The one page investor summary produced during the project period is displayed overleaf.



94 Creyke Road
Ilam, ChCh 8041
Tel: 021 1332417
George@glassjar.co.nz

Funding

Bootstrap plus owners' equity of \$25,000.

Use of Capital

1. Expand development team
2. Accelerate sales
3. Expand marketing outreach

Revenue Forecast

2014: \$300,000

2015: \$1.4M

2016: \$3 M

Reach Profitability

Q1 2015

Competitive Advantage

Technology:

Automation & ease of use
Integrates with Bank API's,
YouPost & RealMe
Cloud-based

Business Model:

Revenue gained through SaaS fees, business partnerships, advertising, property listings and data mining.

Management Team

George Smith, CEO & Founder
Duncan Keall, Web Dev.
Mathew Galloway, Software Dev.

Advisory Board

UC Innovators
Harvey Cameron Advertising
PricewaterhouseCoopers

Executive Summary

Context: Current methods for finding, establishing and managing rental properties are ineffective and laborious for both tenants and landlords. With 83% of our target market owning smartphones there is a growing demand for new services to be cloud based and app accessible.

Elevator Pitch: Glassjar produces software products for tenants and landlords to manage their rental properties and finances in an efficient and transparent manner.

Problem: Over 600,000 tenants in New Zealand manage their flats poorly which results in unpaid bills, issues with trust and conflict between tenants. Landlords of these rental properties struggle with effective communication with their tenants, ensuring they have the best tenants in their properties and managing their finances in an affordable way.

Solution: Glassjar's software keeps flats conflict free by managing their finances and helping pay their bills on time. It saves property managers time and money when managing their portfolio and reduces the investment's risk by connecting them with the best tenants.

Traction: 75% of target flats surveyed would use Glassjar and pay more than \$20/year for it. Kiwibank and NZ Post have agreed to partner with Glassjar. Discussions has begun with ANZ, Meridian and Powershop.

Revenue Model: We will sell SaaS subscriptions at \$10/property/month for both tenants and property managers. Additional revenue through business partnerships, property listings and tenant finder services.

Long-Term Growth: Tenants' software launched to student market (10,000 flats) and progressively into the full tenant market. We will release our property management software 12 months later and use the established tenant user base to access landlords and property managers.

Competitive Landscape: There are a number of competitors for tenants' software however our automation, design and partnerships set us apart. Property management software is well established and competitive however packages are unintuitive, hard to use and lack tenant interaction. Our primary listing's competitor is TradeMe which is well established in the market.

Sales and Channel Model: Online distribution/sales achieved through our website. Kiwibank will also market the software on our behalf.

Market Opportunity: The immediate goal is the 150,000 flats in New Zealand however the main goal is offshore with 900,000 flats in Australia and over 6 million in the United States of America.

Why Invest: Glassjar has a passionate and driven team with the skill sets required to launch this company. We have a growing market and a unique solution to pain points inherent within it.

11.6 Critical Success Factors

Overview

As part of ENMG606: Strategy for Engineering, MEM candidates were required to prepare a board level strategic plan for a chosen company and industry. The following critical success factors have been drawn from the strategic report prepared by George Smith for Glassjar Limited.

Critical success factors (CSF's) are the elements necessary for an organisation to achieve its objectives and strategic direction.

As Glassjar is a poorly funded start-up two key objectives were set; to earn strong revenue and secondly to be profitable. Based on these the following critical success factors have been proposed;

CSF 1 – Be Patient for Growth but Impatient for Profit

Glassjar's management and investors must be patient for growth but not for profit. Should Glassjar's management adopt such thinking they will be forced "to test as quickly as possible the assumption that customers will be happy to pay a profitable price for the product" (Christensen, 2003). This will act to validate or disprove the assumptions presented in their Business Plan regarding the ability of their product to offer real value to customers.

Should low profitability indicate low product value then Glassjar will be forced to follow CSF -2 and pivot toward a more substantial, and ultimately more lucrative, consumer pain point. Crucially CSF – 1 will ensure this pivot occurs quickly and before additional investment is wasted on incorrect product development. An expectation of early profit will also encourage having lower fixed costs further cementing the lean methodology and Glassjar's probability of survival should a profitable product be found.

CSF 2 – Sell, Sell and Sell

Given its development budget Glassjar must get money in the door as soon as possible and subsequently its management must sell as quickly, as often, and as successfully as possible. Through selling Glassjar is able to test the consumer value of their product as "the best form of market validation is getting someone – an industrial or consumer purchaser – to open up their wallet and part with their money" (Adams, 2010). This customer interaction greatly assists the completion of CSF's 1, 3, 4, 6 and 8.

CSF 3 – Complete Agile Product Development

An agile development path with frequent consumer testing ensures that fast, efficient and customer focused development occurs (Reifer, 2002). Glassjar has proposed financial management tools targeted at the narrow market of individuals within each flat currently tasked with managing finances. Glassjar must now develop this minimally accepted feature set, satisfy this chosen submarket and then move on to the next development set. Sole focus on a particular segment's needs also allows a cost advantage to be achieved over other competitors helping to deter such competition (Christensen, 2003).

Customer validation will continually drive product innovation as “innovation is what you get when you capitalise on luck, when you get up from behind your desk and go and see where ideas and people lead you” (Branson, 2008).

Developing at rapid pace also ensures a regular stream of feedback on the products effectiveness. The importance of such customer focused development was observed in an interview conducted with Dave Dodds, the business market development manager at New Zealand Post Digital. NZ Post invested \$14 million dollars developing their new latest service YouPost however following funding cuts were forced to undertake a more customer focused development path. Once on this path they learnt that many of their already built features were unwanted and that a series of small, easy to development features were all that were required to gain significantly greater user uptake.

Don't waste time or money building the wrong features, focus on your customers and build what they require.

CSF 4 – Act Quickly

It is argued that “the ready flow of capital to high-potential returns suggests that high market pain opportunities won't be there long” (Adams 2010). Therefore Glassjar must quickly develop and release its proposed solution before its competition does. As General George Patton stated “A good plan executed toady is better than a perfect plan executed at some indefinite point in the future”.

Glassjar must also focus on getting the most from its current team. Joshua Vial, the co-founder of the Enspiral Foundation advised that doubling the size of the development team will only stand to double costs and double the time taken to develop the product. “Rapid iterations focusing on user tasks is the best development method” (Vial, 2013). Glassjar is advised to cement their small development team and to get going.

CSF 5 – Introduce Appropriate Start-up Structure

Glassjar is advised to create an organisational chart that reflects the positions and work efforts required to achieve the company's objectives. Such charts support operations by providing structure to the organisation and each person with a sense of “commitment and accountability” (Gerber, 1995). However, if the structure is too rigid it can create limitations; “Rules free companies inside a glacier; innovation lets them ride sleighs over it” (Semler, 1993). To counter this all charts should include ‘Boundary Spanners’ that is “people whose job it is to bring information from multiple functions” (Gittell, 2003). This is particularly important at Glassjar in order to reduce the divide between software and business development. Flexible job descriptions will also encourage “relationships of shared goals, shared knowledge, and mutual respect between functions that traditionally have had little in common” (Gittell, 2003).

In line with CSF's 1 and 3 Glassjar must remain true to its role as a business capable of developing customer focused innovations. “Once you say what business you're in, you create boundaries for your employees, you restrict their thinking and give them a reason to ignore new opportunities” (Semler, 1993). Glassjar must not define any specific business operation or product and instead it must remain free to pivot toward consumer preference and demand.

CSF 6 – Implement Successful Marketing Campaigns

Smith and Son advise Glassjar “allocate an equivalent amount of funding for your first-year launch, sales, and marketing efforts as you do for product development” (Adams, 2010). Unfortunately however as their product development budget is so small so too will Glassjar’s marketing budget. Accordingly we advise Glassjar leverage as much free marketing and PR exposure as possible, this is as “PR builds brands; advertising maintains them” (Ross, 2010). Glassjar is in a unique position to exploit such PR exposure given it is a youthful team operating in the technology arena. This was evident in the ease with which Glassjar featured on www.stuff.co.nz earlier in the year⁴.

Further marketing leverage can be gained by applying a SaaS subscription fee to the software’s use. Companies such as banks, power companies, insurance providers and telecommunication providers all want access to Glassjar’s potential user base. Importantly such companies all have existing marketing budgets, users, advertising channels and relationships. Glassjar can offer its service free to such companies and in return request free marketing and exposure. Here however Glassjar must be careful to strike an appropriate balance between the foregone subscription fee and the value received by business partners.

When marketing Glassjar is advised to sell benefits not product features. Whilst Glassjar internally produces brilliant software, in the eyes of its customers Glassjar sells conflict, hassle free flat relationships. Glassjar must also focus this advertising on the individuals within each flat currently tasked with managing finances as these have the greatest pain point and will thus be the innovators and early adopters for the service.

CSF 7 – Protect the Brand

Business partnerships are critically important for the exposure, functionality and revenue they provide. Nonetheless Glassjar must be conscious to only select partners that can offer all three and that also match the values of Glassjar i.e. ‘for the good of tenants and landlords’. Discussions held with Anake Goodall, a board member of Meridian, highlighted that incorrect associations between businesses will send conflicting messages to users and may alienate customers. Subsequently Glassjar must be both careful and selective, “whatever your brand stands for, you have to deliver on the promise. Don’t promise what you can’t deliver and deliver everything that you promise” (Branson, 2008).

CSF 8 – Develop a Competitive Advantage

The following criteria for developing a competitive advantage have been evaluated. In addition Porter’s Five Forces Analysis was conducted to determine the competitive intensity of the industries in which Glassjar operates. Following this a Strategic Projects and Actions template was produced that classifies the actions Glassjar should take to achieve its objectives and meet its CSF’s. These are shown below.

Uniqueness: Glassjar’s entry through the tenant’s market is a unique difference to all established property management competitors. Within the tenant’s market Glassjar must differentiate through increased product functionality such as automation, ease of use and transparency. With that Glassjar

⁴ <http://www.stuff.co.nz/technology/digital-living/8765283/Students-app-solves-flatting-headaches>

must quickly develop supporting mobile applications such that all flatmates can be aware of flat decisions.

Difficult to replicate: Independent software developers are in a position to reverse engineer Glassjar's software. Subsequently Glassjar's competitive advantage will come in the form of its business partnerships, customer traction and brand loyalty; it is these that should be the focus of Glassjar's development after launch.

Superior to competition: Glassjar will be second to market for both tenants' and landlords' software, this affords a unique opportunity to out develop the competition by removing the pain points and poorly developed features of their products. Glassjar must then protect this advantage by continually adapting and advancing the product, in line with the other CSF's above this must always be customer led.

Sustainable: Applying a SaaS model to the software opens a repeatable revenue stream immediately upon launch. This revenue stream will provide funding to drive continued development and operations.

Applicable to multiple situations: Fundamentally Glassjar is tackling the problem of managing group finances. Whilst this has first been directed at tenants such software is also applicable to friend groups, co-ownership or time share arrangements, recreational club management, and perhaps networking within organisations. In line with CSF 1 Glassjar must always be open to pivot toward/explore such opportunities and particularly so if immediate traction cannot be gained in the tenants' market.

Porter's Five Forces Analysis

An analysis has been conducted to determine the competitive intensity of the industries in which Glassjar operates. This led to the development of the following strategic options intended to guide Glassjar to the most profitable position relative to such completion.

Force	Overview	Strategy
Threat of new entrants	• Current competitors are poorly developed and less functional than Glassjar. • There is a strong threat of new entrants to the market. However, they are likely to lack the backing and support of Glassjar. • Glassjar has been advised that it is unable to secure patents for its software.	• Block entrants with exclusivity clauses in partnership agreements. • Accelerate development and build brand credibility and customer loyalty. • Protect the brand through Trademarks and rigorous advertising. • Implement a lean, agile customer focused development such that a better product/service is delivered at a lower cost.
Threat of substitute products or services	• Glassjar's offering is on the boundary of a vitamin and a pain killer. The greatest substitution is for potential customers to do nothing.	• Market the product in terms of the circumstances tenants find themselves in i.e. conflict free management. • Hook users with free trials before imposing a SaaS subscription fee.
Bargaining power of customers (buyers)	• The tertiary market presents a unique path to market but they have substantial price sensitivity.	• Offer reduced subscription fees to participating Student Association members. This can leverage free marketing but also removes price sensitivity.
Bargaining power of suppliers	• Glassjar produces proprietary software so is not limited by suppliers' costs.	• Keep development in house.
Intensity of competitive rivalry	• Competition within the tenant market is limited whereas strong competition occurs in the landlord software market.	• Out develop tenant based competitors, market strongly, cement partnerships and develop a strong tenant user base. Use this existing base to draw in the landlord market and out compete competitors.

Table 4: Porter's Five Forces Analysis

Strategic Projects and Actions

Key Result Area	Options and Objectives	Initiate (What Glassjar must do to satisfy objectives)	Improve (What Glassjar must improve to satisfy objectives)	Defend (What Glassjar must protect/keep to satisfy objectives)	Avoid (What Glassjar must avoid to satisfy objectives)
Develop a large user base with frequent site interactions	Develop product to match customer requirements	- Agile development process. - Customer focused development. - Market validation.	Communication and interaction between software developers and end users.	User focus and customer led development.	- Releasing features without customer approval. - Long complex iterations, technical debt within code.
	Create brand and product awareness through successful marketing campaigns	- Social media and online marketing. - Leverage SaaS subscriptions for marketing.	Understanding of early adopter market.	Focus on a targeted beachhead market.	- Bad PR. - Launching an untested product too early. - Poor pricing.
	Establish appropriate business partnerships	Select business partners with aligned visions and/or those that can offer improved user experience	The number of businesses made contact with.	- An appropriate risk/reward balance with such partnerships. - Careful partner selection.	- Alienating potential partners by entering partnerships with other businesses. - Exclusivity agreements
Profitability	Successfully monetise user interaction with the site.	Research an appropriate pricing level for SaaS subscriptions and data mining potential.	Greater market validation and product testing.	Awareness of the value of SaaS subscriptions.	Give away too many free/reduced subscriptions in return for marketing and exposure.

Table 5: Strategic Projects and Actions

11.7 Work Breakdown Structure Business Development

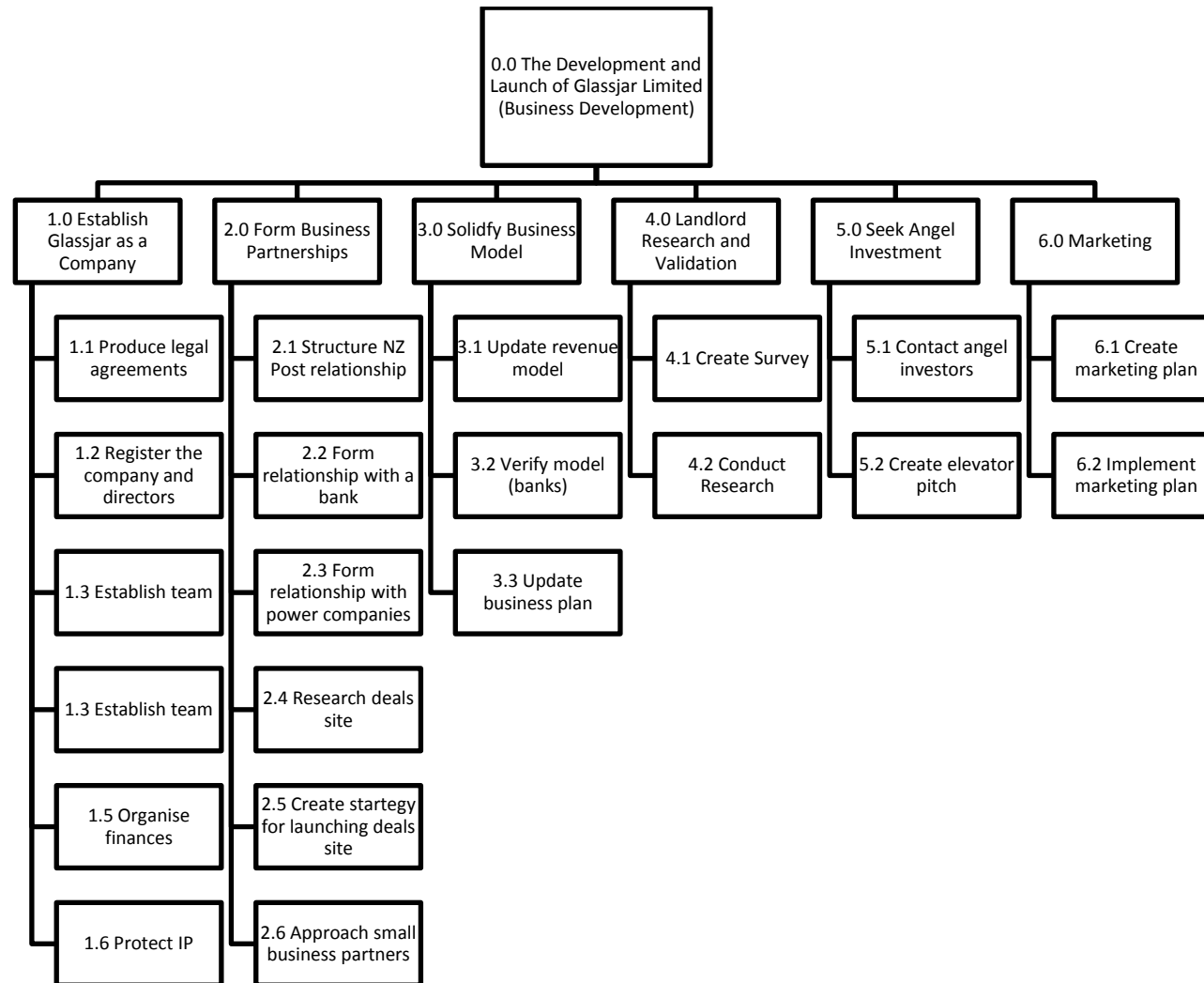


Figure 5: Work Breakdown Structure for the Software Development

11.8 Work Breakdown Structure Software Development

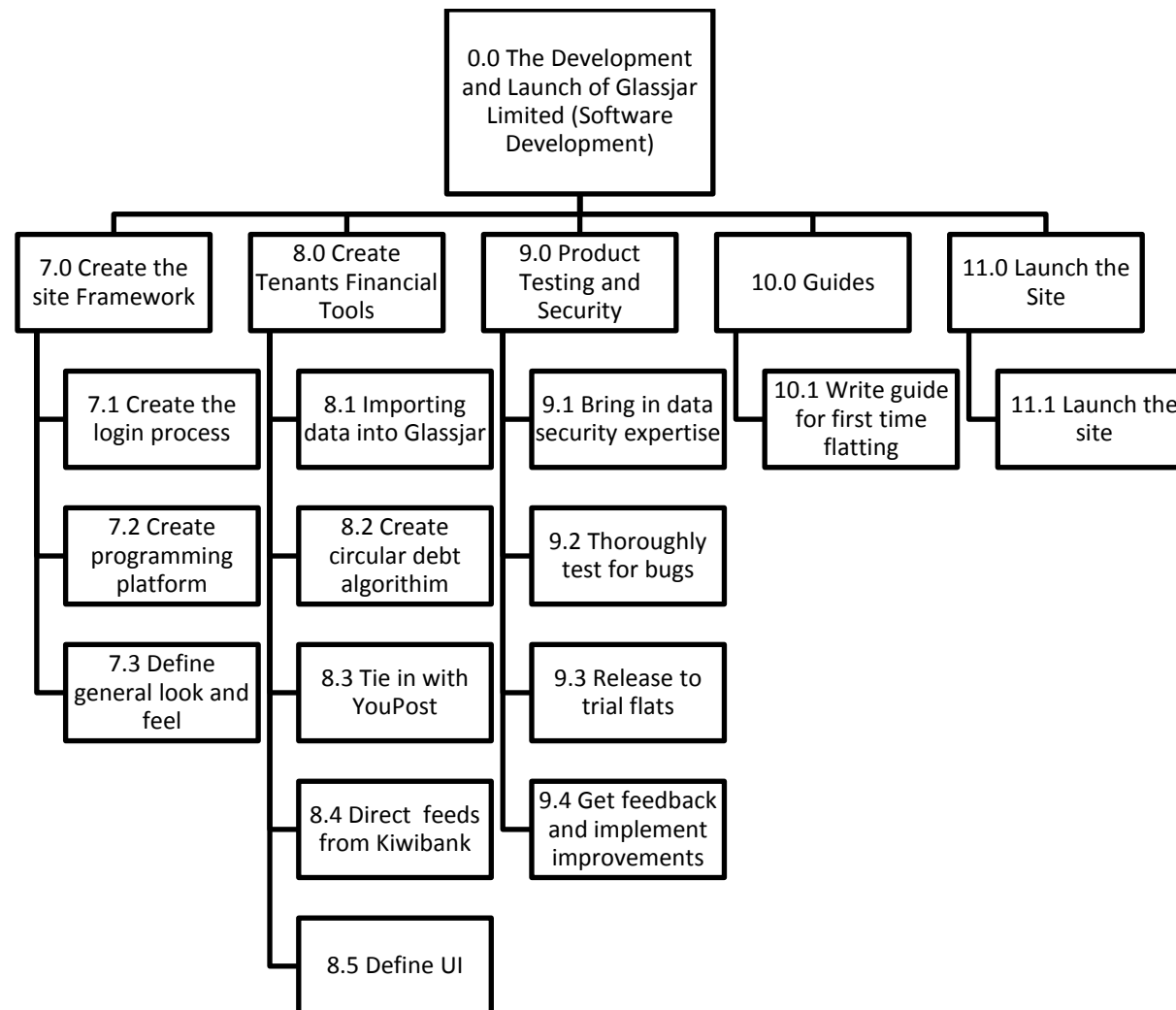


Figure 6: Work Breakdown Structure for Software Development