Business Proposal II:

“The Cool Friend”

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# I. Profit Potential

## The Business Model

## Revenue Model

Overview:

1. Revenues come from direct advertising and subscriptions (mostly advertising)
2. Advertising revenue is reliant on the number of users
3. “Indirect” advertising has been removed from the business model

As the user base grows, not only does revenue grow proportionally with each user, but there is more incentive for advertisers to advertise on the Cool Friend platform. As you will see, direct advertising is the lion’s share of the revenue, and in order to get there you need members.

Indirect advertising is no longer a part of the revenue model. We will have a better app and user experience by forgoing indirect advertising, which in any case contributed little to overall revenues. We felt our time and energy would be better spent developing subscribers and direct advertisers, a finding confirmed by our sensitivity analysis. Also, we felt that the direct advertising would be more impactful, and therefore more valuable to advertisers.

Revenue Assumptions:

*Rate of Ad Growth – Minnesota 10%*

*Rate of Ad Growth – Phase 1 16%*

*Rate of Ad Growth – Phase 2 17%*

*Ad Revenue* $0.10/user/interaction

*User Conversion to Subscription 50%*

*Cost Per Subscription $0.99*

Figure 1: Revenue assumptions for the business model.

Membership Model:

Based on primary event sites in Minnesota, such as the traffic to Vita.mn, our research indicates that we can expect to max out at 135,000 unique visitors per month in Minnesota. It will take time to establish that user base and we predict slow initial growth followed by more exponential growth when the application gains in popularity. Once the original market reaches maturity (approximately 135,000 users), we will have already started to move into a new market to spur continued membership growth. The idea is that when membership in a region hits an inflection point, we go on to the next phase of membership growth by expanding into new regions. Regions for growth will be chosen based on their demographic similarity to the Minneapolis market. This will be determined by mining data from our current user base, as well as our team’s ability to develop connections in those markets. Initial targets for Phase I expansion include Milwaukee, Denver, Seattle, Portland (OR), San Francisco and Austin (TX). Initial targets for Phase II expansion would be Chicago, Boston, Houston, Dallas, Atlanta and Phoenix. Expansion into New York and Los Angeles would require significant resources and expertise that we are unlikely to possess from the start of the venture. So we will focus on smaller markets to begin, with the goal to expand into these cities once we have proven the concept and value proposition.

Within the first two months of our business, we will have zero members. This is due to the development time for the application, which is projected to take 2-3 months. Once initially established, our customer base will be small and will be used as a beta test for our MVP.

Figure 2: 5 Year Membership Model

Revenue Projections:

* Subscriptions

For our users, we are emulating the model of Whatsapp. We intend our application to be free for one year. After the initial year, a low, 99 cent subscription will be required for continued use. We expect customers will find that the benefits of the app will greatly outweigh this nominal fee and we estimate our conversion rate will be 50%.

* Direct Advertisements

Direct advertising is essential to this model and we predict that as the user base grows, the revenue from this source will grow exponentially, to the extent that we add value to advertisers (see the “Critical Success Factors” for further details). To begin, advertising revenue will be extremely minimal because the user base will be small. Once memberships hit approximately 84,000 members (in month 16 of the business), the appeal of advertisers to reach a larger, targeted group of people will kick in. Our rate of growth for advertisers is based on the max target population number for the phase rollouts (MN – 135,000; New Markets Phase I – 300,000; New Markets Phase II – 500,000).

Figure 3: 5 Year Monthly Revenue Projections

## Ongoing Expense Model

Overview:

Ongoing expenses are broken out into three categories:

1. Variable expense
2. Semi-variable expense
3. Other recurring expense

As part of bootstrapping, it is important to keep our operational costs at a minimum until our user base is established and we are able to generate revenues from advertisers.

Ongoing Expense Assumptions:

*Commissions for ad sales 5% of revenue*

*Salaries, wages, hourly employees starting in 11th month*

*Computing and data storage estimates based on heroku.com*

*Advertising expense 1/3 of development cost, then 7-8% of revenue*

*Office expenses starting in the 25th month*

*Miscellaneous 3% of revenue*

Figure 4: Ongoing Expense assumptions for the business model.

Variable Expense:

Initially, our variable expense will be low, as is common with software products. Once we see our user base begin a rapid growth, we will have entered a stage when the app is attractive to advertisers. At that point, we will institute a commission based sales program with a budget set to pay 5% of our revenue that comes from the advertising sales side.

Semi-variable Expense:

Semi-variable expenses are what we describe as salaried employees, hourly employees, and infrastructure (computing power and data storage).

Initially, there will be few salaried or hourly employees. They will be needed for administrative tasks and data entry positions to update events and enter ranking criteria that the recommender engine will need. Once our business scales, we will hire additional help and full-time employees as needed. Given our revenue stream, we expect this will be around the 34th month (March, 2016) when we expect revenues to begin increasing dramatically.

Another important aspect of our semi-variable costs is computing power and data storage. This is absolutely necessary for the performance of the application and its need to store and access large amounts of data. In the beginning we should be able to spend very little, but as the user base grows, our costs will dramatically increase to handle the high volume of users expected (information from https://www.heroku.com).

Other Recurring Expense:

For other recurring costs, we are considering legal fees, IT support services, and hosting services. Since we are trying to keep our costs at a minimum, expenses such as advertising will not kick in until after we have beta tested the product and have made sure that it is ready for market. Advertising is expected to be 7-8% of revenues when our business reaches steady state (information from http://www.sba.gov). However, the initial marketing spend to support the release is expected to be 1/3 of the total development cost and is spread out over a 9 month period starting in our 9th month (February, 2015). We are confident that we will have a great product ready for a larger market at that time.

Other notable expenses, such as employee health insurance, will kick in as we become more established. Our rent expense was calculated on the basis of $10 per square foot. We expect to need approximately 2,520 square feet to begin, which equates to $2,100 per month. To reflect the possibility of costs being above or below our expectations, we have added a Miscellaneous Expense category calculated at 3% of revenues.

## Non-recurring Expenses Model

Overview:

The non-recurring expenses are divided into two groups:

1. Initial development costs (web and mobile application development)
2. Legal fees

Non-recurring Expense Assumptions:

*Mobile application and web development $50,000*

*Legal Fees $6,000*

Figure 5: Non-recurring Expense assumptions for the business model.

Our focus is on the mobile app, so we would work on its development first. We expect this to cost $45,000. We have found ranges of $20,000 quoted from Saturn Systems in Duluth, MN to $60,000 on Kinvey.com. We would have a minimal web presence and we would expect our website to cost $5,000.

Some of factors that play into cost of development (where we can get our varying costs):

* What platform the app will run on
* The size of the app
* User management
* Types of data storage
* Integrating existing data sources
* The method of user engagement
* The quality of the user experience (MVP versus top-notch)
* Type of data analytics tracked

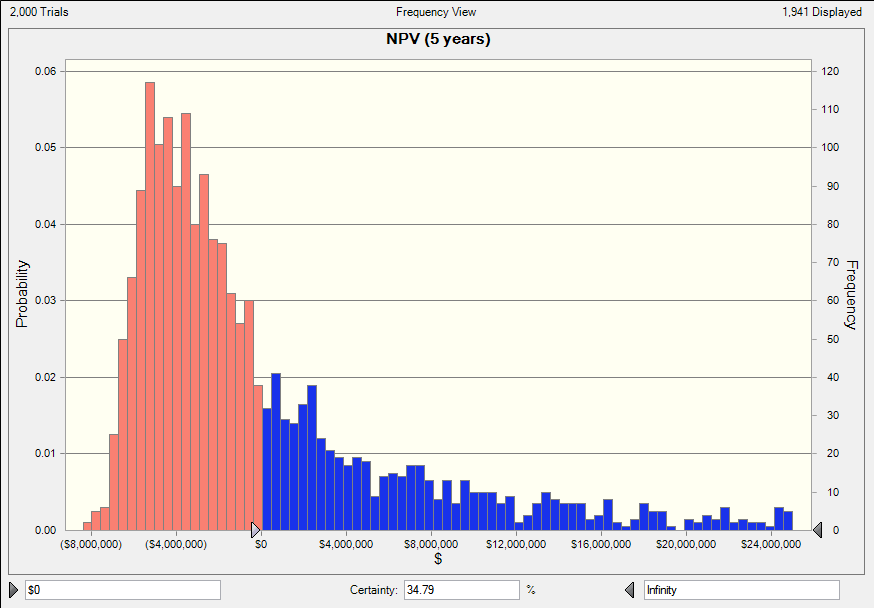
We plan to use $6,000 in legal fees based on advice from highly regarded startup legal professionals. Business licenses, domain names, and permits are essential, but at minimal costs. To keep overhead down, we do not plan to lease any office space during the business startup. Further into the business we would require offices, which would mean more fixed costs such as computer hardware and software, furniture and décor, etc., which have been included in 2016.

## Critical Success Factors

Initially, we had identified the following as critical success factors (in no particular order):

1. Web/app design, development, and maintenance
2. Advertising sales, marketing (to direct advertisers), and account management
3. Activity generation and definition (i.e. building the dataset used for the recommender engine)
4. Recommender algorithm development and refinement
5. Marketing and advertising of the platform, including social network development to attract and retain subscribing users

In developing our financial model, we performed a Monte Carlo simulation including a sensitivity analysis on the resulting simulations. We saw that the range of possible 5-year NPVs is -$8,307k to $58,951k. There is a 35% possibility, given the inputs, that we will create positive NPV after 5 years. That said, based on the range of possibilities, The Cool Friend has an expected 5-year NPV value of $4,694k. The odds of a big payout are low, whereas the odds of losing it all are much higher. Considering the reality of social media and app-related venture failure rates we consider the model to be realistic.



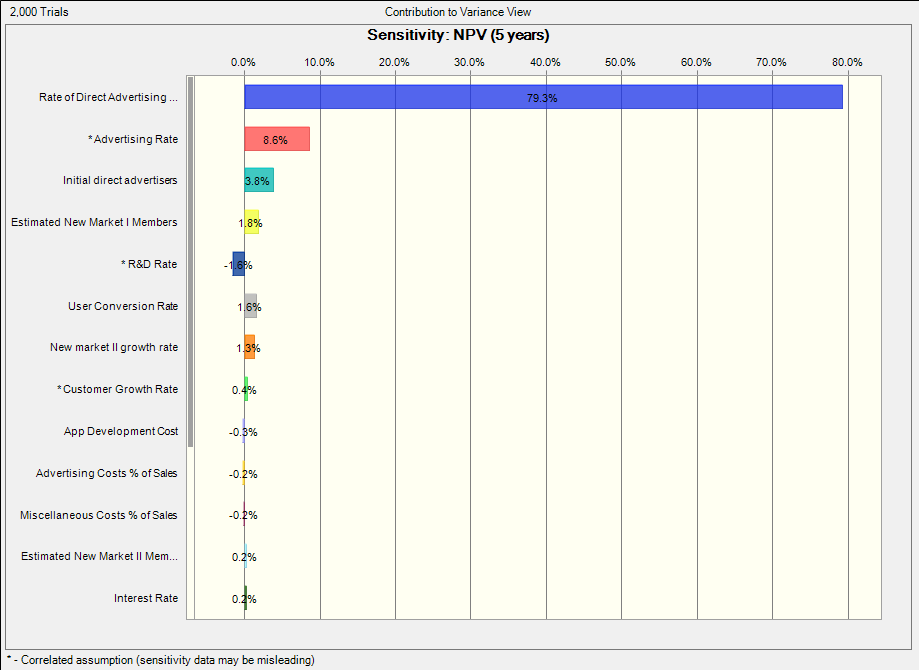


Figure 6: 5-Year NPV Monte Carlo Simulations (above); Sensitivity of NPV to chosen variables (below).

The Monte Carlo analysis confirms several of our success factors. It also indicates that we need to consider our factors from a higher level. For example, it is important that we have a good recommender engine, but this may not be what drives subscribers or advertisers to use our platform. At this time, with no data, we need to confirm the hypothesis that the recommender engine does matter. There are, however, other factors that are more obvious as being critical.

From this analysis, it is clear that our most important critical success factor is our ability to attract, retain, develop and profit from direct advertisers; the top 3 contributors to variance in the NPV relate to direct advertisers. The rate at which we are able to add new advertisers and the rate we are able to charge are our top two simulation variables. This validates our critical success factors 2 and 5. In order to drive both high rates of growth as well as charge a relatively high price to advertisers ($0.10/user/interaction is our current estimated price), we need to ensure that the app does in fact create value for advertisers. There are many social platforms in the app universe and an app that does actually drive traffic to an advertiser’s business would truly stand out for advertising spend. As such, our business will be successful only to the extent that customers follow-through on their social plans. We realize that this may be asking consumers to take a large step outside of their normal behavior. One key hypothesis that we need to test is that consumers who make plans on The Cool Friend will, in fact, follow-through with those plans.

It should also be noted at this point that user growth does not contribute substantially to the NPV. User growth is a source of revenue. However the point of charging users for the service is not so much to generate revenues as to increase the engagement of users with the app. By having some “skin in the game” we can potentially increase users’ interaction with the app. If it is totally free, it is likely that many users will simply download and forget about it. By charging a nominal fee, we potentially increase the likelihood that users who have it, use it.

Additionally, the degree to which we can control R&D costs, here defined as expenses on development of the application, recommender system, etc. have a significant impact on the NPV of the business. This relates to factors 1, 3 and 4. While this model does not take into account the quality of the recommender engine, it is clear that R&D costs are more significant than initially expected and can have more impact on our profitability than our ability to attract new users.

## Financial Data

Cash Flows:

In the appendix is a monthly cash flow for the first year and annual cash flows for years 2 - 5. Attached in a separate document is the data that outlines our revenue, ongoing expenses, and non-recurring models as well.

Breakeven:

Our first month with a positive cash flow from operations will be in our 13th month. At that time, we will have just over 41,500 users and we will be producing just over $4,000 in ad revenue.

Under standard breakeven analysis, we would require 45 months to generate a positive cumulative cash flow. Including assumptions for the time-value of money, our breakeven will occur between the 55th and 56th month of operation. This assumes an 8% cost of capital. At that time, we will expect to have over 789,000 users and we will be producing more than $2,000,000 in ad revenue.

# II. Profit Durability

## Ecosystem

The Cool Friend application will be positioned in an ecosystem that includes all of the other mobile applications we use in our day to day interactions. Applications like Instagram, Urbanspoon, and Google Maps are some examples of entities that operate in this ecosystem. Every one of these entities has suppliers, customers (direct/indirect), complementary products, investors, competition, and government entities that make up their ecosystem. The Cool Friend is no different. The Cool Friend’s ecosystem is made up of the following elements:

*Mobile Device Manufacturers*

Mobile device manufacturers include Apple, Motorola, Samsung, etc. The Cool Friend application will be developed to operate on mobile devices built by these firms. The risks associated with this part of the ecosystem are related to changes in the device technologies and our ability to adapt to these changes. These risks are relatively small because the past changes have been incremental and there has always been an early announcement to give developers enough time to respond. The opportunities in this part of the ecosystem relate to the capabilities these devices provide (e.g. GPS access, location tracking, etc.). These technologies enable The Cool Friend to provide the desired user interface without much additional cost. For profit durability The Cool Friend will have to ensure it continues to keep up with the changes in mobile device technology into the future. This will require the ongoing R&D expenses that we mention above.

*Application Developers*

The Cool Friend application will utilize a number of application and web developers to bring this platform to life and optimize the user experience. Since there is a large variety of skills in this part of the ecosystem, identifying the desired developers is a key risk for The Cool Friend. The Cool Friend will ensure to set short term milestones to be able to determine the skill level of the developers selected before launching into long term development exercises. We will minimize risks by developing and releasing MVPs, rather than working to develop fully-polished applications. The opportunities in this part of the ecosystem exist in the experience level of the development community. For the past many years the community of application and web developers has been creating breakthrough user interfaces. The Cool Friend will utilize this experience level from its ecosystem to be able to create and maintain a successful application. In order to ensure profit durability The Cool Friend must continuously foster its development team, add new members and recruit the best possible candidates who believe in our mission of helping people to get the most out of their free time and socialize better.

*Analytical Tool Providers*

The Cool Friend will be able to use analytical tools to track important metrics related to the application usage. Services like Google Analytics will provide useful information around application usage, crash rates, demographics, etc. This information will feed into the development cycle of The Cool Friend to further optimize the user experience and application effectiveness. The risk in this part of the ecosystem is to interpret the data collected in the wrong way. Sometimes it is tempting to interpret data to validate the hypothesis. Staying objective and challenging the status-quo will be our mode of operation. This will ensure we are able to pick up trends and respond to changing tastes and preferences rapidly. Analytical tools will be one of the key assets that will help The Cool Friend to iterate service, user experience and content to ensure continued satisfaction and adoption by customers. The continuous improvements in the product will ensure continued profitability.

*Distributors (Application Stores)*

Our application will be distributed through application stores such as Apple Store and Android Application store. Both of these platforms provide access to hundreds of millions of users. However, the risk of getting lost in the competitive landscape of mobile applications and never getting noticed is tangible. Therefore, The Cool Friend will ensure intelligent and targeted marketing to generate interest in the service and to keep an engaged user base. The constant targeting of the user base through the distributors will ensure continued profitability of The Cool Friend.

*Infrastructure Providers*

The current landscape of web storage, development, and hosting services levels the playing field for newcomers into this space. Companies like Amazon provide very competitive hosting and storage services for websites. The Cool Friend will take advantage of the competitive pricing landscape and will not invest in fixed assets for this part of the business. There are certain risks associated with tying our website to an outside party. However, since Amazing provides this service for a very large number of products, the risk of imminent changes in this landscape are unlikely. The Cool Friend will monitor this landscape on an on-going basis to ensure uninterrupted service and continuous profitability.

*Technology Providers*

The Cool Friend will have to make use of advertising networks such as InMobi effectively to be able to stay profitable. The largest risk in this part of the ecosystem is not being able to target the advertising to specific consumers. The Cool Friend will have to ensure the firms who are trying to advertise on The Cool Friend application understand the value they are getting by targeted advertising. Furthermore we will ensure The Cool Friend application is utilizing the best advertising networks to generate the greatest amount of value for firms who are advertising on our application.

*Social Network Providers*

The Cool Friend will utilize social media outlets such as Facebook and Twitter to not only capture a large user base, but to also bring value to their platforms by allowing users to share what they are doing on these social media outlets (e.g. allowing users the post the event they are attending on Facebook, twitter, etc.). This symbiotic relationship will ensure The Cool Friend is reaching the largest number of customers and continues to the stay relevant in the market. Additionally, this will ensure the advertising on The Cool Friend application is reaching largest number of customers and to deliver on-going profitability.

*Complementary Products – Data Providers*

The Cool Friend will utilize data generated by Google, Yelp, etc. in order to get access to the users, their locations, their likes/dislikes, the popular bar/restaurant locations, up to date event information, etc. This part of the ecosystem provides a lot of advantages since some of these services have been utilized for a long time and they are updated continuously. This will also help us to reduce our costs and yet still be able to scale the business to new markets. As The Cool Friend team, we will ensure we curate the most relevant selections from these data providers to our consumers in order to mitigate against the risk of generating irrelevant suggestions to consumers. The recommender engine of The Cool Friend will be developed and tested in multiple stages to ensure we are taking full advantage of this part of the eco-system.

*Competitive Products*

The Cool Friend has a few competitors in the event curating applications world such as Gravy, Polo, and EventSeeker. All of them utilize different algorithms and user experiences. The Cool Friend will collate the user feedback generated for these applications to understand the user preferences and their likes/dislikes with these applications. Once this is collated The Cool Friend development team will interpret these to gain valuable insights into user experiences. In effect we will be using our competitors to help us generate our hypotheses and MVP. Having applications that are around for a number years that provide similar services gives The Cool Friend the edge. It allows The Cool Friend team to understand user behavior better and to optimize user experience. The Cool Friend will be able to differentiate itself from all of its competitors by combining the most liked features of these applications into its recommendation, event generation, and planning engines. This continuous differentiation will result in durable profitability.

*Customers*

The Cool Friend will have to ensure it can bring value to its existing and potential new customers. In order to gain access to an increasing number of customers, The Cool Friend will have to clearly articulate its value proposition and utilize all other parts of this ecosystem to bring value to its customers. The Cool Friend will have to ensure it is able to strike a balance between the two sets of customers on an on-going basis. The needs of the customers who are utilizing the application to find events and connect with their friends must be balanced with the needs of the customers who are trying to target their advertising to the application users. This balance and continued innovation in The Cool Friends value proposition will ensure continued profitability into the future.

*Investors and shareholders*

The Cool Friend will have to ensure it can provide a return to its investors and shareholders. In order to achieve continuous returns, The Cool Friend will have to continuously innovate, grow, and bring new value propositions to their customers. New ways of engaging customers, reaching to the target customers for advertising, and generating different value streams will be challenges for The Cool Friend to take advantage of this part of the ecosystem.

*Government and Regulations*

The Cool Friend will have to ensure it is adhering to the privacy and data sharing concerns and laws of the jurisdictions it operates within. As The Cool Friend expands into different geographies, adherence to different regulations will become more challenging. The Cool Friend team will ensure it is able to adhere to regulations before expanding into any new geography.

## Legal considerations

For our business, we will take the following legal measures:

*Business Type*

We will form The Cool Friend as an LLC in the state of Minnesota. The name of the company is planned to be “The Cool Friend, LLC”. This is primarily out of convenience, as the founders will all be in Minnesota. At the time of founding there will be no outside shareholders and as such concerns about minority shareholder rights are not a significant concern. However, if, investors are added and the founders become minority shareholders, having more legal protection is important for us. The business documents will be filed in the state of Minnesota.

There will be tax implications, of course, for the founders of an LLC. The primary one being that the business cannot pay taxes on our behalf. For the initial years of the business, this would not be an issue as the business will not experience significant profit. Once the business starts to become profitable and we take on investors, we will consider changing the entity to a C Corp.

*Intellectual Property*

The Cool Friend could have significant intellectual property, though not likely at the outset. The technological underpinnings of the system will all be off-the-shelf components, such as our recommender engine. If, there are developments that warrant patenting, we will seek these as quickly as possible and file for a patent in the United States. While there are no plans to expand the business internationally, if something patentable arises from the business, we will seek to patent in Europe and Japan as quickly as possible, for the purposes of licensing the technology to European and Japanese subsidiaries. In this case we will organize a subsidiary in Ireland to maximize the value of the IP (similar to arrangements already used by Apple, Google, etc.) Initially, however, our IP will be limited. The brand will be registered as a trademark and we will purchase the domain name, including the .org and .biz, through GoDaddy.com.

*Buy/Sell Agreement and Corporate Governance*

We will craft a buy/sell agreement with the help of legal counsel in order to allow any of the initial 4 founders to sell out to the others at any time. The buy/sell agreement will also include the size of the board, initially to be set as the 4 founders plus up to 5 outsiders, for a total of 9 members. The board should be kept at an odd-number of members as much as possible.

*Financing and Stock*

The goal of the business is to become profitable and sustainable enough in order to attract outside investors. Initially, we will seek financing through friends and family as well as bootstrapping to keep costs as low as possible. Stock will be issued to investors as well as to the founders. Initially, we will issue 10% of the stock to each of the founders and retain the remaining 60% by the company for sale to potential investors or to issue to employees. Share valuation initially will be $1/share. Any shares issued to employees or the founders will vest over 4 years; approximately 2.08%/month for the first 12 months (i.e. to 25% in the first year) and then at 25%/year for the following 3 years. For the first years, we will primarily contract with outside service providers, such as Amazon Web Services and 3rd party application developers to do all, or at least the significant majority, of our design and development work. These service providers will be paid for their service directly and not receive any stock as compensation. Should we take on employees, they will be subject to vesting of shares as stated above, should they be issued any shares or options as part of their compensation package, which will be negotiated with each employee individually. We will only issue options, not warrants.

*Additional legal considerations*

Ultimately, the legal issues of the business can most accurately be determined by engaging experienced legal counsel. As the product is digital, there are few concerns for environmental or torts. There could be some product liability issues, however we anticipate these to be minimal as well. Our terms of service will release us from liability should someone be harmed on an activity that The Cool Friend recommends, such as going to a rock climbing facility or other activity where there is a risk of physical harm. Some activities will be removed from the recommender engine in any case, such as adult entertainment or those where there is a significant physical risk (e.g. sky-diving). In any case, purchasing some insurance against liability will be pursued. An additional source of risk is in the contracts with direct advertisers. We will state explicitly that we do not guarantee that anyone will visit their business in exchange for recommendations nor will we require users to visit these businesses. All search results that result from advertising will be declared to the end-user as well to reduce liability and increase transparency.

# Appendix A: Financial Model for “The Cool Friend”

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fiscal Year** | **2014** |  |  |  |  |  |  |  |  |  |  |  | **2015** | **2016** | **2017** | **2018** |
| **Month** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** |  |  |  |  |
| **Gross Margin per Unit** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unit Price | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **1** | **2** | **3** |
| Unit Cost | - | - | - | - | - | - | - | - | - | - | - | - | **(0)** | **(0)** | **(0)** | **(0)** |
| Gross Margin | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **1** | **2** | **3** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| # of Units Sold | - | - | 25 | 60 | 125 | 350 | 725 | 1,626 | 2,930 | 5,242 | 9,252 | 15,954 | **202,689** | **448,455** | **600,359** | **857,903** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Cash Flow from Operations** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Revenues | - | - | - | - | - | - | 36 | 89 | 177 | 348 | 677 | 1,284 | **260,556** | **3,222,168** | **12,002,910** | **25,436,979** |
| Variable Costs | - | - | - | - | - | - | - | - | - | - | - | - | **(12,122)** | **(125,503)** | **(491,392)** | **(1,117,650)** |
| G&A Salaries | - | - | - | - | - | - | - | - | - | - | (640) | (640) | **(169,587)** | **(1,189,542)** | **(3,369,335)** | **(6,090,626)** |
| Rent/Utilities | - | - | - | - | - | - | - | - | - | - | - | - | **-** | **(28,800)** | **(31,200)** | **(32,400)** |
| G&A Other | (1,120) | (1,120) | (1,155) | (1,155) | (1,155) | (1,155) | (3,156) | (1,157) | (5,160) | (4,165) | (3,291) | (2,309) | **(245,377)** | **(2,241,567)** | **(7,047,540)** | **(14,043,989)** |
| *Subtotal* | (1,120) | (1,120) | (1,155) | (1,155) | (1,155) | (1,155) | (3,120) | (1,068) | (4,983) | (3,817) | (3,254) | (1,665) | **(166,530)** | **(363,243)** | **1,063,443** | **4,152,314** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Cash Flow from Investing** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Web/Mobile Application Development | (17,500) | (17,500) | (15,000) | - | - | - | - | - | - | - | - | - | **(10,000)** | **(10,000)** | **(10,000)** | **(10,000)** |
| Other |  |  |  |  |  |  |  |  |  |  |  |  | **-** | **-** | **-** | **-** |
| *Subtotal* | (17,500) | (17,500) | (15,000) | - | - | - | - | - | - | - | - | - | **(10,000)** | **(10,000)** | **(10,000)** | **(10,000)** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Cash Flow from Financing** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Loan |  |  | 40,000 |  |  |  |  |  |  |  |  |  | **140,000** | **-** | **-** | **-** |
| Equity |  |  |  |  |  |  |  |  |  |  |  |  | **-** | **-** | **-** | **-** |
| Loan/Dividend Payment |  |  |  | (478) | (478) | (478) | (478) | (478) | (478) | (478) | (478) | (478) | **(17,472)** | **(25,872)** | **(25,872)** | **(25,872)** |
| *Subtotal* | - | - | 40,000 | (478) | (478) | (478) | (478) | (478) | (478) | (478) | (478) | (478) | **122,528** | **(25,872)** | **(25,872)** | **(25,872)** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | **-** | **-** | **-** | **-** |
| **Net Cash Flow** | (18,620) | (18,620) | 23,846 | (1,632) | (1,632) | (1,632) | (3,597) | (1,546) | (5,461) | (4,294) | (3,732) | (2,143) | **(54,002)** | **(399,115)** | **1,027,571** | **4,116,442** |

Financial models were completed for 5 years (as opposed to only 3), with the caveat that less accuracy is expected as the model extrapolates further into the future.

# Appendix B: Monte Carlo Simulation Inputs

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | **Crystal Ball Report - Assumptions** |  |  |  |  |
| No Simulation Data | | | |  |  |  |  |  |  |
|  |  |  |  |  | **Assumptions** |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Worksheet: [CashFlow V4 - SDB for Monte Carlo.xlsx]Cash Flow** | | | | | | | |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Assumption: Interest Rate** | | | |  |  |  |  |  | **Cell: C5** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  |  |  |  |
|  |  | Minimum |  | 7% |  |  | | |  |
|  |  | Likeliest |  | 8% |  |  |
|  |  | Maximum |  | 11% |  |  |
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|  |  |  |  |  |  |  |  |  |  |
| **Worksheet: [CashFlow V4 - SDB for Monte Carlo.xlsx]Non-recurring Exp** | | | | | | | | |  |
|  |  |  |  |  |  |  |  |  |  |
| **Assumption: App Development Cost** | | | | |  |  |  |  | **Cell: C10** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  | | |  |
|  |  | Minimum |  | 40,000 |  |  |
|  |  | Likeliest |  | 45,000 |  |  |
|  |  | Maximum |  | 100,000 |  |  |
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|  |  |  |  |  |  |  |  |  |  |
| **Worksheet: [CashFlow V4 - SDB for Monte Carlo.xlsx]Ongoing Exp** | | | | | | | |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Assumption: Advertising Costs % of Sales** | | | | |  |  |  |  | **Cell: B17** |
|  |  |  |  |  |  |  |  |  |  |
|  |  | Initial marketing will be 1/3 of the expected development cost.  Expect 7-8% of revenues to marketing for a small business.  http://www.sba.gov/community/blogs/how-set-marketing-budget-fits-your-business-goals-and-provides-high-return-investmen | | | | | | |  |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  |  |  |  |
|  |  | Minimum |  | 7.00% |  |  | | |  |
|  |  | Likeliest |  | 10.00% |  |  |
|  |  | Maximum |  | 15.00% |  |  |
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|  |  |  |  |  |  |  |  |  |  |
| **Assumption: Misc Cost Efficiency** | | | | |  |  |  |  | **Cell: AZ30** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  | | |  |
|  |  | Minimum |  | 0.840 |  |  |
|  |  | Likeliest |  | 0.930 |  |  |
|  |  | Maximum |  | 1.020 |  |  |
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|  |  |  |  |  |  |  |  |  |  |
| **Assumption: Miscellaneous Costs % of Sales** | | | | | |  |  |  | **Cell: B31** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  | | |  |
|  |  | Minimum |  | 0.02 |  |  |
|  |  | Likeliest |  | 0.03 |  |  |
|  |  | Maximum |  | 0.05 |  |  |
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| **Assumption: R&D Rate** | | | |  |  |  |  |  | **Cell: B32** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  |  |  |  |
|  |  | Minimum |  | 0.20 |  |  | | |  |
|  |  | Likeliest |  | 0.27 |  |  |
|  |  | Maximum |  | 0.35 |  |  |
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|  |  |  |  |  |  |  |  |  |  |
|  | Correlated with: | |  |  |  |  | Coefficient |  |  |
|  |  | Customer Growth Rate (Revenue!C40) | | |  |  | 0.07 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Worksheet: [CashFlow V4 - SDB for Monte Carlo.xlsx]Revenue** | | | | | | | |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Assumption: Advertising Rate** | | | | |  |  |  |  | **Cell: I9** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  | | |  |
|  |  | Minimum |  | 0.001 |  |  |
|  |  | Likeliest |  | 0.010 |  |  |
|  |  | Maximum |  | 0.011 |  |  |
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|  |  |  |  |  |  |  |  |  |  |
|  | Correlated with: | |  |  |  |  | Coefficient |  |  |
|  |  | Customer Growth Rate (C40) | | |  |  | 0.20 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Assumption: Customer Growth Rate** | | | | |  |  |  |  | **Cell: C40** |
|  |  |  |  |  |  |  |  |  |  |
|  |  | Scott: Variable; correlated to app cost | | | | | | |  |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  |  |  |  |
|  |  | Minimum |  | 0.40 |  |  | | |  |
|  |  | Likeliest |  | 0.60 |  |  |
|  |  | Maximum |  | 0.62 |  |  |
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|  | Correlated with: | |  |  |  |  | Coefficient |  |  |
|  |  | Advertising Rate (I9) | |  |  |  | 0.20 |  |  |
|  |  | R&D Rate (Ongoing Exp!B32) | | |  |  | 0.07 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Assumption: Estimated New Market I Members** | | | | | | |  |  | **Cell: C44** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  | | |  |
|  |  | Minimum |  | 150,000 |  |  |
|  |  | Likeliest |  | 300,000 |  |  |
|  |  | Maximum |  | 330,000 |  |  |
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| **Assumption: Estimated New Market II Members** | | | | | | |  |  | **Cell: C51** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  | | |  |
|  |  | Minimum |  | 300,000 |  |  |
|  |  | Likeliest |  | 500,000 |  |  |
|  |  | Maximum |  | 550,000 |  |  |
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| **Assumption: Estimated Total MN members** | | | | |  |  |  |  | **Cell: C38** |
|  |  |  |  |  |  |  |  |  |  |
|  |  | Scott: Variable | | | | | | |  |
|  |  |  |  |  |  |  |  |  |  |
|  | Normal distribution with parameters: | | | |  |  | | |  |
|  |  | Mean |  | 135,000 |  |  |
|  |  | Std. Dev. |  | 13,500 |  |  |
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| **Assumption: Growth of new members** | | | | |  |  |  |  | **Cell: C45** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  |  |  |  |
|  |  | Minimum |  | 45,000.00 |  |  | | |  |
|  |  | Likeliest |  | 50,000.00 |  |  |
|  |  | Maximum |  | 55,000.00 |  |  |
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| **Assumption: Initial direct advertisers** | | | | |  |  |  |  | **Cell: I11** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  |  |  |  |
|  |  | Minimum |  | 2 |  |  | | |  |
|  |  | Likeliest |  | 5 |  |  |
|  |  | Maximum |  | 6 |  |  |
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| **Assumption: Member Growth Phase 0** | | | | |  |  |  |  | **Cell: C39** |
|  |  |  |  |  |  |  |  |  |  |
|  |  | Scott: Variable | | | | | | |  |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  | | |  |
|  |  | Minimum |  | 9,000.00 |  |  |
|  |  | Likeliest |  | 10,000.00 |  |  |
|  |  | Maximum |  | 11,000.00 |  |  |
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| **Assumption: New market I growth rate** | | | | |  |  |  |  | **Cell: C46** |
|  |  |  |  |  |  |  |  |  |  |
|  | Normal distribution with parameters: | | | |  |  |  |  |  |
|  |  | Mean |  | 0.40 |  |  | | |  |
|  |  | Std. Dev. |  | 0.04 |  |  |
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| **Assumption: New market II growth rate** | | | | |  |  |  |  | **Cell: C53** |
|  |  |  |  |  |  |  |  |  |  |
|  | Normal distribution with parameters: | | | |  |  | | |  |
|  |  | Mean |  | 0.20 |  |  |
|  |  | Std. Dev. |  | 0.02 |  |  |
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| **Assumption: New Market II member growth** | | | | |  |  |  |  | **Cell: C52** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  | | |  |
|  |  | Minimum |  | 27,000.00 |  |  |
|  |  | Likeliest |  | 30,000.00 |  |  |
|  |  | Maximum |  | 33,000.00 |  |  |
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|  |  |  |  |  |  |  |  |  |  |
| **Assumption: Rate of Direct Advertising Growth** | | | | | | |  |  | **Cell: C31** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  |  |  |  |
|  |  | Minimum |  | 99% |  |  | | |  |
|  |  | Likeliest |  | 110% |  |  |
|  |  | Maximum |  | 121% |  |  |
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| **Assumption: User Conversion Rate** | | | | |  |  |  |  | **Cell: C34** |
|  |  |  |  |  |  |  |  |  |  |
|  | Triangular distribution with parameters: | | | |  |  |  |  |  |
|  |  | Minimum |  | 5% |  |  | | |  |
|  |  | Likeliest |  | 50% |  |  |
|  |  | Maximum |  | 95% |  |  |
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| End of Assumptions | | | |  |  |  |  |  |  |