Business plan for the mobile application 'Whizzbit'

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Foreword

This thesis is written as a completion to the Master of Industrial Management at the University of Gent.
This work would not have been possible without the help of certain people.
I would especially like to thank my two promoters who gave me valuable insight and direction which allowed me to complete the research and write this thesis.
I would also like to thank my colleagues at work for their support, listening ear and the sharing of their knowledge.

Tom Leleu.

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1. Executive Summary

Avalon Automation is a technology company which has a passion for innovation and is unafraid to invest in R&D projects. During one of our brainstorm sessions we came up with the idea to create a mobile application. Worldwide, smartphones are becoming the most widely available communication platforms. We wanted to create an application which lets users connect to their IO circuit boards and remotely control them. We noticed there was a hole in the market since to date, no such application is available on the market.

The purpose of this business plan is to decide what to do with the mobile application: either bring it to the market ourselves or sell the technology to some strategic partner.

Therefore multiple steps were taken. The first was to measure the interest of the market for such a product. We used an online survey tool to screen whether our idea was appealing to our market segmentation, which were men aged from 30 to 55 and home owners with a technical profile. The results of this survey were more than positive. Although these have to be taken with a grain of salt, it was still a confirmation that our idea had merit.

Secondly, we had to choose what type of business model we would adopt for this application. After some reflection we decided to study the impact of two different models: the pay-per-download model and the subscription model. The price setting for the pay per download model is 4.99 Dollars and for the subscription model 1.99 Dollars/month. The price was set in conformity to the market for quality apps.

Once the price was set, we had to look at the financial aspect, which depends on our sales forecast. We wanted the sales forecast to be based on factors we could monitor. In our case we used the conversion rate of our online website visitors.
We defined three scenarios with three different conversion rates: a worst case with 1%, a medium case with 2% and a best case with 3%. We quickly noticed that even in the best case, sales volumes were not enough to be considered a profitable activity.
We realized if we wanted to make profit we needed a partnership. The most obvious partner would be an IO circuit board manufacturer. We updated our sales forecast based on theirs which was difficult to grasp. We had to make some assumptions as the exact sales volume was unknown.

After updating our sales forecast in our three different scenarios for the two business models, we did a profit and loss projection and calculated the cash flows for each case. We quickly concluded that the only case which was profitable was the best case scenario with a subscription model.
That was not exactly the result we were hoping for as we thought this model is inappropriate for our type of application.

As going to market ourselves is not a viable option, we will look to sell this technology. We decided to launch the application on the market anyway, and tried to gather as many good reviews as possible and work out all the technical issues before starting the sales process.

As this document is an internal document only intended for the eyes of our management, a new business case will have to be made with a view to sale.

2. General Company Description

2.1 Company summary

Avalon Automation is a company which provides industrial automation specialized in the tank terminal business. Most of our customers are industries which store and carry out economic shipments with chemical products.

In those automation projects we provide the following services:

- Process engineering: P&ID and piping design, flow calculations etc.
- E&I engineering: electrical schedules, cable calculation etc.
- Software engineering, PLC programming, scada systems, trending etc.
- MES engineering: we have a R&D department which developed our own Terminal Automation System solution which is a MES system for the tank storage business.
- Execution on site with fixed contractors

2.2 Mission

WhizzBit is the most complete mobile app for automation projects which will facilitate the control and interface with any type of IO hardware equipment. Our purpose is to provide a mobile application to help users create their own small automation projects in a simple and intuitive way. Our application will provide a fully customizable, brand-independent control platform in the palm of their hands.

2.3 Objectives

- Generate new revenue
- Grow a customer base

2.4 Keys to Success

- High quality development skills.
- Strategic planning and setting up the proper partnerships.
- Strong technology, involving substantial and useful enhancement to existing IO boards.
- First to market, rapid development and penetration of market to enhance visibility to potential acquirers.

2.5   Company History

| Past Performance		2010		2011		2012
Sales	€	11 890 743	€	7 450 158	€	9 450 684
Gross Margin	€	1 266 248	€	919 875	€	957 550
Gross Margin %		96,58%		94,21%		95,35%
Operating Expenses	€	406 692	€	431 701	€	439 900
Balance Sheet		2010		2011		2012
Current Assets						
Cash	€	2 296 302	€	2 485 369	€	2 905 895
Other Current Assets	€	2 051 778	€	3 861 796	€	1 773 769
Total Current Assets	€	4 348 080	€	6 347 165	€	4 679 664
Long-term Assets						
Long-term Assets	€	3 422	€	3 429	€	13 025
Accumulated Depreciation	€	-	€	-	€	-
Financial Assets	€	38 050	€	38 050	€	38 050
Total Long-term Assets	€	41 472	€	41 479	€	51 075
Total Assets	€	4 389 552	€	6 388 644	€	4 730 739
Current Liabilities						
Accounts Payable	€	1 898 481	€	2 423 808	€	1 620 205
Current Borrowing	€	-	€	-	€	-
Other Current Liabilities	€	247 448	€	1 368 286	€	124 234
Total Current Liabilities	€	2 145 929	€	3 792 094	€	1 744 439
Long-term Liabilities						
Total Liabilities						
Paid-in Capital	€	100 000	€	100 000	€	100 000
Retained Earnings	€	-	€	-		
Earnings	€	2 143 622	€	2 496 550	€	2 886 300
Total Capital	€	2 243 622	€	2 596 550	€	2 986 300
Total Capital and Liabilities	€	4 389 551	€	6 388 644	€	4 730 739
Other Inputs						
Payment Days		30		30		30

Table 1 : Past performance
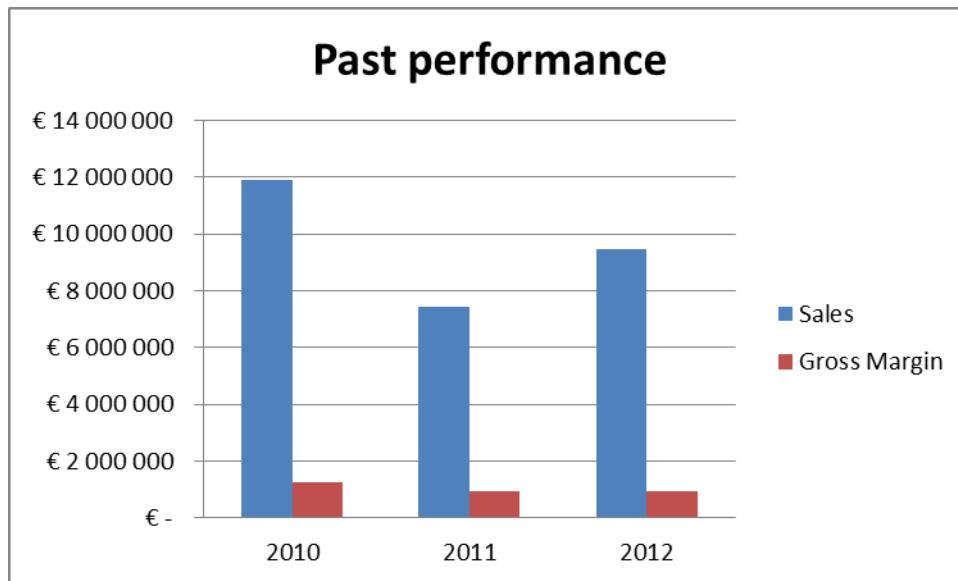
Figure 1 : Past Performance

3. Product

3.1   Introduction

Avalon Automation is a company whose strategy is based on technological innovation. In one of our brainstorm meetings we had the idea to create a mobile application which provided an opportunity for anybody to create an automated environment at home, in the office etc. at low cost and easy to implement. We were looking for a market segment within mobile applications that was not currently served: a hole in the market. We realized there is a lot of hardware equipment available on the market such as all kind of IO boards but no real interface and remote control possibilities with smartphones. The only mobile applications on the market that offer remote control are   for home automation projects which are combined with expensive total installation packages by third parties. There were no apps that gave the customers the possibility to automate and control home projects themselves with any kind of hardware, brand independent. So we decided to create one: WhizzBit was born.

3.2   Development Requirements

The first question we have to ask our self is which type of application we want to develop. There are basically two types: a native version and a web based version. Both have advantages as well as inconveniences, which we will run through in this paragraph.

First of all, let us define what native and web applications are.
A native app is for a certain mobile device (smartphone, tablet, etc.) and installed directly onto the device. Users typically acquire these apps through an online store or marketplace such as The App Store or Android Apps on Google Play.
When we talk about mobile web apps, we're referring to Internet-enabled apps that have specific functionality for mobile devices. They're accessed through the mobile device's web browser (i.e. on the iPhone, which is Safari by default) and do not need to be downloaded and installed on the device.
Let us compare both types versus the following factors:

User interface:
In terms of the general look-and-feel, there's little difference between the two, making for a consistent user experience.

Development:
For native apps, each mobile application development platform (e.g. iOS, Android) requires its own development process and has its own native programming language.

The web app runs in the mobile device's web browser and each may have its own features and quirks. Mobile web apps are mostly written in HTML5.

Hardware interfacing:
Native apps can interface with the device's native features, information and hardware (camera, accelerometer, etc.)
Mobile web apps can access a limited amount of the device's native features and information (orientation, geo-location, media, etc.)

Monetization:

Developers have the ability to charge a download price and app stores will typically handle the payment process (in exchange for a percentage of sales).

Charging users for the mobile web app requires the set-up of an own-pay or subscription-based system.

We will talk later about the different possible business models for an application.

Distribution:

Native apps are directly downloaded onto a mobile device from stores and marketplaces and run as a standalone application (no web browser needed). Users must manually download and install app updates.

Web apps are accessed through a mobile device's web browser. There is no need to install new software as updates are made to the web server without user intervention. Since there is no app store for the Mobile Web, it can be harder for users to find our app.

App version:

As a result of distribution methods native app users may choose to ignore an update, resulting in different users running different versions of the app, while all web app users are on the same version.

Strengths:

Native apps	Web apps
Typically perform faster than mobile web apps	Have a common code base across all platforms
App stores and marketplaces help users find native apps	No installation needed
App store approval processes can help assure users of the quality and safety of the app	Direct control over the application's distribution (no store approvals needed)
Tools, support and standard development best practices provided by device manufacturers can help speed up development	Delivering updates is much more convenient

Weaknesses:

Native apps	Web apps
Are typically more expensive to develop, especially if we're supporting multiple mobile devices	Mobile web apps can't access all of the device's features (yet)
Supporting multiple platforms requires maintaining multiple code bases and can result in higher costs in development, maintenance, pushing out updates, etc.	Supporting multiple mobile web browsers can result in higher costs in development and maintenance, etc.

Users can be on different versions and can make our app harder to maintain and provide support	Users can be on different mobile browsers and can make our app harder to maintain and provide support
App store approval processes can delay the launch of the app or prevent the release of the app	For users, it may be harder to find a mobile web app because of the lack of a centralized app store

Conclusion:

As we can see there are multiple factors to consider when deciding which type of application we want to develop, such as business objectives, target audience, technical requirements and so forth.

We decided to choose for a native application due to the following reasons:

- direct access to a large group of consumers through the existing stores. Native apps are easy to find and install. The Apple App Store, Google Play, etc. are great places to browse for and download apps.
- complete integration with payment systems. Apple users are notoriously voracious consumers and are two clicks away from buying an app. Apple have 400 million active iTunes accounts with credit boards on file which makes app purchases really easy.
- higher user adoption, usage volume and user engagement (i.e. duration of usage per session)

3.3 Product description

3.3.1 Overview

WhizzBit is a mobile application which allows the users to perform low level automation on any type of external I/O hardware boards through their smart devices and a software controller installed locally. The system is highly customizable and gives users the full freedom to create their own supervision and control screens. The system setup is quite simple: All you need is a (soft) controller or pc and an internet connection. The configuration of the controller and the I/O boards is done on an online server and will be available for all users. WhizzBit will be built as an open community.
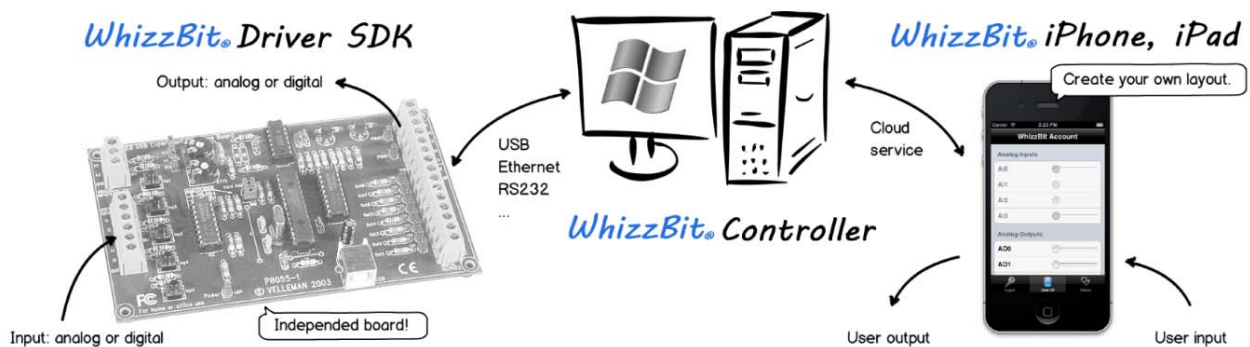
Figure 2 : WhizzBit overview

3.3.2 Features

WhizzBit is an automation software solution for hobbyists and professionals who consider simplicity, mobility and adaptability an advantage.

Simplicity

WhizzBit is a story about playing with input and output signals. Let's start with defining what these inputs and outputs are.
We recognize three different types of I/O's:
- Digital: can store only one bit. So the result is (0 or 1) or (false or true).
- Analogue: can store 32 bits.
- Stream: is unique and stores an undefined amount of bytes. Most of the time the stream will be converted to a string that represents text.

These three types of IO can be either input or output:
- Input: all the data that goes in the WhizzBit system such as board input, user input and timers.
- Output: all the data that leaves the WhizzBit system such as board output and user read-only data.

The WhizzBit controller collects all the different inputs and calculates the values for the outputs, via user defined expressions.
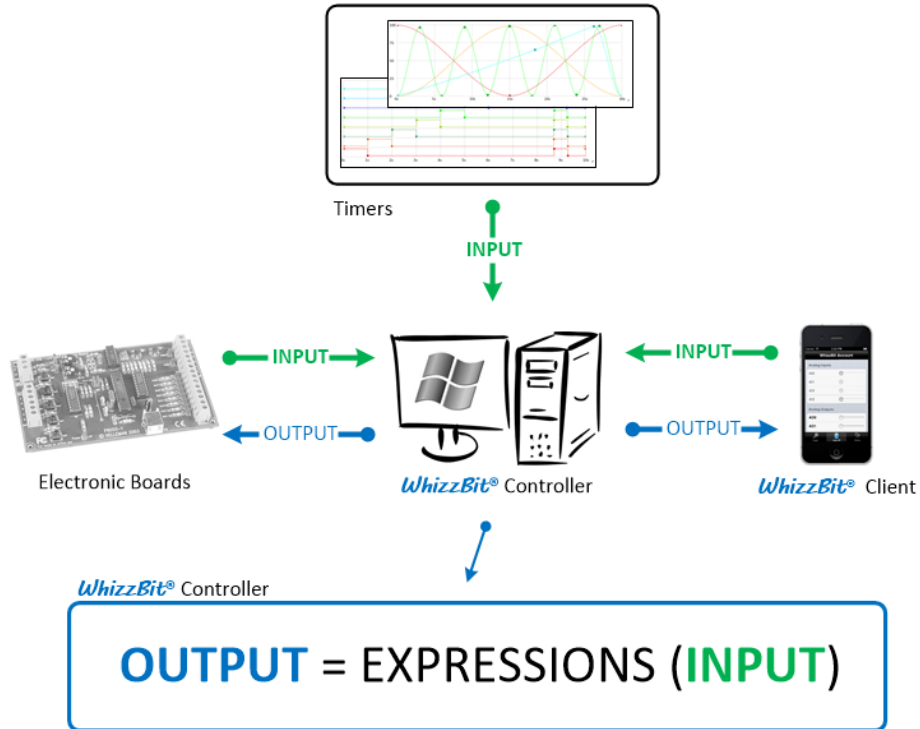
Figure 3 : WhizzBit simplicity

Mobility

The user can connect from anywhere without requiring any special configuration. He simply enters his access code and is then able to see the I/O that has been configured. Our cloud services will handle the high performance communication between the controller and the iPhone/iPad app. The controller will only send status messages when a client is connected. The bandwidth of the messages is extreme low: we are using one of the best compression and streaming technics available today.
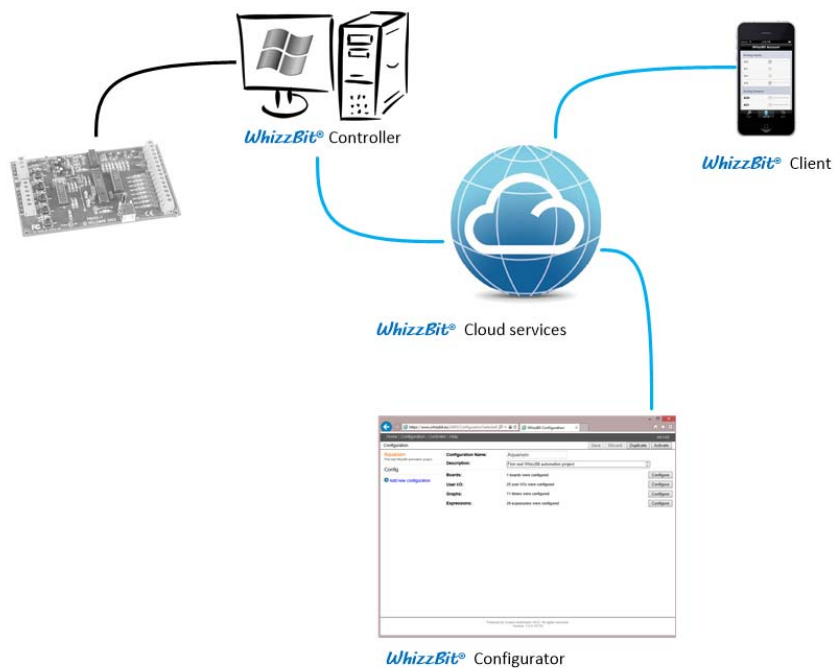
Figure 4 : WhizzBit mobility

After registering a WhizzBit account, the user has full access to three key components: a WhizzBit controller, a WhizzBit configurator and a WhizzBit iPhone/iPad application.

Adaptability

As mentioned previously, it is primarily about inputs and outputs but we will not bind the user to any specific hardware solution. He can choose his own hardware (boards) and check if there is already a WhizzBit driver available. If not, he can request one or create his own driver via the free WhizzBit Driver SDK (Software Development Kit). Creating own-user drivers is just a matter of implementing a .Net Interface we supply via the WhizzBit Driver SDK.

In summary here are the main features of WhizzBit:
- Create a personal supervision and control system and design a custom made screen for both iPhone & iPad in minutes.
- The system is independent of electronic boards and sensors.
- Create own drivers with the free SDK and share them with the WhizzBit community.
- A virtual board is available upon registration so that the user can play and feel the power without the need to invest in hardware.
- A time-boxed installation procedure enables the user to be up and running within 6 minutes.
- No firewall configuration is needed. Plug and play with Apple devices.

4. Market analysis

Market research analysis is conducted in order to gather as much information as we can on the target market. This research will be divided into three parts. The first will handle the market and customer's needs. The second estimates the size of the market and the final part assesses the competition.

4.1   Market segmentation

We want to determine which types of customers would be interested in our product so we can target them directly through our marketing channels.

The four basic market segmentation strategies are based on:

- Behaviour (rate of usage, loyalty status, readiness to purchase etc.,)
- Demographics (age, gender, occupation, socio-economic group etc.,)
- Psychographics (personality, lifestyles etc.,)
- Geography (customer location, region etc.,)

The one we are using is Demographics. Our segmentation is as follows:

- Men: this mobile app has a gadget aspect and we know that men love gadgets.
- 30-55 years: this must be taken into account with the next criteria. We think that only people with their own house will spend time and money automating it. Most home-owners are between 30 and 55 years.
- home-owner: see above.
- with a college Degree or technical job (electricians, engineers etc.): people who want to use this app will need to have some small level of technical knowledge.
- household incomes = 75 000 Dollars: we assume that people who earn in excess of 75 000 Dollars per year will not spend time automating projects themselves; they will outsource it to professional firms. People who earn less than 75 000 Dollars will probably not be interested in spending money on automation projects.
- owns an iPhone/iPad: quite logical in order to use an app.
- location: worldwide: all of the app content and the website are written in English, thus understandable for everybody.

4.2   Market research

Now that we have defined our market segmentation, we want to perform a primary market research to gather qualitative and quantitative data on our market niche. The tools that are usually used are focus groups, surveys, field tests and interviews. Primary research is usually based on statistical methodologies that involve sampling as little as 1 percent of a target market. This tiny sample can give an accurate representation of a particular market.

The downside of primary market research is that it can be very expensive. Fortunately, a growing number of online tools allow us to conduct primary research such as surveys ourselves at minimal cost.

The focus of our primary market research was to see if our idea of a brand-independent and fully customisable mobile application for automation projects was appealing to our market segmentation.

For budgetary reasons, we decided to perform a primary market research through an online survey. Our first goal was to find a qualitative online survey tool. After some Internet research, we decided to choose Survey Monkey which is a well-known player in this field of service.

After a few meetings with our mobile application developers, we agreed on the questions we wanted answered through the survey. The survey can be found in appendix 10.

Once the survey was made, we had to find a way to reach our market segment. Survey Monkey offers many options for broadcasting our survey:
- Through an existing mailing list
- Through some social account (Facebook, Twitter etc.,)
- Through a website

This was a problem for us, since developing a mobile application is not our core business, we don't have an existing customer base we can use to broadcast the survey.

So we tried another approach, which was to contact some list brokers to obtain the email addresses of people fitting our market segmentation. List brokers are agents that provide lists containing people's names and contact information. Additionally, these lists may include additional demographic information such as age, gender etc.

We soon found out that the use of such lists was problematic. The online survey site only accepts lists with a maximum capacity of 10 000 records. According to our calculation we needed about 2 000 responses to the survey to be representative of our market segment.

In order to calculate a sample size, we need to determine a few things about the target population and the sample :

Population Size — How many total people fit our demographic ?

Margin of Error (Confidence Interval) — No sample will be perfect, so we need to decide how much error to allow.

Confidence Level — How confident do we want to be that the actual mean falls within our confidence interval ? The most common confidence intervals are 90% confident, 95% confident, and 99% confident.

Standard of Deviation — How much variance do we expect in our responses ? A safe decision is to use 0,5.

Sample Size - Infinite Population (where the population is greater than 50 000)

$$SS = \frac{Z^2 \times (p) \times (1-p)}{C^2}$$

Where :

Z = Z-value (1,96 for a 95 percent confidence level)

P = Percentage of population picking a choice (0,5)

C = Confidence interval, expressed as decimal (0,02)

The response rates guaranteed by the list brokers were varying around 10% and went as low as 1%, which meant we would need to broadcast between 20 000 and 200 000 emails. This was not a viable option for us with Survey Monkey, nor any other online survey tool.

We tried to bypass Survey Monkey and went looking for a broadcasting firm which was able to handle such big lists. Unfortunately they were very expensive and we decided not to proceed.

We finally contacted the US branch of Survey Monkey which had a product called "Survey Monkey Audience" which could help us reach a broad group of people or a targeted population, using specific demographic and behavioural traits.

This option appealed to us since we only paid per response received and were guaranteed to have our 2 000 responses since their user base was very large.

The complete answers and results of the survey can be found in appendix 10. Below we present the information that is most important to us: the confirmation of our idea.

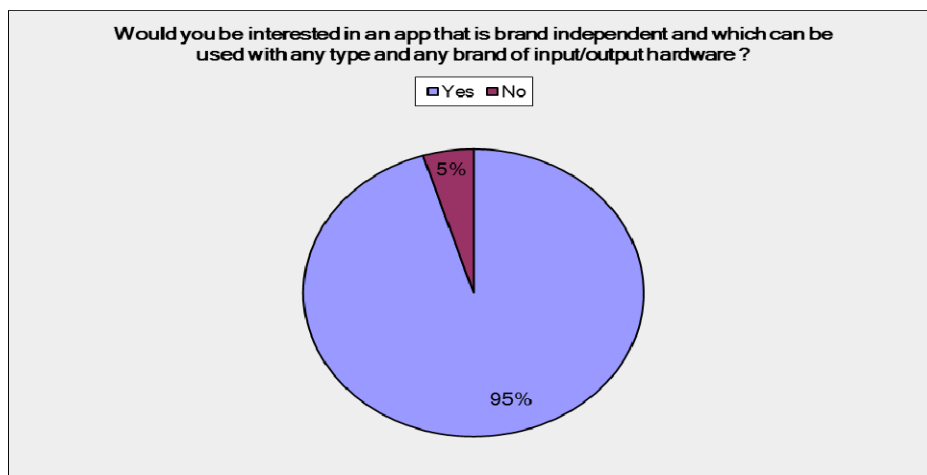We see that a large majority of people are interested in the concept we want to offer.

Figure 5 : Survey result 1
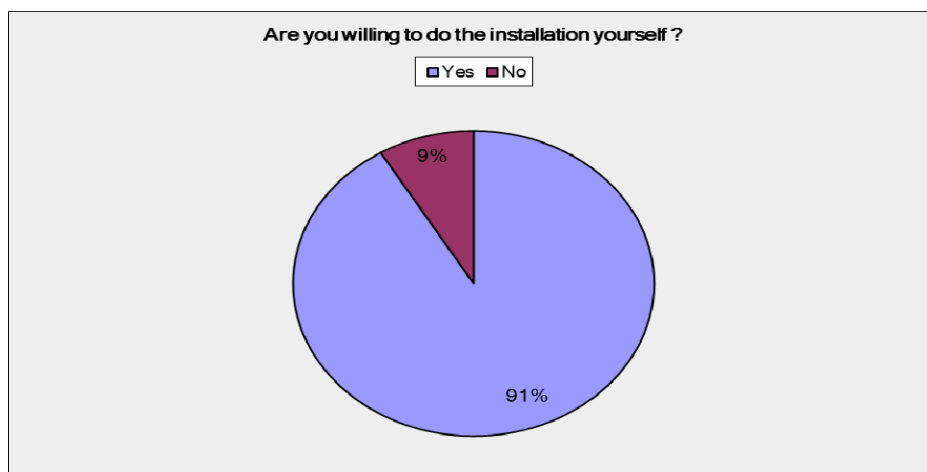
Figure 6 : Survey result 2
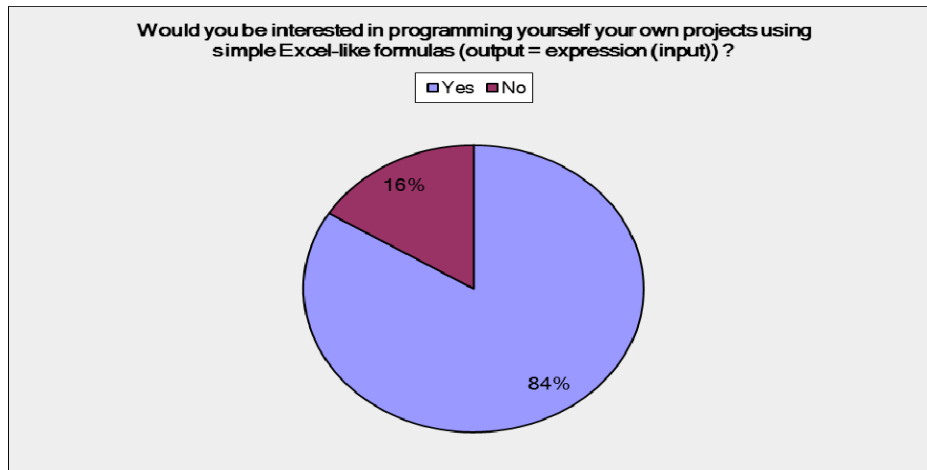
Figure 7 : Survey result 3

Besides the primary research, we will perform what is called secondary marketing research. Secondary marketing research involves the investigation of existing data sources and previously detailed relevant information. This data is available through other publications or reports, newspapers, magazines, websites etc. Secondary market research is easy to find, and much of it is free or low-cost. The downside of secondary market research is that it is not customized to our needs, so it may not be as useful as primary market research. For example, we can find out how many applications were downloaded last year and at what price, but that will not tell us how many downloads our application will generate.

We will primarily use the Internet to screen interesting statistics on consumer behaviour, download volumes of apps, price setting etc.

Info	Internet links
Trends (growth, consumer preferences) in usage of mobile apps	http://www.iosappstats.com/stocks/mobile-consumer-behavior-and-trends-2012/ http://mobithinking.com/mobile-marketing-tools/latest-mobile-stats/e#appusers
Growth potential of mobile app market	http://www.smartinsights.com/mobile-marketing/mobile-marketing-analytics/mobile-marketing-statistics/ http://techcrunch.com/2011/01/18/report-mobile-app-market-will-be-worth-25-billion-by-2015-apples-share-20/ http://www.iosappstats.com/stocks/38185/
Growth potential of iPhones	http://gigaom.com/2013/07/17/isuppli-predicting-2013-iPhone-sales-growth-to-be-below-industry-average/ http://www.businessinsider.com/iPhone-5-sales-by-area-around-the-world-2012-9
Growth potential of Android phones and other smartphones	http://www.tomsguide.com/us/ios-android-windows-phone-smartphone-iPhone,news-15473.html http://www.iosappstats.com/stocks/is-android-really-beating-ios/
App statistics	http://148apps.biz/app-store-metrics/ http://www.ottocat.com/results.php?genreId=6002

Table 2 : secondary market research

Information we were especially interested in:
- ➜ How many apps are available in the Apple store? 900.000 apps (June 2013)
- ➜ How many new apps are uploaded every day? Approximately 257 (62 games and 196 non-games)
- ➜ How many utility apps are available in the Apple store? 86.501 apps
- ➜ How many of these apps involve:

   Automation: 407

   Electronics: 28

   Circuit boards: 4
- ➜ What is the average price setting of these apps?

   They vary in price from totally free to 4,99 Dollars

4.3 Sizing up the market

Perhaps the most important question for anyone trying to market a new product or service is determining the size of the potential market. The estimation of market size gives a business plan its sense of scale. We want to know how big the opportunity is currently and how big it may become in the future.

Sizing up the market is probably the most challenging aspect as it is not an exact science. Market size is relative, markets change quickly, so market numbers are educated guesses at best. There are many techniques which can help us estimate the size. The one we shall use is the chain-ratio method. It consists of multiplying a larger market size, which is well known, by a chain of related-percentages.

The known market we will start from is the total population of iPhone users. According to Wikipedia, who took their information directly from Apple, over 146 million iPhones are active so far worldwide.

Fiscal Year	Q1 [Oct-Dec]	Q2 [Jan-Mar]	Q3 [Apr-Jun]	Q4 [Jul-Sep]	Total sold
2007			270,000[1]	1,119,000[2]	1,389,000
2008	2,315,000[3]	1,703,000[4]	717,000[5]	6,890,000[6]	11,625,000
2009	4,363,000[7]	3,793,000[8]	5,208,000[9]	7,367,000[10]	20,731,000
2010	8,737,000[11]	8,752,000[12]	8,398,000[13]	14,102,000[14]	39,989,000
2011	16,240,000[15]	18,650,000[16]	20,340,000[17]	17,070,000[18]	72,300,000
2012	37,044,000[19]	35,100,000[20]	26,000,000[21]	26,900,000[22]	125,044,000
2013	47,800,000[23]	37,400,000[24]			85,200,000
Fiscal Year	Q1	Q2	Q3	Q4	

Table 3 : IPhone sales per quarter

We will now search the percentages representing our segmentation. As a reminder our segmentation is as follows:

- men

- 30-55 years

- home-owner

- with a college degree or technical job (electricians, engineers etc.)

- household incomes = 75 000 Dollars

- owns an iPhone/iPad
- location: worldwide

According to the 2012 RJI Mobile Media News Consumption Survey, researchers have determined that Apple iPhone users are generally older, better-educated and earn more than those using Android or other smartphones.

SMARTPHONE OWNERS	All Android Brands	Apple iPhone	Blackberry Smartphone	
Men	65.1%	60.8%	56.2%	
Women	34.9%	39.2%	43.8%	
Ages 18-34	56.0%	45.7%	43.1%	
Ages 35-54	27.8%	31.5%	36.1%	
Ages 55 or Older	16.2%	22.8%	20.8%	
Income under $75,000*	63.9%	38.5%	41.3%	
Income $75,000 or more*	36.1%	61.5%	58.7%	
*Annual household income				
College Degrees*	48.7%	64.0%	63.9%	
* 4-year college degree or graduate degrees				

Table 4 : RJI Mobile Media News Consumption Survey

In terms of demographics, iPhone users tend to fall into the over-35 group. In terms of income a majority of iPhone users earn more than 75 000 Dollars annually. Education-wise, iPhone users that hold bachelors or post-graduate degrees stand at 64%.

We will use the percentages of table 4 to determine our market size starting from the 146 million iPhone users. If we suppose the distribution of age groups is equal for each gender, than we have about 28 million men from ages 35 to 54. We need to find the percentage of technical profiles in this group but it is understandably difficult to find statistics concerning this information. We are forced to make a guess: about 10 % *may* have a technical background and/or profile.
This gives us a market size of 2.8 million potential customers.

4.4   Assessment of the competition

When entering a market with a new product or service, it is crucial to screen and analyse the competition. A competitive assessment is a business-planning tool that will help us make good business decisions by taking into account the presence of competitors and their potential impact. An assessment typically involves creating a list of competitors and creating a profile for each competitor that includes information such as the types of products and services they sell, their market share, marketing strategies, and notable strengths and weaknesses.

Before going further, we have to make the distinction between different market types:
- New market
    A new market is usually created by a disruptive innovation. There are no customers, no competitors. A need has been created that did not previously exist.

- Existing market
  An existing market is a market where the competitors are known, the customers are known, and most importantly, the basis of competition is known (these are the features which are very important to the consumers and for which the consumers are ready to dump their current supplier). Winning shares of an existing market is only done when performing better on those features. The competitive analysis must be around those features.
- Re-segmented market
  This is an existing market which we want to segment, meaning we found some characteristic or needs of customers in an existing market that incumbents are not addressing. The strategy to be used here is a market niche strategy: we will not go in a head-on battle with the competition. We want to create a new market space and be first to the market which offers a great advantage.

We have to identify in which market type we are active: this is clearly a re-segmented market. We have a product that fulfils an unaddressed need in the automation world: remote control of I/O boards through smartphones. Besides the fulfilment of this need, the customer is also free to choose:

- the material they want to use, brand independent.
- the way they want it to work, no closed programming box.

A competitive analysis makes sense when a company is entering an existing market. In a re-segmented market, a competitive analysis starts with the hypothesis of "Here's the problem we are solving for our customers." The competitive analysis chart highlights the product features that differentiate our start-up from the existing market incumbents because of our understanding of specific customer needs in this niche.

The research of potential competitors first began in the App Store using keywords such as "home automation", "I/O boards", "remote control I/O boards", "home remote control" etc. The best strategy would be to download those applications and test them thoroughly. Due to lack of time, we decided to proceed otherwise. After making a list of the potential competitor's applications, we screened them and their content online:

- There are several web-based, third party app directories that are worth exploring as they contain much information on those apps.
- The websites of competitors: press releases, news, version updates, etc.
- Websites with customer reviews
- Specialized blogs
- Etc.

The competition chart can be found in appendix 7. We notice that the majority of competitors are manufacturers of home automation hardware delivering a mobile application which is brand related and usually comes free of charge with the installed hardware. There are no real direct competitors providing remote control of I/O boards which is the main purpose of our app.

4.5 SWOT Analysis

A SWOT analysis is a method used to evaluate the **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats of a business. The purpose is to align our strategies with the realities of our business environment in order to:

- Maintain and build on our strengths
- Take advantage of our opportunities
- Fix or eliminate our weaknesses
- Counter threats

Strengths

- Strong developer team: the developers of the mobile app are key developers of the R&D department with very strong skills.
- First to market: we have and must always keep a step ahead. A first mover may not always be an advantage. Secondary or late movers to an industry or market, have the ability to study the first movers and their techniques and strategies. They can learn from their mistakes.
  The competition is also allowed to benefit and not incur the costs which the first mover has to sustain.
  First movers must deal with the entire risk associated with creating a new market, as well as the technological uncertainties which will follow (Shifts in technology or customer needs).
- Solid technology: it is an open and very configurable technology, no black box.
- Good segment: not everyone has (or can afford) the necessary software and hardware for automation projects. With no market leader or competition here, WhizzBit has a unique opportunity to capitalize on our technology.

Weaknesses

- No strong marketing capacity: we are a technology firm, not a marketing one. We need to accumulate some marketing knowledge. We may appeal to some marketing students who could potentially help us in this matter. Additional training could also be considered.
- Only interface with USB boards: at this point we cannot interface with wireless boards.
- Only available on iPhone platform: we are awaiting the reaction of iPhone users before we develop it for other platforms.
- Monetization model: we are unsure about the business model to use in order to make profit and to grow. The monetizing model is not fixed; we are free to experiment with it and it will have to be fine-tuned after some time.

Opportunities

- Partnership: as we are interfacing with I/O boards, a partnership with a manufacturer may very well be considered.

Threats

- Competitors emerging: as we are first to the market, we need to be sure to stay one step ahead of the competition.
- Evolution of apps: as mobile technology is evolving very quickly, it is hard to predict how mobile apps will evolve in the future. As for countering the competition, we need close

monitoring of all new trends on the market in order to react accordingly to any changes and trends.

The business environment is constantly changing and a SWOT analysis is not a static tool. We have to revisit our SWOT analysis on a regular basis, at least annually and more frequently if our business is experiencing growth problems, or failing to meet goals and objectives, to see how the balance of strengths, weaknesses, opportunities, and threats may have shifted.

5. Strategy and Implementation Summary

5.1 Marketing strategy

The next question we have to ask ourselves is how we will reach our potential customers? How can we make them aware our app is available and convert them as our customers? This will be realized by our marketing strategy.

There are three kind of marketing strategies:
- direct sales: this is done when a customer base exists, where we can directly reach out to our customers usually by phone, by email or through direct personal contact.
- direct marketing: there is a straight communication to the customer (or potential customer; this can be used on contact information from a database) with advertising techniques such as SMS, email, interactive consumer websites, online display ads, fliers, catalogue distribution, promotional letters, and outdoor advertising.
- mass marketing: Is the technique of trying to spread a marketing message, to anyone and everyone who is willing to listen, through big audience media such as radio, television, internet, etc.

For our application, we are going to use two different marketing strategies:

1) <u>Mass marketing</u>

We have seen that our potential customer base is between two and three million people, so we have quite a big audience. These people are not existing customers, we have no relationship with them nor do we possess their contact information. The strategy to adopt is a mass marketing strategy. We will try to reach to our niche through mass marketing channels, mainly the internet. There are many ways to proceed:
- Getting our app into the iPhone app store. In later stages the app will be available on independent app stores such as GetJar, Handango, and Amazon etc. We choose for a slow distribution so we can manage feedback, fix bugs quickly and concentrate on updates before a rollout strategy.
- Using social media. We will create some YouTube video's where we will demonstrate our application. Besides YouTube, we will create Facebook and Twitter accounts and use LinkedIn as a communication channel.
- Making an app-specific web site. We will also promote our app through our firm's website.
- Setting up search marketing campaigns through search providers such as Google, Yahoo and Bing.
- Reaching out to bloggers such as TechCrunch, TheNextWeb, Mashable, VentureBeat, TUAW etc.
- Participating in events: exhibitions, meet-ups, conferences etc.…in the electronics and automation world.
- Placing an advertisement or an article in a specialized magazine.

The marketing strategy can be divided in two parts: A pre-launch and post-launch strategy. The pre-launch strategy is used to create awareness and visibility. The goal is to try to acquire the interest and build the curiosity of as many users as possible.

The post-launch strategy is used to maintain existing customers, to increase the conversion rate and to create user retention.

Pre-launch strategy:

- **Landing page:** create a landing page, typically a one page website that is an advertising tool for our app. Even though a lot of downloads will come directly from the app store, a huge amount of traffic is driven through the web. This is also a good way to build an email database as we will invite people to share their email addresses to stay updated when the app launches. These are the people that are more likely to be converted into customers.

- **Blog:** create a blog where we will write regularly about the issues that our product covers or might be a solution for.

- **Social Media Profiles:** create social media profiles so we can spread the word about our blog posts, our landing page and website, and also write about the category and related content of our app.
  It is also important to follow and connect with influential people of the niche market (bloggers, reviewers, writers etc.)

- **SEO:** begin search engine optimization or SEO for our website. The idea of SEO is to generate as much traffic as possible on our website by finding the most relevant and popular keywords for the site and our app and using them in a way that generates and converts traffic.

- **Tech Blogs:** once the beta testing is finished and the app is ready for launch and bug-free, we want to prepare a press release of our product idea and start getting in touch with blogs such as Mashable, TechCrunch, TheNextWeb, FastCoDesign, Ars Technica, etc. A press release will contain a short description of the app and its key benefits, some screenshots, links to videos, links to user testimonials and reviews and a link to the website which includes our contact information.

- **Forums:** we want to be as active as possible in forums dealing with I/O circuit boards, DIY home automation solutions etc. and try to integrate with our response a link back to our app's web site. These links are crucial in the Search Engine Optimizing (SEO) of our website. The more back links we have from other blogs and forums back to our site, the higher up our site will appear in search engine results. We must keep participating in online forums to keep discussion about our product active and on-going. A great tool to use here is Google alerts. This way we can track keywords and news about our app.

<u>Post-launch strategy:</u>

- **App Store Marketing:** we will try to grab the attention of the online audience by having a catchy app icon. App stores require us to mention keywords that we feel our customers will use to search for our application so the selection has to be done wisely.
  Our app description is also important, it is our selling pitch. It should be short, explain key benefits and highlight the cool features.

- **App Review Websites:** as a large audience reads online reviews before downloading an app, we need to prepare a press release and send it to app review sites. As our app is a paid app, Apple gives 50 promotional codes that let this precise number of people download our application for free. We will send these together with the press release.

- **Tech Blog Redux:** If the tech blogs did not cover our app in the pre-launch phase, we have another reason to write to them, informing them of the launch. If our app does well, this is yet another reason to write to them informing them about the statistics and how well the product has been received on the market.

- **Ratings and Reviews:** we will encourage our customers to review and rate our application. The more the ratings, the more chances of it being downloaded from the App Store. All feedback, positive and negative, must be quickly responded to.

2) <u>Direct marketing</u>

We are looking for a strategic partnership with one or multiple I/O board constructors. The strategy is to approach them presenting our firm and product and ask if they are interested in collaboration between the two firms.
We think in this situation, for a first contact, that a letter is the best media. A cold phone call or email is not appropriate at this stage.
The idea would be to sell our mobile application together with the I/O boards as a package. This would be a win-win situation. As we provide for a lot of drivers for the I/O boards through our open community, this can be an extra sales argument for the manufacturer. This approach offers the chance to reach more customers and create a good name reputation.

The following manufacturers will be contacted: Blastronix, AB electronics UK, Arduino, ICP DAS and Velleman.

As the app and website has already been developed, we will summarize some ideas about further fine-tuning the design and content aspects in order to reinforce our marketing strategy.

Regarding the app:
- The app has to be social media friendly, which means it must be easily shared on social media.
- We as the app developers, need to be easily reachable:
  - Contact us from within the app.

> ▪ Contact us from the App Store page (the support URL).
> ▪ Contact us from our website or through social media.

- The app needs a feedback/bugs report button which will steer complaints away from the App Store and send them directly to us. We don't want our users to vent their frustrations in the App Store reviews.
- Showing pop up messages inviting the user to rate the app. This has to be done carefully not to irritate the user. We can implement this request for example after users have spent a set amount of time using the app.

Regarding the website:
- The website and launch page also has to be social media friendly. We have to incorporate links to our social media accounts: a Facebook Like button, a Tweet button etc.
- We have to integrate badges. Badges are quickly recognized as download links to the app marketplace.

- Create call-to-action buttons. The goal of these buttons is to get a visitor to our site to do something. In our case that something could be downloading our app, requesting information and signing up. Someone signing up for our email newsletter is someone we're going to be able to reach easily and engage with.
  Newsletters are a powerful tool as they give us the possibility to:
  > ▪ Gauge the interest people have in our app (no sign ups? Maybe something is wrong)
  > ▪ Keep people informed about when our app is launching.
  > ▪ Ask people for feedback
  > ▪ Ask people to vote for our app for an award or a contest
  > ▪ Let people know about great news and milestones

Special attention has to been given to the design of these buttons as we want them to increase the conversion rate of our visitors.

5.2   Sales strategy

This part considers our business model choice. A business model describes how an organization creates, delivers, and captures value and generates revenue, or in other words how will we make money through our application.
Monetizing an application can be the single most challenging aspect when undertaking a mobile venture. How to price our application? Will our application be free for users or will they be charged? What is the appropriate pricing model for our application? These are some of the questions which will be reviewed here.

There are about 5 existing different business models today in the mobile app business:
- Pay per download
- In-app advertising
- In-app purchasing
- Freemium
- Subscription

1) Pay per download

This model generates income directly from the App Store when users download them. We fix a price and the user pays that price to download the application. This model works for almost any application. A drawback is once the application is sold there is no way to sell the application to the same customer a second time.

2) In-app advertising

In the advertising model, users download the app for free. Instead, ads are placed (usually banners, but not always – lots of innovative new ad types are available these days) and we get paid by advertisers when users click the ads.

3) In-app purchasing

With this model the application itself can be free (but is not required) and the main revenue stream is generated through the in-app purchase. The applications consist of an initial usable part and a part that is only usable if the customer decides to buy it. For example, a game has five free levels and to play the sixth level the user has to buy the level.

4) Freemium

These applications are free. The objective here remains to make money. Free is a very powerful motivator to get people to download a product. This model generates income only from other business activities, such as:

• Increasing sales of related products
Here we usually have two applications, a free one and a paid one. The free application is used as demo to show the user how powerful the paid application is. The free application is more likely to be downloaded than the paid application and therefore the free application can be seen as a marketing move. The user is able to test the free application and decide if they will buy the paid application.

• Building our own reputation
These apps are promotional tools which extend the power and offering of the company. Great examples of these are eBay or Facebook.

5) Subscription

A subscription means the customer has access to a service or product as long as a fee is paid. The fee is paid for a limited period of time; if the time is complete the customer has to re-initiate the subscription. Magazines or newspapers work with this model.

Which models will we choose?

In order to answer this question we can break it down into the following questions:

Is my app high usage, with long session times (advertising)?
Will my users be willing to pay for my app? Or am I better off keeping it free and monetizing through advertising?
Is my app compelling enough that users will buy it without trying a free version first (pay per download)?
Can the value of my app be broken into multiple pieces and sold à la carte (in app purchase)? Or does it need to be packaged all as one upgrade (Freemium)?

The Freemium model is not an option for us as we only have one app. The in-app advertising model is only interesting when we expect a very large user base in volume markets which is not our case. The in-app purchase was considered but it is difficult in our case to decide what content is free and what will be charged. We are afraid if the free content is not enough it will negatively reflect upon our app (poor functionalities) and if we expand the free content too much, the users will not upgrade to other functions.
The business models we will consider are the pay per download and the subscription models:
- The pay per download model which is applicable for any type of application. It is the most popular and most suited in our case.
- A subscription form. This may, in the first instance, be a better choice as it will provide a returning source of income. But subscriptions are a natural fit for certain types of content, such as magazines or other types of content that get refreshed regularly. We don't really have an app whose content lends itself to this model so we actually want to use subscriptions purely to try and increase the amount of money we can draw from users which is not a good idea as users will perceive this.
Nevertheless we will consider both models in the following section.

5.2.1 Price setting

There are a number of factors that should help us determine what to charge for our app. The first step consists of pricing our app in relation to the existing competition. This assures fair pricing for our mobile app and gives our audience the impression that we are at par with the competition. Raising our price slightly above the competition will make customers think that ours is a better product.
In our case we are first to the market with our product so there is no price setting by the market in our category.

The most important key in app pricing is the user expectations. Users expect simple apps to be either free or 0,99 cents. More complex utilities often sell for between 2,99 and 4,99 Dollars. Apps in the 4,99+ Dollar range need to have an expansive feature set and lots of polish. That is, they need to look good and provide a great deal of value for the user. While users won't know if they got their money's worth until they install the app, users will be quick to leave negative feedback if they feel they've been ripped off, which will likely turn off future customers.
Here we face a market of customers who are either willing or have already purchased some kind of hardware such as an I/O board or soft PLC and might be interested in a remote control version on

their smartphone. As the hardware material is the "big" cost we are confident we can sell our app for a price setting that is above the average price on the Apple store. Also a higher price will be associated with exclusivity and quality. As with most things, it's a lot easier to lower the price later than it is to raise it.

For the pay per download model we will set the price at 4,99 Dollars. For the subscription model we will set the price at 1,99 Dollars per month.

Let us remind ourselves that app prices aren't fixed. We are free to change and experiment with various price settings and models.

For information this table shows the number of apps per price category.

App Price	# Apps	# Games	Total	% of Total
Free	436,593	81,939	518,532	(58.64%)
0.99	132,920	46,977	179,897	(20.34%)
1.99	61,583	12,857	74,440	(8.42%)
2.99	32,471	5,212	37,683	(4.26%)
3.99	15,933	1,253	17,186	(1.94%)
4.99	18,528	2,009	20,537	(2.32%)
5.99	5,690	248	5,938	(0.67%)
6.99	3,017	279	3,296	(0.37%)
7.99	2,410	97	2,507	(0.28%)
8.99	1,775	53	1,828	(0.21%)
9.99	8,695	261	8,956	(1.01%)

Table 5 : App price categories

5.2.2   Sales forecast

Assumption: The choice of the subscription model has no negative impact on the sales figures.

In chapter 4.3 we made an estimation of our market size which was about 2.8 million. The question now is how big will our market share be? How many apps will we sell?

There are many models for new product sales forecasting:
- Historical review: If a company has introduced similar new products into similar markets in the past, these histories can be used as predictors of future outcomes. This approach has limitations as history is not always a good predictor of the future.
- Mathematical models
- A widely used method is to compare the new product to sales volumes of existing similar products. For example, if our new product involves only a slight innovation or change, it will likely sell very much like our (or someone else's) existing product.

As our product is an innovation unlike any other product on the market, we won't use any of the methods described above.

Instead we will use following method:

We want to forecast our sales on factors we can obtain. These factors can be monitored at all time, so that we can tell when we're off our forecast. All forecasts are by definition wrong. What is important is to see *how* wrong, in what direction and what do we do to manage our business better? Over time the forecasts will get better. By the second month we have some data that can help us make better assumptions. The purpose is setting guesses down as assumptions so we can track later how the real results differ and then revise and make course corrections.

The factor we will consider is traffic on our mobile application's website.

Our forecast sales will be based on traffic, clicks, conversions, page views, visits, and other analytic-driven techniques. Our traffic is a function of searches, paid searches, and marketing efforts. We will go from that traffic to conversions to sales, and we'll have something we can track and manage later.

We start by using the Google Adwords Keyword Tool to get an estimate of the number of people that might be interested by our product. Here is what we discovered with just a few of the relevant keyword phrases:

- I/O boards – 12 100 monthly searches
- Home automation app – 1 300 monthly searches
- Home control – 201 000 monthly searches

These three pieces of data give us an idea of our market potential. With around 214 400 monthly searches represented in just three search phrases on Google, it is safe to say that there are at least twice as many (428 800) monthly searches between the entire major search engines.

Now we will break that number down to determine how much of that market we can realistically capture. Here is how we proceed:

- Let's assume the 428 800 searches are representative of the US population
- 91% of adults in the US have cell phones (91% x 428 800 = 390 208)
- 56% of adults cell phone users have smartphones (56% x 390 208 = 218 517)
- 25% of smartphones are iPhones (25% x 218 517 = +/- 55 000 searches)

(Percentages according the Pew Internet Project's research related to mobile technology).

Assuming we use Google advertising to enhance traffic to our website, we can set up an ad campaign that targets all our product related keyword phrases that are only displayed when the user searches using a PC or an iPhone for example.

According to Google, the average click through rate for an AdWords ad is 2%. On this basis let's assume that of the 55.000 searches per month that occur, 2% will click through on our ad:

55.000 x 2% = 1.100 monthly clicks.

We suppose that the traffic generated through Google advertising represents 80% of the total traffic on the website. 20% will come from other sources (forums etc.).

Now that we know we will have 1.320 visitors each month, we need to determine a conversion rate for those visitors. How many will become customers?

From here on, we will consider multiple scenarios: a medium, worst and best case. The factor we will adapt is the conversion rate.
- Medium case : 2%
- Worst case : 1%
- Best case : 3%

Let us work out the medium case in detail. We assume the conversion rate will be no more than 2% so we will have 26 downloads of our app every month.

This sales projection is only based on Google advertising. We can add some more sales projections:

- We assume that each purchase of the app will result in additional sales because the buyer will share it with his hobbyist friends or via social media.
- If we can be published in some specialized blogs and/or magazines, the impact on sales will also be noticeable.

We suppose these extra sales will be 10%.

- If we can bring in a strategic partner such as an I/O board constructor, we will be able to generate more sales. We will base our estimation on the sales figures from manufacturer Arduino. This is a well-known player in this field. Finding the sales figures was not an easy task. The last official figures are from 2009, where they sold 84 674 units worldwide.
It is safe to say that in 2014, 120 000 units will be sold. From those 120 000 units, we assume 40% are the type of I/O boards for which our app has been developed. The average price for an I/O board is 30 Dollars. If sold as a package with our app, the price rises to 35 Dollars.
We guess that from the 48 000 units sold, 20% will be as a package in the medium case and 30% in the best case. The generated sales for Arduino will then be 336 000 Dollars (medium case) or 504 000 Dollars (best case). Our percentage on those sales will be negotiated to 15% which will generate extra revenue of 50 400 Dollars (medium case) or 75 600 Dollars (best case).
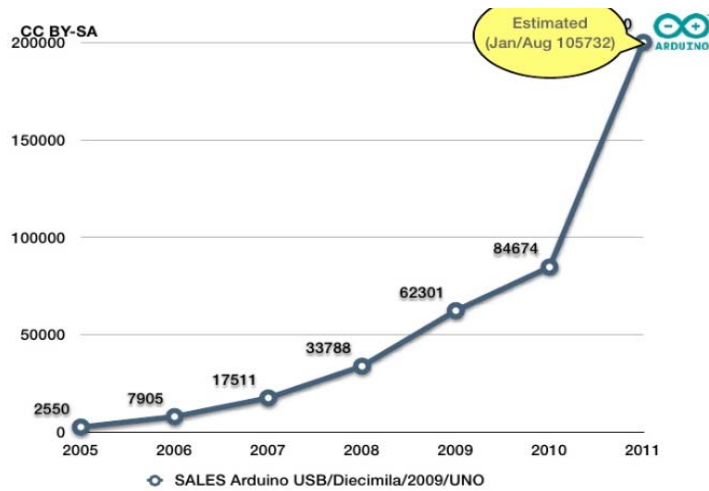
Figure 8 : Arduino sales volume

- If we choose the subscription form as pricing strategy we can increase our revenues with every package sold. We assume the repeat rate to be 80%, which means that 80% of the customers will extend their subscription each month.

Below we will resume the estimated sales figures for the different scenario's and different business models. The detailed calculations can be found in annex.

Following scenarios have been studied:
1) A pay per download business model
2) A subscription business model

For each business model there are 3 possible cases:
- A worst case, assuming we have no partnership with a board constructor and a conversion rate of 1% of our website traffic.
- A medium case, assuming we have a partnership with a board constructor and a conversion rate of 2% of our website traffic.
- A best case, assuming we have a partnership with a board constructor and a conversion rate of 3% of our website traffic.

No forecasting is perfect. All are based on hidden assumptions and include human judgment, and if these underlying assumptions or judgments are off the mark, then the corresponding forecast can be inaccurate. Nevertheless, the forecast is based on factors we can track which provide the ability to correct if necessary.

Worst case scenario with pay per download business model:

Sales Forecast			
	Year 1	Year 2	Year 3
Sales			
Paying Users	$696,54	$703,50	$710,54
Partner Revenue	$0	$0	$0
Total Sales	$696,54	$703,50	$710,54

Table 6 : Worst case scenario with pay per download business model

Medium case scenario with pay per download business model:

Sales Forecast			
	Year 1	Year 2	Year 3
Sales			
Paying Users	$1 372,13	$1 385,82	$1 399,70
Partner Revenue	$50 400,00	$50 904,00	$51 413,04
Total Sales	$51 772,13	$52 289,82	$52 812,74

Table 7 : Medium case scenario with pay per download business model

Best case scenario with pay per download business model:

Sales Forecast			
	Year 1	Year 2	Year 3
Sales			
Paying Users	$2 033,74	$2 054,07	$2 074,61
Partner Revenue	$75 600,00	$76 356,00	$77 119,56
Total Sales	$77 633,74	$78 410,07	$79 194,17

Table 8 : Best case scenario with pay per download business model

Worst case scenario with subscription business model:

Sales Forecast			
	Year 1	Year 2	Year 3
Sales			
Paying Users	$934,12	$943,46	$952,90
Partner Revenue	$0	$0	$0
Total Sales	$934,12	$943,46	$952,90

Table 9 : Worst case scenario with subscription business model

Medium case scenario with subscription business model:

Sales Forecast			
	Year 1	Year 2	Year 3
Sales			
Paying Users	$34 496,24	$34 841,20	$35 189,61
Partner Revenue	$50 400,00	$50 904,00	$51 413,04
Total Sales	$84 896,24	$85 745,20	$86 602,65

Table 10 : Medium case scenario with subscription business model

Best case scenario with subscription business model:

Sales Forecast			
	Year 1	Year 2	Year 3
Sales			
Paying Users	$51 716,29	$52 233,45	$52 755,79
Partner Revenue	$75 600,00	$76 356,00	$77 119,56
Total Sales	$127 316,29	$128 589,45	$129 875,35

Table 11 : Best case scenario with subscription business model

6. Personnel Summary

6.1 Personnel Plan

The personnel plan is quite short as we will only employ one developer who will be responsible for:
- Customer support
- Website maintenance
- WhizzBit Community administrator
- Marketing

During the year 2015 we assume we will need to develop some new features based on customer feedback from the previous year. A second developer will join the team for a couple of months.

Personnel Plan			
	2014	2015	2016
Developer 1	$72 000	$72 000	$72 000
Developer 2	$0	$24 000	$0
Total People	1	2	1
Total Payroll	$72 000	$96 000	$72 000

Table 12 : Personnel plan

7. Financial plan

7.1 Underlying Assumptions

The Company has based its pro forma financial statements on the following:

- WhizzBit will have an annual sales growth rate of 1%.
- The owner will acquire 133 400 Dollars (100 000 Euro) of equity funds to develop the business.

7.2 Projected Profit and Loss

A projected profit and loss statement is a financial document that reflects the amount of profit or loss we expect our business to generate in future periods. It will be a useful tracking tool for determining whether our business is likely to make a profit or else generate a loss. The projected profit and loss statement will list revenues (from sales or services provided), our cost for goods or services provided, operating expenses (such as wages, rent, advertising), and net income or loss.

List of revenues:

1) Sales: the sales are based on our different forecasts models.

List of expenses:

1) Cost of Goods Sold (COGS) is the category of expenses directly related to producing a service. It includes all the costs directly involved in delivering a service. These costs can include labour, material, and shipping. The idea behind COGS is to measure all the costs directly associated with making the product or delivering the service.
   For a software company these costs are:
   - Costs related to keeping the product up and running for customers. A SaaS company would expect to incur additional hosting and storage-related expenses as its customer base increases.
   - Costs related to supporting customers throughout their usage of the product such as the depreciation of equipment bought by the company, all equipment that might have been leased and the amortization of software related to providing professional.
   - Other costs incurred due to the sale of our product: Examples here may include software licensing fees, credit card fees, etc. Marketing, advertising, commissions, or other sales- related costs would NOT fall under this umbrella.
2) Payroll: these are the salaries of the personnel described in 6.1
3) Marketing: this line covers all marketing expenses such as advertising in magazines, standing fees on events etc.
4) Depreciation: computer material, office furniture etc.
5) Website hosting: upgrade costs of our own datacentre
6) Travel: covers the travel expenses of participating at an event
7) Utilities: these costs fall under the running activities of the main company. There are no extra costs related to this complementary activity
8) Dues and subscriptions: as we want to remain up to date with the latest technologies and trends, we will subscribe to both online and offline (print) magazines.
9) Insurance: these costs fall under the running activities of the main company.

Profit & Loss Projection

(pay per download model)

Account	Period 2014			Period 2015			Period 2016		
	Worst	Medium	Best	Worst	Medium	Best	Worst	Medium	Best
Pro Forma Profit and Loss									
Sales	$ 696,54	$ 51 772,13	$ 77 633,74	$ 703,51	$ 52 289,85	$ 78 410,07	$ 710,54	$ 52 812,74	$ 79 194,17
Costs of Goods Sold	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68
Other Costs of Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Cost of Sales	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68
Gross Margin	$ -1 556,14	$ 49 519,44	$ 75 381,06	$ -1 549,17	$ 50 037,16	$ 76 157,39	$ -1 542,14	$ 50 560,06	$ 76 941,49
Gross Margin %	0,00%	95,65%	97,10%	0,00%	95,69%	97,13%	0,00%	95,73%	97,16%
Expenses									
Payroll	$ 72 000,00	$ 72 000,00	$ 72 000,00	$ 96 000,00	$ 96 000,00	$ 96 000,00	$ 72 000,00	$ 72 000,00	$ 72 000,00
Marketing/Promotion	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00
Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rent	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Website hosting	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Travel	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00
Utilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Dues and subscriptions	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00
Insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses	$ 75 500,00	$ 75 500,00	$ 75 500,00	$ 99 500,00	$ 99 500,00	$ 99 500,00	$ 75 500,00	$ 75 500,00	$ 75 500,00
Profit Before Interest and Taxes	$ -77 056,14	$ -25 980,56	$ -118,94	$ -101 049,17	$ -49 462,84	$ -23 342,61	$ -77 042,14	$ -24 939,94	$ 1 441,49
EBITDA	$ -77 056,14	$ -25 980,56	$ -118,94	$ -101 049,17	$ -49 462,84	$ -23 342,61	$ -77 042,14	$ -24 939,94	$ 1 441,49
Interest Expense	$ -	$0	$ -	$ -	$0	$ -	$ -	$0	$ -
Taxes Incurred	$ -	$ -	$ -40,43	$ -	$ -	$ -	$ -	$ -	$ 489,96
Net Profit	$ -77 056,14	$ -25 980,56	$ -78,52	$ -101 049,17	$ -49 462,84	$ -23 342,61	$ -77 042,14	$ -24 939,94	$ 951,53
Net Profit/Sales	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,20%

Table 13 : Profit and loss projection (pay per download model)

Profit & Loss Projection

(subscription model)

Account	Period 2014			Period 2015			Period 2016		
	Worst	Medium	Best	Worst	Medium	Best	Worst	Medium	Best
Pro Forma Profit and Loss									
Sales	$ 934,12	$ 84 896,24	$ 127 316,29	$ 943,46	$ 85 745,20	$ 128 589,45	$ 952,90	$ 86 602,65	$ 129 875,34
Costs of Goods Sold	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68
Other Costs of Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Cost of Sales	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68
Gross Margin	$ -1 318,56	$ 82 643,56	$ 125 063,60	$ -1 309,22	$ 83 492,52	$ 126 336,77	$ -1 299,79	$ 84 349,97	$ 127 622,66
Gross Margin %	0,00%	97,35%	98,23%	0,00%	97,37%	98,25%	0,00%	97,40%	98,27%
Expenses									
Payroll	$ 72 000,00	$ 72 000,00	$ 72 000,00	$ 96 000,00	$ 96 000,00	$ 96 000,00	$ 72 000,00	$ 72 000,00	72 000,00
Marketing/Promotion	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	1 500,00
Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rent	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Website hosting	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Travel	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	$ 1 500,00	1 500,00
Utilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Dues and subscriptions	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00	$ 500,00	500,00
Insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses	$ 75 500,00	$ 75 500,00	$ 75 500,00	$ 99 500,00	$ 99 500,00	$ 99 500,00	$ 75 500,00	$ 75 500,00	75 500,00
Profit Before Interest and Taxes	$ -76 818,56	$ 7 143,56	$ 49 563,60	$ -100 809,22	$ -16 007,48	$ 26 836,77	$ -76 799,79	$ 8 849,97	52 122,66
EBITDA	$ -76 818,56	$ 7 143,56	$ 49 563,60	$ -100 809,22	$ -16 007,48	$ 26 836,77	$ -76 799,79	$ 8 849,97	52 122,66
Interest Expense	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Taxes Incurred	$ -	$ 2 428,10	$ 16 846,67	$ -	$ -	$ 9 121,82	$ -	$ 3 008,11	17 716,49
Net Profit	$ -76 818,56	$ 4 715,46	$ 32 716,94	$ -100 809,22	$ -16 007,48	$ 17 714,95	$ -76 799,79	$ 5 841,87	34 406,17
Net Profit/Sales	0,00%	5,55%	25,70%	0,00%	0,00%	13,78%	0,00%	6,75%	26,49%

Table 14 : Profit and loss projection (subscription model)
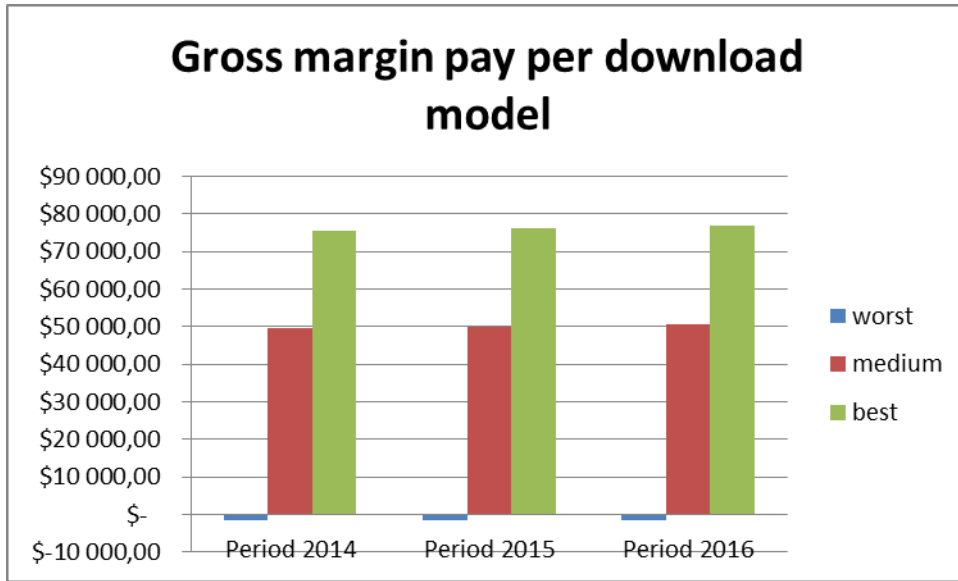
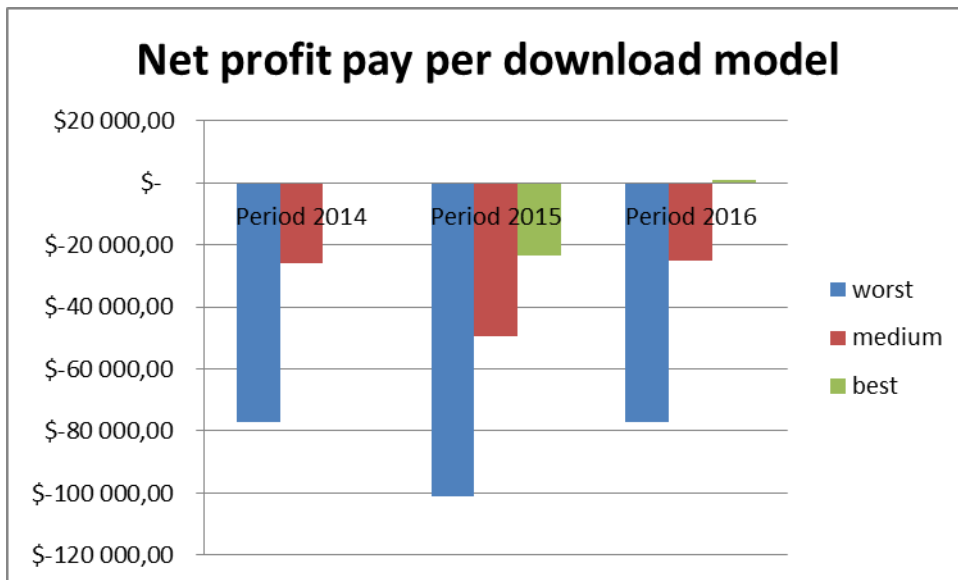Figure 9 : Gross margin (pay per download model)

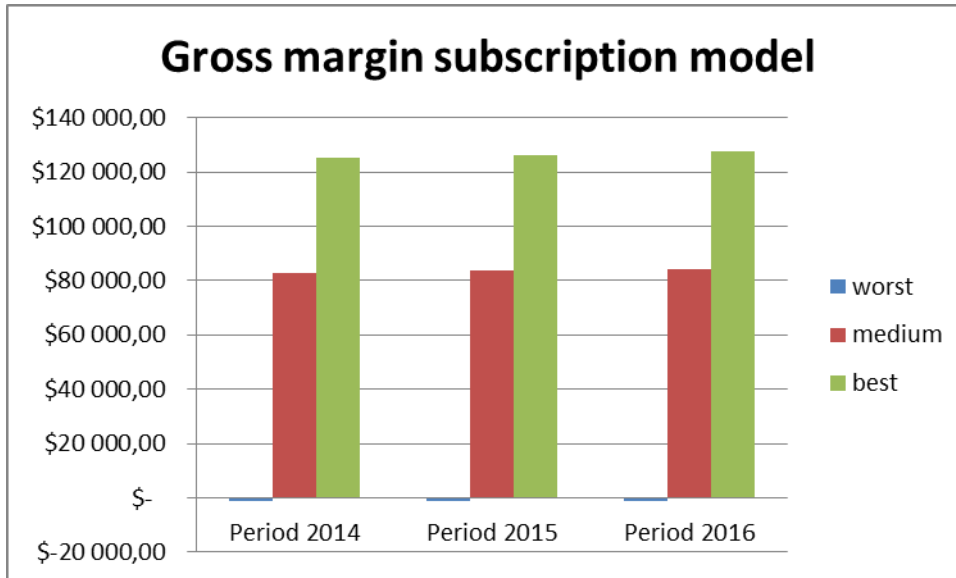Figure 10 : Net profit (pay per download model)

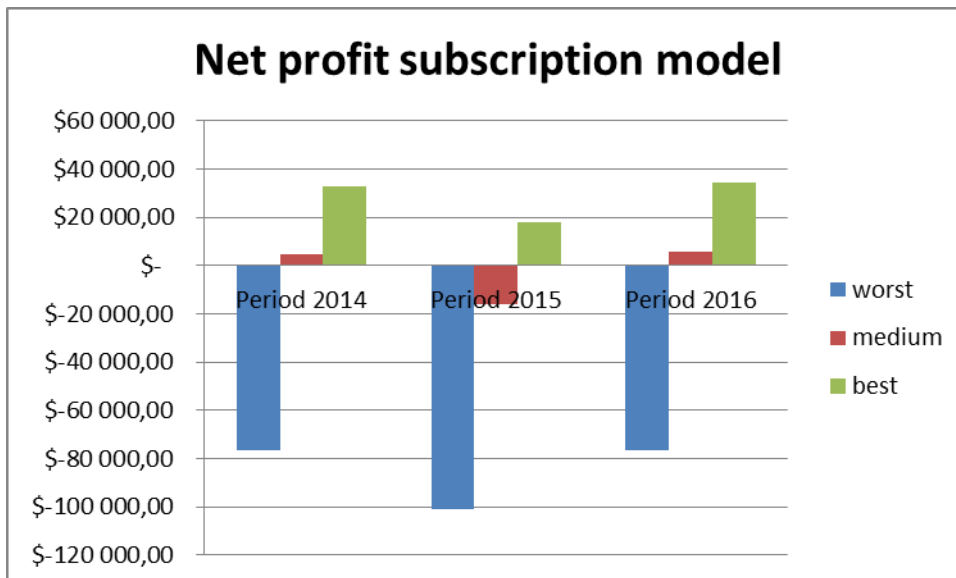**Figure 11 : Gross margin (subscription model)**

Figure 12 : Net profit (subscription model)

By looking at the numbers, we clearly notice that the pay per download model is not generating any revenues for the company. The only profitable model is the subscription form under the best case scenario.

7.3 Projected Cash Flow

This financial report tracks money that flows in and out of our business over a given period of time (weekly, monthly, quarterly, or yearly.) The first part of our cash-flow statement details funds coming in and going out of our company. The second part shows the resulting changes in our cash position. Both parts must match in order to reconcile the net effect of the inflow and outflow of money with the difference in cash holdings over the reported period.

By looking at the numbers, we can easily see that most scenarios are cash draining activities. The two only exceptions are the medium and best case scenarios in the subscription model.

Cash flow Projection

(pay per download model)

Account	Period 2013	Period 2014 Worst	Medium	Best	Period 2015 Worst	Medium	Best	Period 2016 Worst	Medium	Best
Pro Forma Cash Flow										
Cash Received										
Cash from Operations										
Cash Sales	$ -	$ 696,54	$ 51 772,13	$ 77 633,74	$ 703,51	$ 52 289,85	$ 78 410,07	$ 710,54	$ 52 812,74	$ 79 194,17
Subtotal Cash from Operations	$ -	$ 696,54	$ 51 772,13	$ 77 633,74	$ 703,51	$ 52 289,85	$ 78 410,07	$ 710,54	$ 52 812,74	$ 79 194,17
Additional Cash Received										
Sales Tax, VAT, HST/GST Received	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Current Borrowing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Other Liabilities (interest-free)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Long-term Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sales of Other Current Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sales of Long-term Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Investment Received	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Cash Received	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Expenditures										
Expenditures from Operations										
Cash Spending	$ 110 710,00	$ 75 500,00	$ 75 500,00	$ 75 500,00	$ 99 500,00	$ 99 500,00	$ 99 500,00	$ 75 500,00	$ 75 500,00	$ 75 500,00
Bill Payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Spent on Operations	$ 110 710,00	$ 75 500,00	$ 75 500,00	$ 75 500,00	$ 99 500,00	$ 99 500,00	$ 99 500,00	$ 75 500,00	$ 75 500,00	$ 75 500,00
Additional Cash Spent										
Sales Tax, VAT, HST/GST Paid Out	$ -	$ -	$ -	$ -40,43	$ -	$ -	$ -	$ -	$ -	$ 489,96
Principal Repayment of Current Borrowing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Liabilities Principal Repayment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Long-term Liabilities Principal Repayment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase Other Current Assets	$ 10 672,00	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68
Purchase Long-term Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Dividends	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Cash Spent	$ 10 672,00	$ 2 252,68	$ 2 252,68	$ 2 212,25	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 742,64
Net Cash Flow	$ -121 382,00	$ -77 056,14	$ -25 980,56	$ -78,52	$ -101 049,17	$ -49 462,84	$ -23 342,61	$ -77 042,14	$ -24 939,94	$ 951,53
Cash Balance	$ 12 018,00	$ -65 038,14	$ -13 962,56	$ 11 939,48	$ -166 087,31	$ -63 425,39	$ -11 403,12	$ -243 129,45	$ -88 365,33	$ -10 451,59

Table 15 : Cash flow projection (pay per download model)

Cash flow Projection

(subscription model)

Account	Period 2013	Period 2014			Period 2015			Period 2016		
		Worst	Medium	Best	Worst	Medium	Best	Worst	Medium	Best
Pro Forma Cash Flow										
Cash Received										
Cash from Operations										
Cash Sales	$ -	$ 934,12	$ 84 896,24	$ 127 316,29	$ 943,46	$ 85 745,20	$ 128 589,45	$ 952,90	$ 86 602,65	$ 129 875,34
Subtotal Cash from Operations	$ -	$ 934,12	$ 84 896,24	$ 127 316,29	$ 943,46	$ 85 745,20	$ 128 589,45	$ 952,90	$ 86 602,65	$ 129 875,34
Additional Cash Received										
Sales Tax, VAT, HST/GST Received	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Current Borrowing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Other Liabilities (interest-free)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Long-term Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sales of Other Current Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sales of Long-term Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Investment Received	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Cash Received	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Expenditures										
Expenditures from Operations										
Cash Spending	$ 110 710,00	$ 75 500,00	$ 75 500,00	$ 75 500,00	$ 99 500,00	$ 99 500,00	$ 99 500,00	$ 75 500,00	$ 75 500,00	$ 75 500,00
Bill Payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Spent on Operations	$ 110 710,00	$ 75 500,00	$ 75 500,00	$ 75 500,00	$ 99 500,00	$ 99 500,00	$ 99 500,00	$ 75 500,00	$ 75 500,00	$ 75 500,00
Additional Cash Spent										
Sales Tax, VAT, HST/GST Paid Out	$ -	$ -	$ 2 428,10	$ 16 846,67	$ -	$ -	$ 9 121,82	$ -	$ 3 008,11	$ 17 716,49
Principal Repayment of Current Borrowing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Liabilities Principal Repayment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Long-term Liabilities Principal Repayment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase Other Current Assets	$ 10 672,00	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68	$ 2 252,68
Purchase Long-term Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Dividends	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Cash Spent	$ 10 672,00	$ 2 252,68	$ 4 680,78	$ 19 099,35	$ 2 252,68	$ 2 252,68	$ 11 374,50	$ 2 252,68	$ 5 260,79	$ 19 969,17
Net Cash Flow	$ -121 382,00	$ -76 818,56	$ 4 715,46	$ 32 716,94	$ -100 809,22	$ -16 007,48	$ 17 714,95	$ -76 799,79	$ 5 841,87	$ 34 406,17
Cash Balance	$ 12 018,00	$ -64 800,56	$ 16 733,46	$ 44 734,94	$ -165 609,78	$ 725,98	$ 62 449,89	$ -242 409,57	$ 6 567,85	$ 96 856,05

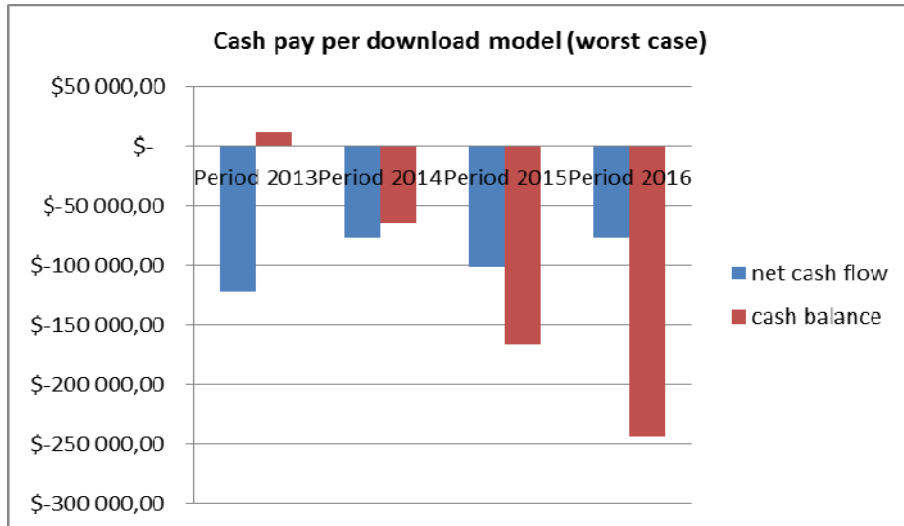**Table 16 : Cash flow projection (subscription model)**

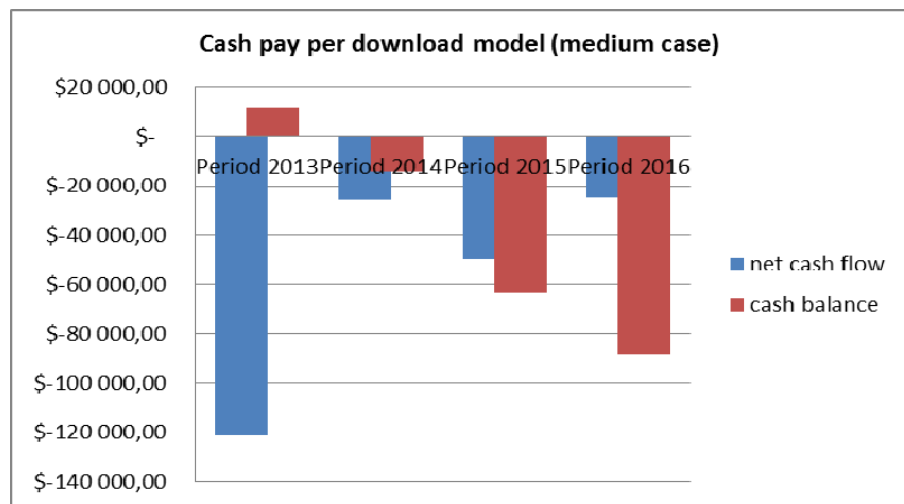**Figure 13 : Cash – pay per download model (worst case)**

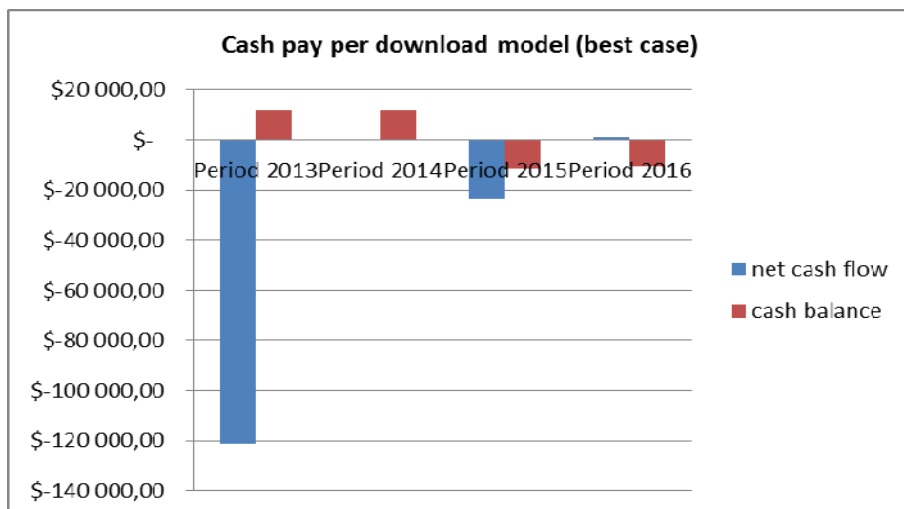**Figure 14 : Cash – pay per download model (medium case)**

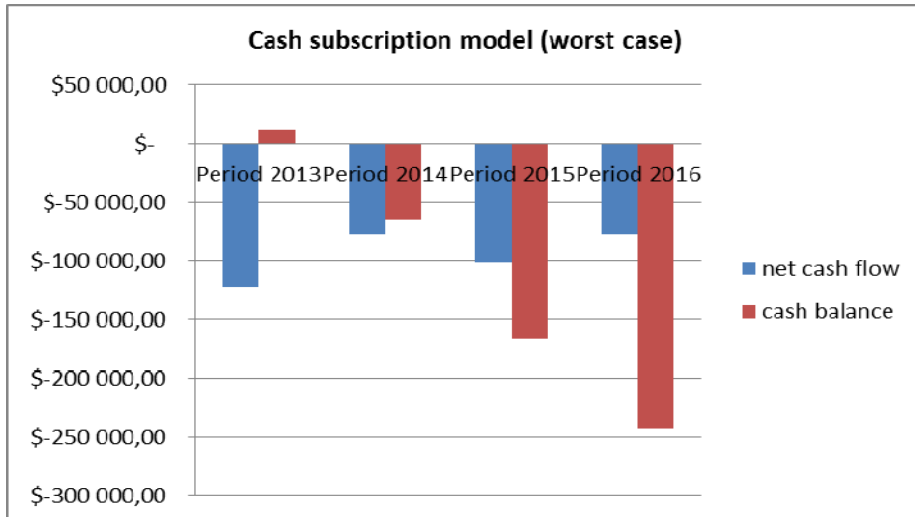**Figure 15 : Cash – pay per download model (best case)**
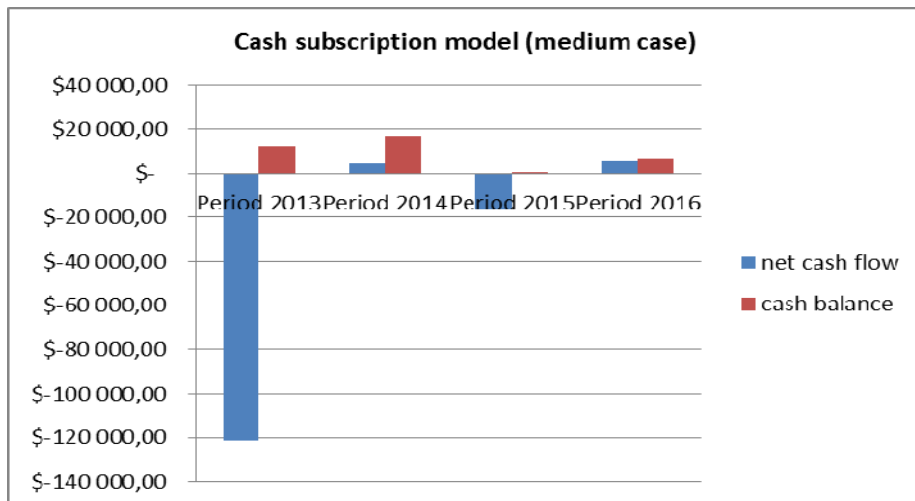
Figure 16 : Cash – subscription model (worst case)

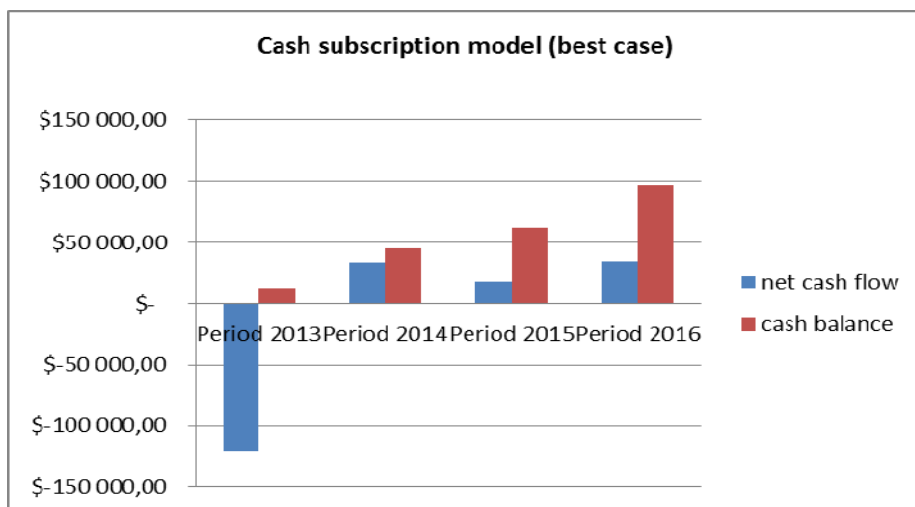**Figure 17 : Cash – subscription model (medium case)**

Figure 18 : Cash – subscription model (best case)

7.4 Projected Balance Sheet

This report captures a financial snapshot of our business at a particular moment in time, usually the very end of a year. The top half of the balance sheet sums up our company's assets. The bottom half combines our company's liabilities with our equity. The top and bottom portions of this report must balance each other out, in other words assets must equal the total of liabilities and owner equity.

Balance sheet
(pay per download model)

Account	Period 2012	Period 2013	Period 2014 Worst	Period 2014 Medium	Period 2014 Best	Period 2015 Worst	Period 2015 Medium	Period 2015 Best	Period 2016 Worst	Period 2016 Medium	Period 2016 Best
Pro Forma Balance Sheet											
Assets											
Current Assets											
Cash	$ 133 400,00	$ 12 018,00	$ -65 038,14	$ -13 962,56	$ 11 939,48	$ -166 087,31	$ -63 425,39	$ -11 403,12	$ -243 129,45	$ -88 365,33	$ -10 451,59
Other Current Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Current Assets	$ 133 400,00	$ 12 018,00	$ -65 038,14	$ -13 962,56	$ 11 939,48	$ -166 087,31	$ -63 425,39	$ -11 403,12	$ -243 129,45	$ -88 365,33	$ -10 451,59
Long-term Assets											
Long-term Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accumulated Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Long-term Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Assets	$ 133 400,00	$ 12 018,00	$ -65 038,14	$ -13 962,56	$ 11 939,48	$ -166 087,31	$ -63 425,39	$ -11 403,12	$ -243 129,45	$ -88 365,33	$ -10 451,59
Liabilities and Capital											
Current Liabilities											
Accounts Payable	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Current Borrowing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Current Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Current Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Long-term Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Paid-in Capital	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	133 400,00
Retained Earnings	$ -	$ -121 382,00	$ -198 438,14	$ -147 362,56	$ -121 460,52	$ -299 487,31	$ -196 825,39	$ -144 803,12	$ -376 529,45	$ -221 765,33	-143 851,59
Earnings	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
Total Capital	$ 133 400,00	$ 12 018,00	$ -65 038,14	$ -13 962,56	$ 11 939,48	$ -166 087,31	$ -63 425,39	$ -11 403,12	$ -243 129,45	$ -88 365,33	$ -10 451,59
Total Liabilities and Capital	$ 133 400,00	$ 12 018,00	$ -65 038,14	$ -13 962,56	$ 11 939,48	$ -166 087,31	$ -63 425,39	$ -11 403,12	$ -243 129,45	$ -88 365,33	$ -10 451,59
Net Worth	$ 133 400,00	$ 12 018,00	$ -65 038,14	$ -13 962,56	$ 11 939,48	$ -166 087,31	$ -63 425,39	$ -11 403,12	$ -243 129,45	$ -88 365,33	$ -10 451,59

Table 17 : Balance sheet (pay per download model)

Balance sheet
(subscription model)

Account	Period 2012	Period 2013	Period 2014 Worst	Period 2014 Medium	Period 2014 Best	Period 2015 Worst	Period 2015 Medium	Period 2015 Best	Period 2016 Worst	Period 2016 Medium	Period 2016 Best
Pro Forma Balance Sheet											
Assets											
Current Assets											
Cash	$ 133 400,00	$ 12 018,00	$ -64 800,56	$ 16 733,46	$ 44 734,94	$ -165 609,78	$ 725,98	$ 62 449,89	$ -242 409,57	$ 6 567,85	$ 96 856,05
Other Current Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Current Assets	$ 133 400,00	$ 12 018,00	$ -64 800,56	$ 16 733,46	$ 44 734,94	$ -165 609,78	$ 725,98	$ 62 449,89	$ -242 409,57	$ 6 567,85	$ 96 856,05
Long-term Assets											
Long-term Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accumulated Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Long-term Assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Assets	$ 133 400,00	$ 12 018,00	$ -64 800,56	$ 16 733,46	$ 44 734,94	$ -165 609,78	$ 725,98	$ 62 449,89	$ -242 409,57	$ 6 567,85	$ 96 856,05
Liabilities and Capital											
Current Liabilities											
Accounts Payable	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Current Borrowing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Current Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Current Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Long-term Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Paid-in Capital	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00	$ 133 400,00
Retained Earnings	$ -	$ -121 382,00	$ -198 200,56	$ -116 666,54	$ -88 665,06	$ -299 009,78	$ -132 674,02	$ -70 950,11	$ -375 809,57	$ -126 832,15	$ -36 543,95
Earnings	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital	$ 133 400,00	$ 12 018,00	$ -64 800,56	$ 16 733,46	$ 44 734,94	$ -165 609,78	$ 725,98	$ 62 449,89	$ -242 409,57	$ 6 567,85	$ 96 856,05
Total Liabilities and Capital	$ 133 400,00	$ 12 018,00	$ -64 800,56	$ 16 733,46	$ 44 734,94	$ -165 609,78	$ 725,98	$ 62 449,89	$ -242 409,57	$ 6 567,85	$ 96 856,05
Net Worth	$ 133 400,00	$ 12 018,00	$ -64 800,56	$ 16 733,46	$ 44 734,94	$ -165 609,78	$ 725,98	$ 62 449,89	$ -242 409,57	$ 6 567,85	$ 96 856,05

Table 18 : Balance sheet (subscription model)

7.5   Business ratios

In order to gauge how our business is doing we need more than single numbers extracted from the financial statements and should view each number in a holistic context.

For example, our income statement may show a net profit of 30 000 Dollars but is this acceptable? If this profit is earned on sales of 100 000 Dollars it may be very good, but if sales of 1 million Dollars are required to produce a net profit of 30 000 Dollars, the picture changes dramatically.

The true meaning of figures from the financial statements emerges only when they are compared to other figures. Such comparisons are the essence of why business and financial ratios have been developed.

There are four categories of ratios:

- liquidity ratios
- efficiency ratios
- profitability ratios
- solvency ratios

Since we do not have any financial debts, there are a lot of ratios which cannot be calculated. The only category we will consider therefore is the one of profitability ratios.

A profitability ratio shows a company's overall efficiency and performance. We can divide profitability ratios into two types: margins and returns. Ratios that show margins represent the firm's ability to translate sales Dollars into profits. Ratios that show returns represent the firm's ability to measure the overall efficiency of the firm in generating returns for its shareholders.

1) The Net Profit Margin

This ratio shows how much of each sales Dollar shows up as net income after all expenses are paid. For example, a net profit margin of 5% means 5 cents in every sales Dollar is profit.

2) Return on Assets

The Return on Assets ratio is an important profitability ratio because it measures the efficiency with which the company is managing its investment in assets and using them to generate profit. It measures the amount of profit earned relative to the firm's level of investment in total assets. The return on assets ratio is related to the asset management category of financial ratios.

The higher the percentage the better, since this means the company is doing a good job using its assets to generate sales.

3) Return on Equity

The Return on Equity ratio is perhaps the most important of all the financial ratios to prospective investors in the company. It measures the return on the money the investors have put into the company. This is the ratio potential investors look at when deciding whether or not to invest in the company. In general, the higher the percentage the better, as it shows that the company is doing a good job of using the investors' money.

Ratio analysis
(subscription model)

		Periode 2014			Periode 2015			Periode 2016		
		Worst	Medium	Best	Worst	Medium	Best	Worst	Medium	Best
Return on Sales (%) Profit Margin	Net Profit After Taxes ÷ Net Sales	0,00%	5,55%	25,70%	0,00%	0,00%	13,78%	0,00%	6,75%	26,49%
Return on Assets Ratio (%)	Net Profit After Taxes ÷ Total Assets	0,00%	28,18%	73,14%	0,00%	0,00%	28,37%	0,00%	88,95%	35,52%
Return on Net Worth (%) Return on Equity	Net Profit After Taxes ÷ Net Worth	0,00%	28,18%	73,14%	0,00%	0,00%	28,37%	0,00%	88,95%	35,52%

Ratio analysis
(pay per download model)

		Periode 2014			Periode 2015			Periode 2016		
		Worst	Medium	Best	Worst	Medium	Best	Worst	Medium	Best
Return on Sales (%) Profit Margin	Net Profit After Taxes ÷ Net Sales	0,00%	0,00%	-0,10%	0,00%	0,00%	0,00%	0,00%	0,00%	1,20%
Return on Assets Ratio (%)	Net Profit After Taxes ÷ Total Assets	0,00%	0,00%	73,14%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Return on Net Worth (%) Return on Equity	Net Profit After Taxes ÷ Net Worth	0,00%	0,00%	73,14%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Table 19 : Business ratios

We notice that the Return on Equity is the same as the Return on Assets, because we have no liabilities. Indeed, the Net Worth is the total of assets minus the liabilities.

Conclusion:
For the pay per download model, the ratio analysis shows poor results. The net profit margin is almost non-existent and the return ratios are zero except in the best case scenario in the first year.
For the subscription model, the medium and best case scenarios shows us good results on the net profit margin. There is a small decrease in 2015 as new development costs will have to be made.
The return ratios are decreasing in 2015 and 2016 as our assets grow quicker than our sales.

7.6   Break-even Analysis

A break-even analysis is a key part of any good business plan. It lets us know how many apps we must sell in order to cover our costs.

It is also a very useful tool to figure out the best pricing structure for our product.

We need several basic pieces of information:
• Fixed costs per month: these are costs that do not alter much from month to month and do not depend upon how many apps are sold. The fixed costs include the salary of the developer and the app store enrolment fee.

- Variable costs per unit: these are the costs that vary with the sales volume. In our case this will be the App store commission.
- Average price per unit

We will calculate the BEQ (break even quantity) which is the number of units needed to be sold to cover our costs.

BEQ= Fixed costs / (Average price per unit – average cost per unit)
One period = one month.

Sales	
Sales price per app	4,99
Sales volume per period [apps]	10
Total sales	49,9

Fixed costs per period	
Salary developper	6000
App store enrollment fee	8,25
Total fixed costs per period	6008,25

BEQ = 1720,08

Variable costs per unit	
App store commission [%]	30
Total variable costs per app	1,497

Net profit (loss)	-5973,32

Sales volume analysis												
Sales volume per period (units)	10	25	50	100	250	500	1000	1250	1500	2000	4000	5000
Sales price per unit	4,99	4,99	4,99	4,99	4,99	4,99	4,99	4,99	4,99	4,99	4,99	4,99
Fixed costs per period	6008,25	6008,25	6008,25	6008,25	6008,25	6008,25	6008,25	6008,25	6008,25	6008,25	6008,25	6008,25
Variable costs	14,97	37,425	74,85	149,7	374,25	748,5	1497	1871,25	2245,5	2994	5988	7485
Total costs	6023,22	6045,68	6083,1	6157,95	6382,5	6756,75	7505,25	7879,5	8253,75	9002,25	11996,3	13493,3
Total sales	49,9	124,75	249,5	499	1247,5	2495	4990	6237,5	7485	9980	19960	24950
Net profit (loss)	-5973,32	-5920,93	-5833,6	-5658,95	-5135	-4261,75	-2515,25	-1642	-768,75	977,75	7963,75	11456,8

Table 20 : Break-even analysis
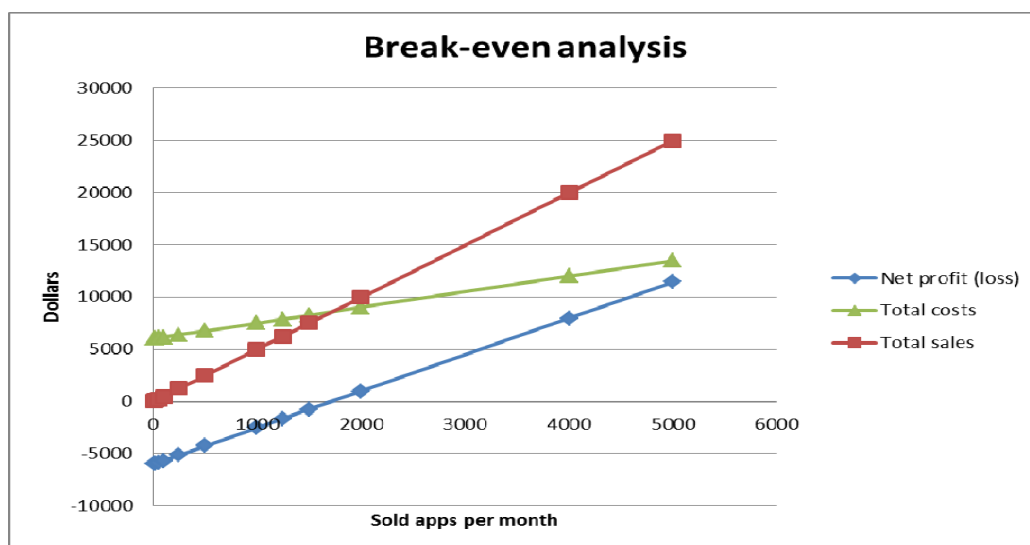
Figure 19 : Break-even analysis

If we set our selling price at 4,99 Dollars, we need to sell 1 720 apps every month to cover our costs. This is a lot for a niche market.

7.7 Profitability

To analyse the profitability of our investment, we will use the NPV (net present value) method. This method is widely used in capital budgeting. NPV compares the value of a Dollar today to the value of that same Dollar in the future, taking inflation and returns into account. In other words, NPV makes the difference between the present value of incoming cash flows and the present value of outgoing cash flows. If the NPV of a project is positive, it should be accepted. However, if NPV is negative, the project should probably be rejected because cash flows will also be negative.

Each cash flow must be discounted back to its present value:

$$\frac{R_t}{(1+i)^t}$$

where
t : the time of the cash flow
i : the discount rate
$\quad R_t$: the net cash flow at time t

The discount rate we will use is the firm's weighted average cost of capital (WACC). To invest into a project, a firm needs funds. These funds can be obtained by debt or/and equity financing. The cost of capital is simply the cost of getting these funds.
The weighted average cost of capital is based on the business firm's capital structure which defines how much of the financing has been obtained by debt and how much has been obtained by equity.
The weighted average cost of capital is important to know as we want the return of a project to be greater than the cost of capital.

In our case, the project has been entirely financed by the retained earnings so the cost of capital equals the cost of equity. The retained earnings have a cost, called an opportunity cost. These earnings could indeed have been used in some other way. For example, they could have been paid out as dividends to shareholders.
To calculate the cost of equity, we will use the Capital Asset Pricing Model (CAPM):

Cost of Equity = Risk-free rate + Beta (Market Rate of Return - Risk-Free Rate)

The general idea behind CAPM is that investors need to be compensated in two ways: time value of money and risk. The time value of money is represented by the risk-free rate in the formula and compensates the investors for placing money in any investment over a period of time. The other half

of the formula represents risk and calculates the amount of compensation the investor needs for taking on additional risk. This is calculated by taking a risk measure that compares the returns of the asset to the market over a period of time and to the market premium.

Here are the steps to estimate the cost of equity:

1) Estimate the economy's risk free rate.

The risk-free rate we have taken here is the rate of return on the 5 year Belgian bonds (OLO 5) which is 3.1%.

2) Estimate the stock market's current rate of return.

This is rather difficult to pin-point.

The best place to look for an answer to our question would be in history. Going back nearly 200 years, the stock market has historically returned 7% in real (after-inflation) dollars. But this is not a smooth, upward trajectory. In the short-term, the stock market can be wildly volatile, sometimes rising or falling by more than 50% in a year. Another problem is that past performance is no indication of future results.

Nevertheless, according to Yahoo finance, over a longer period the return begins to approach that steady 7% average, so we will consider here a return of 7%.

3) Estimate the risk of the stock of the company as compared to the market. This measure is called equity beta.

The beta (risk) of the market is specified as 1.0. If the company's risk is greater than the market, its beta is greater than 1.0 and vice versa. Often, it is a judgment call on the part of company management. We will use 2.0 because we are a small firm in a niche market during a less favourable economic environment with a lot of uncertainty.

4) Insert the variables into the CAPM equation.

The calculated cost of equity is 10,9% which is in our case also our WACC. It is the rate of return that could have been earned by putting the same money into a different investment with equal risk.

Below we have calculated the NPV of incoming and outgoing cash flow over a period of 5 years based on the previously calculated WACC. We are considering the medium and best-case scenarios. For the worst case scenarios it is obvious that the investment was not worthwhile.

Subscription (medium case)				
	T1	T2	T3	T4	T5
Cash IN	€ 84 896,24	€ 85 745,20	€ 86 602,65	€ 87 468,68	€ 88 343,37
Cash OUT	€ -80 180,78	€ -101 752,68	€ -80 760,79	€ -101 752,68	€ -81 352,46
Cashflow	€ 4 715,46	€ -16 007,48	€ 5 841,87	€ -14 284,00	€ 6 990,91

NPV =	€ -9 756,2

Subscription (best case)				
	T1	T2	T3	T4	T5
Cash IN	€ 127 316,29	€ 128 589,45	€ 129 875,34	€ 131 174,10	€ 132 485,84
Cash OUT	€ -94 599,35	€ -110 874,50	€ -95 469,17	€ -111 753,02	€ -96 356,48
Cashflow	€ 32 716,94	€ 17 714,95	€ 34 406,17	€ 19 421,08	€ 36 129,36

NPV =	€ 103 508,0

Pay per download (medium case)				
	T1	T2	T3	T4	T5
Cash IN	€ 51 772,13	€ 52 289,85	€ 52 812,74	€ 53 340,87	€ 53 874,28
Cash OUT	€ -77 752,68	€ -101 752,68	€ -77 752,68	€ -101 752,68	€ -77 752,68
Cashflow	€ -25 980,56	€ -49 462,84	€ -24 939,94	€ -48 411,81	€ -23 878,40

NPV =	€ -128 170,0

Pay per download (best case)				
	T1	T2	T3	T4	T5
Cash IN	€ 77 633,74	€ 78 410,07	€ 79 194,17	€ 79 986,12	€ 80 785,98
Cash OUT	€ -77 712,25	€ -101 752,68	€ -78 242,64	€ -102 511,83	€ -78 783,70
Cashflow	€ -78,52	€ -23 342,61	€ 951,53	€ -22 525,71	€ 2 002,28

NPV =	€ -32 051,1

Table 21 : Net Present Value calculations

The only worthwhile business model is the subscription form - and this only in the best case scenario. We have then a NPV of 103 508 Dollars. A pay per download model, which would be the most appropriate for this kind of app, would not, unfortunately, generate enough revenue.

As these calculations are based on a lot of assumptions and may vary a lot with the sales volume of potential partners, these results may improve. In any event we have to think about an exit strategy which will be to sell our technology.

7.8 Selling the technology

So far we have looked at two different options. The first: to launch the app on the market ourselves. However, we calculated we would need to sell an unrealistic number of apps per month to break-even. The second option was to get into a partnership. In this case we saw that generated revenues depend upon the sales volume of the partner, which is unknown for us at this point.

A third option we will look at now, is to sell our technology.
As we know, the IT and telecom industry is a sector with more than average mergers and acquisitions activity. Knowledge is one of the most important value drivers in this sector. Knowledge, or in other words a specific software for example, can be sold by acquirers to their existing customer base hence creating additional revenue from the purchase of a technology or even attract new customers. Very often smaller technical oriented companies have developed a high quality application or other IT-driven technology but need the sales network and/or marketing capacity of a larger organization in order to bring their products to market.

The three most important questions we have to ask ourselves is to whom can we sell, how do we sell it and for what price?

7.8.1 Value estimation and price setting

The first thing we need to do is to estimate the value of our company. Two common methods can be used:
- The discounted cash flow (DCF) valuation
   The DCF method determines the value of a company based on its expected future cash flows discounted to the present. The discount rate is based on the opportunity cost of capital.
   Since in our case we don't have an existing customer base, nor strong distribution and marketing channels, it would be difficult to use this method.
   We could base the future cash flows on the sales forecast (which we expect to be higher thanks to our technology) of our acquirer but this might be even more difficult to get a handle on.

- The comparative company valuation
   Working out a valuation based on comparison to similar companies may give a better indication of what an acquirer will be prepared to pay. The comparative company method determines the value of a business by looking at the prices of similar companies that have recently been sold.

Both methods are useful as a guide, but we have to bear in mind that if we apply it to our existing forecast it will only give us a stand-alone valuation, rather than an indication of worth to a strategic buyer.

As we have no history at this point and no significant revenues or profits from this technology, we shall use another method:
We could compare our value against the rebuild value i.e. what it would cost the acquirer to develop our technology from scratch and the potential sales they would have lost meanwhile to their competitors.

Usually one of the first things an acquirer will do is to look for other comparable businesses and consider the price that they would have to pay for our competitors against the price they might have to pay for us. This can be to our advantage as we have no direct competitors. There are other firms specialized in developing mobile apps and the acquirer could discover how much it would cost to make an app similar to ours. We might want to approach those firms to see what their price setting is. It would be foolish of us to ask for 300 000 Euros for example, if they can develop it for 100 000 Euros.
We will set our price according to this information.

Sometimes, there is a total mismatch in value between buyers and sellers, but more often it is explained by different expectations of future performance. Our estimate of our value may be based on what we assume we are going to achieve over the next few years, whereas an acquirer's perception of value may be based on our performance (which is nil to date). In order to bridge this gap, some

methods exist to allow the total consideration over time to vary according to future performance, the most common of which is an earn out.

An acquirer will usually set a fixed amount for the value of the business as it stands today, which will be payable on completion of the deal. In order to satisfy our perception of the future value of the business, an earn out can be put in place. This is a sum of money, or several sums, that are paid at either pre-determined dates or at the point at which a milestone is achieved. A common form of earn out is a sum of money that is released if a particular revenue or profit target is achieved at the end of a pre-defined date. This may either be a pre-agreed sum or may be based on a percentage of the achieved figures.

It is vital to ensure that these targets are measurable and achievable, and that mechanisms are put in place to report on progress as these targets are under the control of the acquirer.

It is also important for us that measures are put in place to prevent the acquirer from manipulating the targets.

7.8.2   Selling Plan

The selling plan can be divided in two parts:

1) Preparing for the sale process

Becoming known

It is of no use simply stating our technology is the best. We will need an objective third party opinion, from as reputable a source as possible. We need to be winning Awards, scoring highly in reviews and getting good analyst comments. Acquirers will almost always look those up about companies they are considering buying.

Deciding who should lead the sale process

In most cases the CEO of the company will be the person chosen to run the sale process. But others can make a very valuable contribution to the process such as a board member with experience in these matters. If such a person is not on the board then it's well worth finding someone with relevant experience.

Identifying potential acquirers

The best way is to have a brainstorm with the members of our management team who are going to be involved in the process. We want to start with the biggest players in our sector and work down from there. We will make a list of any company that could benefit from our technology. We can also add any companies that have competitive or complementary products to ours.

Getting to know our target companies

We would have to find out as much as we could about each potential acquirer such as how our technology could fit into theirs and the benefits it would bring. At the same time, we want to predict their behaviour by looking at their history:

Did they make acquisitions in the last two to three years?
What did they pay?
What was the reason they gave for acquisition?
Who led the deal?

We also want to get to know their key personnel as well as we can. We can find biographies and information of key staff on their websites and find out what they have written about themselves on business networking sites such as LinkedIn. We will look for anything that will give us insight into the person:

Do they have a technical background?
Where have they worked in the past?
Are they connected to anyone that we know, who we could ask for more information?

Identifying strategic fit

Once we have gained an insight into the potential acquiring firms and studied their past acquisitions and their plans for the future, we need to work out how we will fit into their plans. In order to understand our value to these companies, we need to examine following:

Will they be able to sell our products to their existing customers?
Will our product allow them to sell higher-up products?
Will having our product give them a technical edge?
Will adding our product allow them to sell more of their existing products?
By acquiring our product, could they make significant savings in other areas of their business?

We must work out the impact that our technology could have on their performance. As long as we are honest about the costs we are also going to add to their operation, we should be able to work out the increase in profits we can bring to them and thus the increase in value.

Making it easy to buy

Selling a business is like selling a house. You give the buyers the best possible experience when they come to look around.
In a software company, a large part of the value will be tied up in the intellectual property and the source code. So it is vital that this is documented and up-to-date.
If our developers have been too busy to document their code in the past, now is the time to do it, because the quality and documentation of the code will be examined by the acquirers. If an acquirer believes there may be a significant delay on knowledge transfer, it may negatively impact the price.

2) The sale process

Once we have completed all our pre-sale preparations, the steps to selling can be summarized as follows:

Creating our Information Memorandum and Executive Summary

In the content of a business sale, an information memorandum is a document that provides an overview of the company that is being offered for sale. Its purpose is to provide information to potential buyers to allow them to review the company and decide whether they would like to progress their interest.
It will typically include information about all aspects of our business, such as:
- Company history
- Products and services
- Types of clients
- Sales and marketing
- Sales figures by product
- Key individuals
- Staff members
- Reasons for the sale
- References, study cases, reviews etc.

The executive summary should describe the key value proposition, summaries all the value elements in the company and explain the reason for sale. The quality of the executive summary is as important as the document itself, as this may be all an acquirer will bother to read, before making a decision on whether to see our company or take the process further.
The reason for the sale is important. Acquirers will want to know why we are considering selling at this point. We must be clear about what we're looking to get out of a sale that we cannot achieve by going it alone. In our case we want to accelerate the adoption of our technology by being part of a larger organization with an existing global client base and distribution channel.

Finding the right contacts

By now we have a list of potential acquirers. The first task is to make contact with them and assess the level of interest from each party.
In many cases we don't even know the names of the people we should be talking to, which is where Internet search engines come in handy. By using Google along with the company's own website we can discover the decision makers to contact. Most of the people we're looking for will be in corporate or business development. In smaller companies it could be the chairman, CEO, COO or CFO.
We also want to see if any acquisitions involving this company took place over the last years. The press releases on their website or Wikipedia may provide some details on previous deals which might prove interesting for us.

Once we have identified the right people to contact, we need three vital pieces of information: their email address, their telephone number and the names of any mutual contacts

The email address might be the most simple to find. Many addresses are in the form: firstname.surname@company.com. If we can't find any matches then we can look for other individuals at their company and follow that pattern.

Making first contact

Having found our contact person, how do we get him interested in our business? This activity requires careful preparation as we will only have one attempt. As a first contact, we will use email. Most corporate development people prefer this approach as it means they can deal with it in their own time according to their priorities. We can always suggest in our email that we will contact them and request an appropriate time and number.

What content should this email contain? We want a teaser document to send to our target. Its purpose is to spark their interest and leave them wanting to know more.

A typical teaser should include brief details of our value proposition, our technology. We can also include something about the strength of our development and management team. We want to be as specific as we possibly can for each target: what we are going to do for their company and what aspect of their business we will improve.

The main reasons why companies make acquisitions are: to improve sales or profits, to provide a new complementary product range, to significantly improving their existing product range or to open up new geographies or customer bases. We have got to be hitting one or more of these goals to garner their interest.

We need to make sure the teaser is phrased appropriately. If we know this person has had a career in pure corporate finance then we don't need to speak overly about technical descriptions.

As this is the first communication they will have received from us, we need to make sure it is as compelling as possible, that it is personalized and is concise.

Following up

There is a possibility our email does not reach its intended target. The company may have a rule of only reading email from people they know, or possibly their email filter may have marked our email as spam.

From this point on, we have to be persistent. If we receive no response to our email we telephone a couple of days later to check receipt.

Finding a direct-line telephone number will be more challenging than discovering an email address. In the worst case, we can always use the main number of the company and request to be put through to our target.

Once we reach our targeted decision-maker we have the chance to convince him of our value proposition and what we represent to their company. Clearly, this has to be a very well-prepared call.

Once they have expressed interest in our teaser document, we can send an executive summary of the information memorandum. We certainly would not send out our entire information memorandum

immediately. We want to wait for them to request this and use this as an opportunity to suggest a call, a WebEx (meeting over the internet) or a live meeting. This is a good way to gauge their level of interest.

The management presentation

Once we have arranged a meeting we need to determine who is going to be attending and what their role is, so that we in turn know what people we should include on our side of the table. During the meeting, we will present the content of our information memorandum. It is important we do not do all of the talking, but listen to what the acquirers have to say and try to get feedback by asking questions.

The next steps

From the point at which we hold a first meeting with a potential acquirer, to the moment we are negotiating price and approaching a Letter of Intent, can take anything from one week to several months and is difficult to predict since it varies for every business. Many meetings will have to take place meanwhile to cover different aspects including technical, financial, legal etc.

Selling a technology is more than software demonstrations and business case presentations. We have to realize there are often many types of people involved in the procurement of high-tech solutions. The following buyers may be involved in the decision-making and evaluation process:
- The CEO
- The finance/accounting department
- The sales department
- The IT department

Each one will need to have the solution communicated differently:
- The CEO will most likely want to know the big picture, the bottom-line and how the return on investment will be measured.
- Finance and accounting will be concerned about capital costs, warrantees, risks etc.
- The sales staff will want to know how it works, its features, selling arguments etc.
- The IT department will want to know specifics on programming, scalability, programming language security, and other technical issues.

It is important we have a strategy that addresses the needs of each of these groups, and one which communicates the benefits in a way that is unique and applicable to each buyer type.

In addition to this, there are several other important aspects to consider and be aware of:

Knowing the market

Understanding the niche market is critical in order to address the needs of the client/ acquirer in identifying what core business challenges our technology addresses. We must be able to provide specific examples of how our solution can positively impact their business.

Knowing all applications and limitations of our solution

It is important to understand the entire applications of our solution including identifying our weaknesses and limitations. This is necessary in order to avoid misconceptions by the buyer and the setting of unreasonable expectations.

Have consulting skills

We have to elevate ourselves to the position of trusted advisor so we can give the buyer a real advantage in the marketplace. To be seen as a consultant, we need to assist the buyer in problems he will encounter and help him look for and manage solutions.

Project and management skills

A high-tech sales deal will require numerous people on our team to help us close the sale. Most likely there will be a need to engage technical and support staff and coordinate their interaction with key staff in our client company. Once we have the deal, there will need to be continual monitoring of these interactions to ensure promises made are fulfilled.

Helping in the transition

Demonstrating the functionality of the technology is easy to do. The key is how fast an organization is able to implement a new technology solution. This is critical in assessing its true value to the buyer. We must help the buyer implement the solution in the smoothest and fastest way possible.

8. Milestones

8.1 Planning with partnership

In appendix 8 you will find a Gantt chart for the further planning of the app launch. This planning is regrouping all marketing and development actions that need to be completed to assure a successful launch and to secure a partnership.

Here is an overview of all steps:

1) Internal beta testing
   It is clear the app has to be truly tested before we launch it on the market. The testing will be divided into two groups. The first group will be internal persons who will test the app for technical "viability".
   We ask them to pay attention to following points:
   - Does the app perform the tasks it was designed for?
   - How does the app perform when being used consistently or under a heavy load?
   - Is it possible to hack the app?
   - What happens when you push the app to its limits?
   - What is the sign-up process like?
   - Do all links with social media work as they should?
   - Etc.
   They should test all the functionality and security issues.

   The second group will be external persons who test the app for usability and the end user's work environment.
   We ask them to pay attention to following points:
   - the usability, which means does it have a user friendly interface?
   - is the use inside the app intuitive?
   - are the features and functions what they expected?
   - how is the app design?
   - Etc.

2) Creating content
   In order to support our marketing efforts, we will need to create some content about our app. Typically this will comprise:
   - Demo videos which illustrate the possibilities of the app and its functionalities
   - An attractive and appealing app icon
   - The best screenshots with description
   - A press release
   - User guides, presentations and articles which can be uploaded on Slideshare for example, and which can easily be shared on social media
   - Etc.

3) Build online presence

It is vital we create Twitter/Facebook accounts for our app well ahead of the launch. We need to engage with the people on these networks whom we believe may want to try our app.

Social networks become extremely powerful once we have a large following of people who subscribe to our updates. There are multiple free tools available which automate the laborious task of finding and getting people to follow you. Tools like TweetAdder are extremely useful for finding people to follow on Twitter that fit our target audience.

Guest blogging is also one of the most effective ways to increase the visibility of our app's web site in search engines like Google. Guest blogging involves writing blog articles on other people's blogs, with the hope of being able to have a link from that article back to your app's web site. There are entire online communities available for people to find blogs to guest post on. MyBlogGuest for example is one of them.

4) Fine tune website

The web site has already been developed but it still has to be fine-tuned. Below some focus points:

- o The web site needs to be social media friendly, which means it must be easily shared on the social media platforms.
- o We need to incorporate all content created in point 3.
- o A keyword research has to be done and implement those onto all pages of the web site.
- o The website needs to be screened by a native English speaker.
- o Call-to-action buttons and badges needs to be implemented.
- o We have to incorporate our own blog
- o Etc.

5) Getting our app tested by third party sites

To ensure the objectivity of the tests we might want to send the app to third parties in order to test them thoroughly.

6) Launching the app

After completing Apple's submission process, the app will be finally launched on their store.

7) Subscribe to an analytic service

Which method is the most effective? How many users renew their subscription? Do we need to change our business model? These questions can be answered by subscribing to an analytic service. We need to measure what works and what doesn't.

8) Getting our app reviewed

Here are a few channels we can use in order to get reviews:

- o Initially identify all our niche influencers (this can be done setting up Google alert for example) and ask them if they want to test our app.
- o There also are a lot of online review sites we can contact and submit our app to.
- o We must target online forums which are already fans of the genre our product falls into. This is generally the most receptive consumer base and they'll be more than happy to download the product, fostering discussions and viral word-of-mouth publicity.

   o Also users should be encouraged to write reviews.

9) Social sharing

We have spent time cultivating our product's following on these social networking platforms. We can now get the word out that our product is finally available in the mobile marketplace. After the launch, we must keep participating in online forums to keep discussion about our product active and on-going, and keep cultivating and growing our app's Facebook page and Twitter following.

10) Monitor feedback

All feedback and reviews of users have to be closely monitored and responded to.

11) Keep updating

We want to improve the users' satisfaction by incorporating changes based on the feedbacks.

12) Partnership

As we saw in the sales forecast, a partnership with a hardware constructor would be essential for us in term of profit. We need to find a business partner willing to sell our app as a package with their products. An alternative approach would be to sell the technology to them if they are interested.

8.2 Selling the technology planning

The planning can be found in appendix 9. It looks as almost identical to the planning with a partnership. In the first instance we will launch the app on the market and try to gather as many positive reviews as possible and try to work out all the technical issues before starting the selling process described in the selling plan.

9. Final conclusion

Business plans have a reputation for being subjective and any incorrect assumptions within our analysis may have a dramatic effect upon our venture. After examining the financial aspects, we are ultimately disappointed with the results, which are not what we expected.

However, as the application is fully developed, we will launch it as planned and gauge the response of the market.

If this is in line with our predictions, we will attempt to sell the technology. If not, we will continue our online adventure. A business plan is a dynamic tool which needs to be monitored and updated frequently. We will adjust our conclusions and actions to the market dynamics.

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11. Appendix

Appendix 1 : detailed sales forecast year 2014 (pay per download model ; worst case)

	2014											
	Jan	Feb	Mrt	Apr	Mei	Jun	Jul	Aug	Sep	Okt	Nov	Dec
Monthly Google Searches	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Other Search Engines	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Total Searches	428 800	430 944	433 099	435 264	437 441	439 628	441 826	444 035	446 255	448 486	450 729	452 983
Iphone Owner Searches	54 629	54 902	55 177	55 453	55 730	56 009	56 289	56 570	56 853	57 137	57 423	57 710
Percent of Traffic Captured [%]	2	2	2	2	2	2	2	2	2	2	2	2
Monthly Search Engine Traffic	1 093	1 098	1 104	1 109	1 115	1 120	1 126	1 131	1 137	1 143	1 148	1 154
Search Traffic Percent of Total Traffic	80	80	80	80	80	80	60	60	60	60	60	60
Total Monthly Traffic	1 311	1 318	1 324	1 331	1 338	1 344	1 576	1 584	1 592	1 600	1 608	1 616
Conversion Rate [%]	1	1	1	1	1	1	1	1	1	1	1	1
Purchases from website	13	13	13	13	13	13	16	16	16	16	16	16
Purchases from other sources	2	2	2	2	2	2	2	2	2	2	2	2
Total Purchases	15	15	15	15	15	15	18	18	18	18	18	18
Revenue per Purchase	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49
Revenue per Month	$ 52,78	$ 53,01	$ 53,24	$ 53,47	$ 53,71	$ 53,94	$ 62,04	$ 62,31	$ 62,59	$ 62,87	$ 63,15	$ 63,43
Revenue from Partnership	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenue per Month	$ 52,78	$ 53,01	$ 53,24	$ 53,47	$ 53,71	$ 53,94	$ 62,04	$ 62,31	$ 62,59	$ 62,87	$ 63,15	$ 63,43

Partnerschip	2013	2014	2015
Total boards units sold	0	0	0
Percentage of IO boards [%]	0	0	0
Total IO boards sold	0	0	0
Percentage of IO board packages sold [%]	0	0	0
Total IO board packages sold	0	0	0
Price of IO board packages	$ 35,00	$ 35,00	$ 35,00
Total sales of IO board packages	$ -	$ -	$ -
Our percentage [%]	15	15	15
Revenu from partnerschip	$ -	$ -	$ -

Appendix 2 : detailed sales forecast year 2014 (pay per download model ; medium case)

	Jan	Feb	Mrt	Apr	Mei	Jun	Jul	Aug	Sep	Okt	Nov	Dec
						2014						
Monthly Google Searches	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Other Search Engines	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Total Searches	428 800	430 944	433 099	435 264	437 441	439 628	441 826	444 035	446 255	448 486	450 729	452 983
Iphone Owner Searches	54 629	54 902	55 177	55 453	55 730	56 009	56 289	56 570	56 853	57 137	57 423	57 710
Percent of Traffic Captured [%]	2	2	2	2	2	2	2	2	2	2	2	2
Monthly Search Engine Traffic	1 093	1 098	1 104	1 109	1 115	1 120	1 126	1 131	1 137	1 143	1 148	1 154
Search Traffic Percent of Total Traffic	80	80	80	80	80	80	60	60	60	60	60	60
Total Monthly Traffic	1 311	1 318	1 324	1 331	1 338	1 344	1 576	1 584	1 592	1 600	1 608	1 616
Conversion Rate [%]	2	2	2	2	2	2	2	2	2	2	2	2
Purchases from website	26	26	26	27	27	27	32	32	32	32	32	32
Purchases from other sources	3	3	3	3	3	3	4	4	4	4	4	4
Total Purchases	29	29	29	30	30	30	36	36	36	36	36	36
Revenue per Purchase	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49
Revenue per Month	$ 102,07	$ 102,53	$ 102,99	$ 103,45	$ 103,92	$ 104,39	$ 124,08	$ 124,63	$ 125,18	$ 125,74	$ 126,30	$ 126,86
Revenue from Partnership	$ 4 200,00	$ 4 200,00	$ 4 200,00	$4 200,00	$4 200,00	$4 200,00	$4 200,00	$4 200,00	$4 200,00	$4 200,00	$4 200,00	$4 200,00
Total Revenue per Month	$ 4 302,07	$ 4 302,53	$ 4 302,99	$4 303,45	$4 303,92	$4 304,39	$4 324,08	$4 324,63	$4 325,18	$4 325,74	$4 326,30	$4 326,86

Partnerschip	2013	2014	2015
Total boards units sold	120 000	126 000	132 300
Percentage of IO boards [%]	40	40	40
Total IO boards sold	48 000	50 400	52 920
Percentage of IO board packages sold [%]	20	20	20
Total IO board packages sold	9 600	10 080	10 584
Price of IO board packages	$ 35,00	$ 35,00	$ 35,00
Total sales of IO board packages	$ 336 000,00	$ 352 800,00	$ 370 440,00
Our percentage [%]	15	15	15
Revenu from partnerschip	$ 50 400,00	$ 52 920,00	$ 55 566,00

Appendix 3 : detailed sales forecast year 2014 (pay per download model ; best case)

	Jan	Feb	Mrt	Apr	Mei	Jun	Jul	Aug	Sep	Okt	Nov	Dec
						2014						
Monthly Google Searches	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Other Search Engines	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Total Searches	428 800	430 944	433 099	435 264	437 441	439 628	441 826	444 035	446 255	448 486	450 729	452 983
IPhone Owner Searches	54 629	54 902	55 177	55 453	55 730	56 009	56 289	56 570	56 853	57 137	57 423	57 710
Percent of Traffic Captured [%]	2	2	2	2	2	2	2	2	2	2	2	2
Monthly Search Engine Traffic	1 093	1 098	1 104	1 109	1 115	1 120	1 126	1 131	1 137	1 143	1 148	1 154
Search Traffic Percent of Total Traffic	80	80	80	80	80	80	60	60	60	60	60	60
Total Monthly Traffic	1 311	1 318	1 324	1 331	1 338	1 344	1 576	1 584	1 592	1 600	1 608	1 616
Conversion Rate [%]	3	3	3	3	3	3	3	3	3	3	3	3
Purchases from website	39	40	40	40	40	40	47	48	48	48	48	48
Purchases from other sources	4	4	4	4	5	5	5	5	5	5	5	5
Total Purchases	43	44	44	44	45	45	52	53	53	53	53	53
Revenue per Purchase	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49	$ 3,49
Revenue per Month	$ 151,36	$ 152,05	$ 152,74	$ 153,43	$ 157,62	$ 158,32	$ 182,62	$ 183,45	$ 184,28	$ 185,11	$ 185,95	$ 186,79
Revenue from Partnership	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00
Total Revenue per Month	$ 6 451,36	$ 6 452,05	$ 6 452,74	$ 6 453,43	$ 6 457,62	$ 6 458,32	$ 6 482,62	$ 6 483,45	$ 6 484,28	$ 6 485,11	$ 6 485,95	$ 6 486,79

Partnerschip	2013	2014	2015
Total boards units sold	120 000	126 000	132 300
Percentage of IO boards [%]	40	40	40
Total IO boards sold	48 000	50 400	52 920
Percentage of IO board packages sold [%]	30	30	30
Total IO board packages sold	14 400	15 120	15 876
Price of IO board packages	$ 35,00	$ 35,00	$ 35,00
Total sales of IO board packages	$ 504 000,00	$ 529 200,00	$ 555 660,00
Our percentage [%]	15	15	15
Revenu from partnerschip	$ 75 600,00	$ 79 380,00	$ 83 349,00

Appendix 4 : detailed sales forecast year 2014 (subscription model ; worst case)

	Jan	Feb	Mrt	Apr	Mei	Jun	Jul	Aug	Sep	Okt	Nov	Dec
						2014						
Monthly Google Searches	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Other Search Engines	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Total Searches	428 800	430 944	433 099	435 264	437 441	439 628	441 826	444 035	446 255	448 486	450 729	452 983
Iphone Owner Searches	54 629	54 902	55 177	55 453	55 730	56 009	56 289	56 570	56 853	57 137	57 423	57 710
Percent of Traffic Captured [%]	2	2	2	2	2	2	2	2	2	2	2	2
Monthly Search Engine Traffic	1 093	1 098	1 104	1 109	1 115	1 120	1 126	1 131	1 137	1 143	1 148	1 154
Search Traffic Percent of Total Traffic [%]	80	80	80	80	80	80	60	60	60	60	60	60
Total Monthly Traffic	1 311	1 318	1 324	1 331	1 338	1 344	1 576	1 584	1 592	1 600	1 608	1 616
Conversion Rate [%]	1	1	1	1	1	1	1	1	1	1	1	1
Subscription from website	13	13	13	13	13	13	16	16	16	16	16	16
Subscription from other sources	2	2	2	2	2	2	2	2	2	2	2	2
Repeat rate [%]	0	80	80	80	80	80	80	80	80	80	80	80
Total subscriptions	15	27	37	45	51	57	63	68	72	76	79	81
Revenue per subscription	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39
Revenue per Month	$ 21,00	$ 37,90	$ 51,51	$ 62,48	$ 71,36	$ 78,55	$ 87,53	$ 94,82	$ 100,76	$ 105,63	$ 109,63	$ 112,95
Revenue from Partnership	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
IO board packages sold from partnership	0	0	0	0	0	0	0	0	0	0	0	0
Extra subscriptions	0	0	0	0	0	0	0	0	0	0	0	0
Revenu from extra subscriptions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenue per Month	$ 21,00	$ 37,90	$ 51,51	$ 62,48	$ 71,36	$ 78,55	$ 87,53	$ 94,82	$ 100,76	$ 105,63	$ 109,63	$ 112,95

Partnerschip	2013	2014	2015
Total boards units sold	0	0	0
Percentage of IO boards [%]	0	0	0
Total IO boards sold	0	0	0
Percentage of IO board packages sold [%]	0	0	0
Total IO board packages sold	0	0	0
Price of IO board packages	$ 35,00	$ 35,00	$ 35,00
Total sales of IO board packages	$ -	$ -	$ -
Our percentage [%]	15	15	15
Revenu from partnerschip	$ -	$ -	$ -

Appendix 5 : detailed sales forecast year 2014 (subscription model ; medium case)

	Jan	Feb	Mrt	Apr	Mei	Jun	Jul	Aug	Sep	Okt	Nov	Dec
						2014						
Monthly Google Searches	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Other Search Engines	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Total Searches	428 800	430 944	433 099	435 264	437 441	439 628	441 826	444 035	446 255	448 486	450 729	452 983
Iphone Owner Searches	54 629	54 902	55 177	55 453	55 730	56 009	56 289	56 570	56 853	57 137	57 423	57 710
Percent of Traffic Captured [%]	2	2	2	2	2	2	2	2	2	2	2	2
Monthly Search Engine Traffic	1 093	1 098	1 104	1 109	1 115	1 120	1 126	1 131	1 137	1 143	1 148	1 154
Search Traffic Percent of Total Traffic [%]	80	80	80	80	80	80	60	60	60	60	60	60
Total Monthly Traffic	1 311	1 318	1 324	1 331	1 338	1 344	1 576	1 584	1 592	1 600	1 608	1 616
Conversion Rate [%]	2	2	2	2	2	2	2	2	2	2	2	2
Subscription from website	26	26	26	27	27	27	32	32	32	32	32	32
Subscription from other sources	3	3	3	3	3	3	4	4	4	4	4	4
Repeat rate [%]	0	80	80	80	80	80	80	80	80	80	80	80
Total subscriptions	29	53	72	87	99	109	123	134	143	150	157	162
Revenue per subscription	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39
Revenue per Month	$ 40,62	$ 73,30	$ 99,62	$ 120,86	$ 138,04	$ 151,97	$ 170,95	$ 186,36	$ 198,90	$ 209,16	$ 217,58	$ 224,55
Revenue from Partnership	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00	$ 4 200,00
IO board packages sold from partnership	800	800	800	800	800	800	800	800	800	800	800	800
Extra subscriptions	0	640	1 152	1 562	1 889	2 151	2 361	2 529	2 663	2 771	2 856	2 925
Revenu from extra subscriptions	$ -	$ 889,60	$ 1 601,28	$ 2 170,62	$ 2 626,10	$ 2 990,48	$ 3 281,98	$ 3 515,19	$ 3 701,75	$ 3 851,00	$ 3 970,40	$ 4 065,92
Total Revenue per Month	$ 4 240,62	$ 5 162,90	$ 5 900,90	$ 6 491,49	$ 6 964,14	$ 7 342,45	$ 7 652,94	$ 7 901,54	$ 8 100,65	$ 8 260,16	$ 8 387,98	$ 8 490,47

Partnerschip	2013	2014	2015
Total boards units sold	120 000	126 000	132 300
Percentage of IO boards [%]	40	40	40
Total IO boards sold	48 000	50 400	52 920
Percentage of IO board packages sold [%]	20	20	20
Total IO board packages sold	9 600	10 080	10 584
Price of IO board packages	$ 35,00	$ 35,00	$ 35,00
Total sales of IO board packages	$ 336 000,00	$ 352 800,00	$ 370 440,00
Our percentage [%]	15	15	15
Revenu from partnerschip	$ 50 400,00	$ 52 920,00	$ 55 566,00

Appendix 6 : detailed sales forecast year 2014 (subscription model ; best case)

	Jan	Feb	Mrt	Apr	Mei	Jun	Jul	Aug	Sep	Okt	Nov	Dec
						2014						
Monthly Google Searches	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Other Search Engines	214 400	215 472	216 549	217 632	218 720	219 814	220 913	222 018	223 128	224 243	225 364	226 491
Total Searches	428 800	430 944	433 099	435 264	437 441	439 628	441 826	444 035	446 255	448 486	450 729	452 983
Iphone Owner Searches	54 629	54 902	55 177	55 453	55 730	56 009	56 289	56 570	56 853	57 137	57 423	57 710
Percent of Traffic Captured [%]	2	2	2	2	2	2	2	2	2	2	2	2
Monthly Search Engine Traffic	1 093	1 098	1 104	1 109	1 115	1 120	1 126	1 131	1 137	1 143	1 148	1 154
Search Traffic Percent of Total Traffic [%]	80	80	80	80	80	80	60	60	60	60	60	60
Total Monthly Traffic	1 311	1 318	1 324	1 331	1 338	1 344	1 576	1 584	1 592	1 600	1 608	1 616
Conversion Rate [%]	3	3	3	3	3	3	3	3	3	3	3	3
Subscription from website	39	40	40	40	40	40	47	48	48	48	48	48
Subscription from other sources	4	4	4	4	5	5	5	5	5	5	5	5
Repeat rate [%]	0	80	80	80	80	80	80	80	80	80	80	80
Total subscriptions	43	78	106	129	148	164	183	199	212	223	231	239
Revenue per subscription	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39	$ 1,39
Revenue per Month	$ 60,23	$ 108,69	$ 147,73	$ 179,24	$ 206,12	$ 227,90	$ 254,99	$ 277,00	$ 294,93	$ 309,61	$ 321,68	$ 331,68
Revenue from Partnership	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00	$ 6 300,00
IO board packages sold from partnership	1 200	1 200	1 200	1 200	1 200	1 200	1 200	1 200	1 200	1 200	1 200	1 200
Extra subscriptions	0	960	1 728	2 342	2 834	3 227	3 542	3 793	3 995	4 156	4 285	4 388
Revenu from extra subscriptions	$ -	$ 1 334,40	$ 2 401,92	$ 3 255,94	$ 3 939,15	$ 4 485,72	$ 4 922,98	$ 5 272,78	$ 5 552,62	$ 5 776,50	$ 5 955,60	$ 6 098,88
Total Revenue per Month	$ 6 360,23	$ 7 743,09	$ 8 849,65	$ 9 735,18	$ 10 445,27	$ 11 013,62	$ 11 477,97	$ 11 849,78	$ 12 147,55	$ 12 386,10	$ 12 577,28	$ 12 730,56

Partnerschip	2013	2014	2015
Total boards units sold	120 000	126 000	132 300
Percentage of IO boards [%]	40	40	40
Total IO boards sold	48 000	50 400	52 920
Percentage of IO board packages sold [%]	30	30	30
Total IO board packages sold	14 400	15 120	15 876
Price of IO board packages	$ 35,00	$ 35,00	$ 35,00
Total sales of IO board packages	$ 504 000,00	$ 529 200,00	$ 555 660,00
Our percentage [%]	15	15	15
Revenu from partnerschip	$ 75 600,00	$ 79 380,00	$ 83 349,00

Appendix 7 : competition analysis
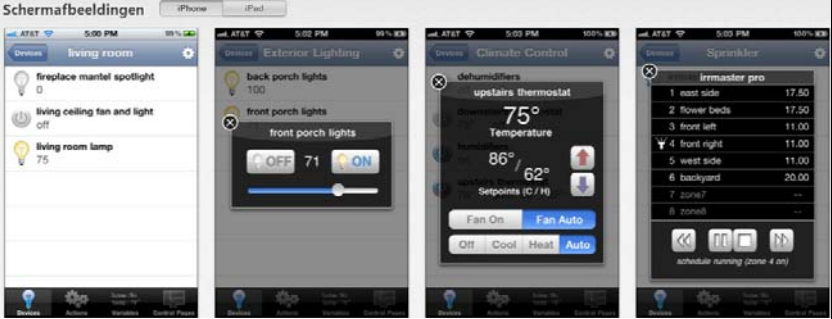
App name	Developer	Web site	Brand independent	Pricing	Number of downloads	Ratings
Indigo Touch	Perceptive Automation, LLC.	http://www.perceptiveautomation.com/indigo/touch.html	no	Free	156000	2159
iRule	iRule	http://www.iruleathome.com/	no	Free	80000	782
WeMo	Belkin International Inc.	http://www.belkin.com/us/wemo	no	Free	54000	397
HSTouch	HomeSeer	http://board.homeseer.com/showthread.php?t=153660	no	Free	22000	221
iMyHomeLE	UpToWeb	http://imyhome.uptoweb.it/index.html	no	Free	20000	513
Control4 My Home	Control4	http://www.control4.com/residential/products/myhome/	no	Free	18000	149
BeoLink	Bang & Olufsen a/s	http://www.bang-olufsen.com/en/customer-service/product-support	no	Free	16000	1645
ControlFX	CommandFusion	http://www.controlfx.co.uk/index.html?homepage=true	no	Free	11000	113
eve Remote Control	ilevia	http://www.ilevia.com/html/index.html	no	Free	10000	117
iVera Free	Thinkiwi LLC	http://www.thinkiwi.com/	no	Free	8000	36
Vantage Home Control	Vantage Controls, Inc	http://www.vantagecontrols.com/	no	Free + inapp	8000	35
Crestron Mobile Pro	Crestron Electronics, Inc.	http://www.crestron.com/	no	89,99 euro	5000	87
Haiku Home Automation for HAI			no	49,99 dollar	5000	110
iViewer 4	CommandFusion	http://www.commandfusion.com/iviewer.html	no	Free	3000	28
iDomintell Lite	Pablo Pinon	http://idomintell.wordpress.com/about/	no	Free	2000	8
InControl Home Automation	Moonlit Software, LLC	http://www.moonlitzwave.com/	no	Free	2000	12
My Fox App	Ecco Systems	http://www.myfox.fr/	no	Free	2000	130
Smarti - Home Automation	TAB Systems Inc.	http://www.tab-systems.com/	no	Free	1000	7
B&B Home Client	Bits & Bytes	http://www.bitsbytes.be/dom_nl/dom_nl.html	yes	Free		
AnB Home Anywhere	AnB Securite s.a.	http://www.homeanywhere.net/nl/presentationwelcome.html	no	Free	<1000	-
casaControl	Siteware	http://www.casalingo.be/	no	Free	<1000	-
CMClient	ComfortClick	http://www.comfortclick.com/	no	Free	<1000	-
Domotica My Home LE	INGEGNI Tech s.r.l.	http://www.ingegnitech.com/app/en/app.php?app=domotica	no	Free	<1000	-
Home Automation	ZTE Netview	http://ztenv.com.cn/english/index.aspx	no	Free	<1000	-
Home Master	Think Simple S.p.a.	http://www.vitrum.com/eng/content/home-master	no	Free	<1000	-
Homecenter	Stijnen Solutions	http://www.stijnen.be/homecenter/index.php	no	Free	<1000	-
HomeControl for Room Automation	Siemens AG	http://www.buildingtechnologies.siemens.com/bt/global/en/buildingautomation-hvac/hvac-products/hvac-controllers/app-homecontrol/Pages/HomeControlforRoomAutomation.aspx	no	Free	<1000	-
houseinhand KNX	Apel Electronica S.L.	http://www.houseinhand.com/	no	Free	<1000	-
iAutom8 - Home Automation	Tristan Phillips	http://www.homeautom8.com/iAutomate/	no	12,99 euro	<1000	-
iMyHome	UpToWeb	http://imyhome.uptoweb.it/	no	33,99 euro	<1000	88
INSTEON for Hub	Smarthome	http://www.insteon.net/index.html	no	Free	<1000	-
iTYDOM 1000	Delta Dore	http://www.deltadore.com/be-nl	no	Free	<1000	-
Loxone	Loxone Electronics GmbH	http://www.loxone.com/Pages/en/produkte/LoxAPP-Bedienen-mit-dem-iPhone/iPhone-iPod-Version/iphone-app.aspx	no	Free	<1000	-
Sweet Home Automation for Vantage	Manuel Novi	http://www.sweethomeforvantage.com/index.php		Free	<1000	2
TaHoma Home Control By Somfy	Somfy SAS	http://www.somfy.nl/	no	Free	<1000	3
TELETASK iSGUI V2	TELETASK home automation	http://www.teletask.eu/home.aspx	no	Free	<1000	-
xxter	xxter b.v.	http://www.xxter.com/	no	Free	<1000	-
Zodianet	ZODIANET Home Robotics	http://www.zodianet.com/	no	Free	<1000	-
ayControl - KNX en meer	easyMOBIZ mobile IT solutions	http://aycontrol.com/	no	Free	-	-

1) Indigo Touch

		Indigo Touch
	App Name and Logo	
1. Objective/Problem	What is the objective, problem, or challenge?	Indigo Touch is an iPhone, iPad and iPod touch optimized application for remotely controlling lighting, appliances, HVAC, and sprinklers from anywhere. It will automatically connect to the required Indigo v4.1+ home control software, installed in your home, to communicate with INSTEON and X10 compatible hardware. Now you can adjust your home's thermostat, run the sprinkler, and turn off the lights from anywhere in the world! The features of this app are: - Instant control and access to all your Indigo hardware - One touch UI controls for lighting, appliances, sprinklers and HVAC - Execute any Indigo defined Action Groups - View any Indigo defined Variables (temperature, home mode, etc.) - Real time updates of all hardware (brightness, temperature, active zone, etc.) - Real time updates of all variable values - Control Page viewer for custom user defined UI pages - Optimized for iPhone and WiFi/3G/Edge connectivity - Bonjour enabled to get you connected with a single touch (no IP addresses needed!)

		- Easy remote access from anywhere via optional reflector subscription GoPrism.com (eliminates all router configuration and dynamic IP address problems
2. Purpose / Goals / Objectives	How clear are the purpose and goals of the app at a glance from name, tagline, and imagery?	The name and logo of Indigo does not tell you what you can do wi app. It tells you more that it has to do with your own home.
3. Target audience	Which population(s) does the website serve?	This app is targeted at people who want to control all system like the lights, appliances, HVAC and sprinklers, … of their home.
4. Users	Is there any information about users through images, stories, or testimonials or about site usage?	
5. Ratings, reviews & feedback	What are the ratings, reviews, and feedback (with links)?	These are the reviews of iTunes of the app: - "Stable and easy to use. One of the few applications that I'm

		using on every day." - "Very usefull application." - "Het is een prima applicatie. Alleen dat het niet makkelijk is om het apple script te kennen. Het aanmaken van acties is daardoor moeilijk maar de applicatie werkt prima." Other reviews: - "This is a simple, no fuss, reliable control for Indigo. It conntects quickly over WiFi. We use it every day to control lights, temperature and the shades at our home." - "Nice to have my iPhone on the bedside table at night and being able to control the lights and thermostat while still under the covers. The fix the development team made for the wifi/Bluetooth interference bug (that was really a Bluetooth problem) works great. I also love being able to check if my garage door is down after I get a few blocks away from the house and can't remember if I put it down or not." - "Works great! Great app!" http://appfinder.lisisoft.com/app/indigo-touch.html http://www.iPhoneappsplus.com/reviews-305247971-0-1.htm
6. Downloads	How many users and downloads are there?	There are 156 000 downloads.

7. Research	Was there any research used?	
8. Design	How professional is the design? Characterize the design (modern, dated, simple, crisp…) and if the design works given the site purpose and users.	The design is simple and clean. The app uses iPhone standards and the features are optimized to work with touch.
9. Layout and navigation	What sections does the website have? Are sections delineated by content type, roles, or user needs? How usable and organized are the layout and navigation (including labels and menus)? Do they make apparent the options a user has?	The application has 5 versions from 18-02-2009 till the last version of 22-12-2010.
10. Branding	Does the home page identify the organization behind the site? Does it make clear their purpose and goals in general and for the website in particular?	
11. External affiliations	Is there branding from other organizations, accreditation (such as HONcode), sponsorship, Google ads, or advertising?	

12. Authors and oversight	Are authors listed and, if so, are their credentials available? Is there an advisory board or clinician involvement? Is there a review process?	
13. Readability	Is the content easy to understand? What reading level is it?	
14. User-generated content	What are the user-generated components (including discussion forums, blogs, user-submitted videos, wikis, social bookmarking, ratings, and reviews)? Is user-generated content clearly delineated from expert content?	
15. Policies	Are there explicit privacy policies or ones for how user-generated components managed, organized, or moderated?	
16. Registration	Do users register and, if so, what can they do befo and after registering?	
17. Cost	Is there a cost and if so, what is it?	This is a free application.

18. Social media and content sharing	Which, if any, social media is used? Can content be shared?	
19. Support	Is there a website or support forum for users?	The website of the company Perceptive Automation has an Suppo page. You can see frequently asked questions, see the How-to-Wiki pag and e-mail the company. http://www.perceptiveautomation.com/support/
20. Overall assessment	What are the overall best and worst features of th app?	

2) iRule

	App Name and Logo	iRule
1. Objective/Problem	What is the objective, problem, or challenge?	iRule is a cloud based universal remote control application for both phones and tablets. It's easy to configure and maintain, allowing you to control your home theater with a customizable color touch screen remote using the mobile device you already have! Customize your remote and configure your devices with iRule Builder, our online application. The Builder allows you to upload your own custom images as well as share devices, panel layouts, and images with other users. Builder also includes a large device database to support most IR-based consumer electronics equipment found in a typical living room or home theater. Please note that that most users' systems will require a hardware gateway to control consumer electronics devices that do not support direct network control. iRule is compatible with Global Caché products.
2. Purpose / Goals / Objectives	How clear are the purpose and goals of the app at a glance from name, tagline, and imagery?	The name and logo of iRule does not tell you what you can do with app. It tells you more that you can rule something (for example your home).
3. Target audience	Which population(s) does the website serve?	This app is targeted at people who hates the pile of remote controls. What about the complexity of running in a living room. Power this on, switch that input, change that input. This app can control not only your audio/video equipment and your home theater, but also your

		lights, drapes, fireplace and even thermostats. It can simplify system operation.
4. Users	Is there any information about users through images, stories, or testimonials or about site usage?	
5. Ratings, reviews & feedback	What are the ratings, reviews, and feedback (with links)?	These are the reviews of iTunes of the app: - Other reviews: - "Love it! By Usamarkd: I use this to control all my home theater electronics and software such as XBMC. I also use it to control my lights using Insteon switches. I love the flexibility of the software which allows me to make custom graphics or use others graphics. Works awesome on the iPad an iPhone as well. Nice job guys! Keep the ingenuity and great work coming!!" http://appfinder.lisisoft.com/app/irule-hd.html - "People that do not know about technology will find it useless, but is a great app to control your a/v equipment from a tablet."

	- …
	http://www.amazon.com/iRule-LLC/product-reviews/B006R8S9AW
	- "Very difficult setup and doesn't work. Waste of time." - …
	http://www.badappreviews.com/iosapps/171298/irule
6. Downloads	How many users and downloads are there?	There are 80 000 downloads.
7. Research	Was there any research used?	
8. Design	How professional is the design? Characterize the design (modern, dated, simple, crisp…) and if the design works given the site purpose and users.	The design is simple and clean. The app uses iPhone standards and the features are optimized to work with touch.
9. Layout and navigation	What sections does the website have? Are sections delineated by content type, roles, or user needs? How usable and organized are the layout and navigation (including labels and menus)? Do they make apparent the options a user has?	The application has 18 versions from 15-02-2010 till the last version of 21-06-2013.
10. Branding	Does the home page identify the organization behind the site? Does it make clear their purpose and goals in general and for the website in particular?	

11. External affiliations	Is there branding from other organizations, accreditation (such as HONcode), sponsorship, Google ads, or advertising?	
12. Authors and oversight	Are authors listed and, if so, are their credentials available? Is there an advisory board or clinician involvement? Is there a review process?	
13. Readability	Is the content easy to understand? What reading level is it?	
14. User-generated content	What are the user-generated components (including discussion forums, blogs, user-submitted videos, wikis, social bookmarking, ratings, and reviews)? Is user-generated content clearly delineated from expert content?	
15. Policies	Are there explicit privacy policies or ones for how user-generated components managed, organized, or moderated?	
16. Registration	Do users register and, if so, what can they do befo and after registering?	

17. Cost	Is there a cost and if so, what is it?	This is a free application.
18. Social media and content sharing	Which, if any, social media is used? Can content be shared?	
19. Support	Is there a website or support forum for users?	On the website of iRule you have a topic Support. On the link http://support.iruleathome.com/ you can find articles by topic. On the same page you also have community discussions. If you haven't found any help, you can also call of email th organization.
20. Overall assessment	What are the overall best and worst features of th app?	

3) Beolink

	App Name and Logo	BeoLink
1. Objective/Problem	What is the objective, problem, or challenge?	BeoLink controls all systems of modern homes; audio, video, lighting, curtains, etc. The features of this app are: - Controls Bang & Olufsen's products in your BeoLink network. - Finger gestures: control your home without looking at the phone screen - Automation scenes: completely change the mood of the whole house. - Automatically generates the screens to match your home set-up - Discovers Master Link Gateway units automatically, and downloads your home configurations - Support multiple homes and user profiles
2. Purpose / Goals / Objectives	How clear are the purpose and goals of the app at a glance from name, tagline, and imagery?	The name and logo of BeoLink does not tell you what you can do with app. It tells you more about the producer of the app, this is 'Bang & Olufsen
3. Target audience	Which population(s) does the website serve?	This app is targeted at people who want to control all system like the lights, curtains, … of their home.

4. Users	Is there any information about users through images, stories, or testimonials or about site usage?	
5. Ratings, reviews & feedback	What are the ratings, reviews, and feedback (with links)?	These are the reviews of iTunes of the app: - "Nothing to add, it is simply super !!" - "Perfect at last" - "Like to see device status and playing source info (station name, cd/track etc). Can this be expected in a future release?" Other reviews: - "Like most things B&O release as of late. It does not work, very buggy" - "This app is great for those who have the very expensive Masterlink Gateway but for those Beophiles that don't it isn't much use. What would be great is an app that allows one to control Beoport/Beoplayer with the iPhone via WiFi in much the same way that Apple's Remote software works. This could feature two-way control, which is something I feel is sorely

		lacking from B&O's remotes!!" http://www.badappreviews.com/iosapps/65138/beolink
6. Downloads	How many users and downloads are there?	There are 16 000 downloads.
7. Research	Was there any research used?	
8. Design	How professional is the design? Characterize the design (modern, dated, simple, crisp…) and if the design works given the site purpose and users.	 The design is simple and clean. The app uses iPhone standards and the features are optimized to work with touch.

9. Layout and navigation	What sections does the website have? Are sections delineated by content type, roles, or user needs? How usable and organized are the layout and navigation (including labels and menus)? Do they make apparent the options a user has?	The application has 6 versions from 5-03-2010 till the last version of 22-01-2013.
10. Branding	Does the home page identify the organization behind the site? Does it make clear their purpose and goals in general and for the website in particular?	
11. External affiliations	Is there branding from other organizations, accreditation (such as HONcode), sponsorship, Google ads, or advertising?	
12. Authors and oversight	Are authors listed and, if so, are their credentials available? Is there an advisory board or clinician involvement? Is there a review process?	
13. Readability	Is the content easy to understand? What reading level is it?	
14. User-generated content	What are the user-generated components (including discussion forums, blogs, user-submitted videos, wikis, social bookmarking, ratings, and reviews)? Is user-generated content clearly delineated from expert content?	

15. Policies	Are there explicit privacy policies or ones for how user-generated components managed, organized, or moderated?	You can find the privacy policies of the company in the link below: http://www.bang-olufsen.com/en-US/the-company/privacy-policy
16. Registration	Do users register and, if so, what can they do befo and after registering?	
17. Cost	Is there a cost and if so, what is it?	This is a free application.
18. Social media and content sharing	Which, if any, social media is used? Can content be shared?	http://www.facebook.com/#!/bangolufsen?fref=ts https://twitter.com/BangandOlufsen You can see the developments of the product and the new Versions, when will they come out, etc.
19. Support	Is there a website or support forum for users?	The website of the company Bang & Olufsen has an costumer servic page: You can find 'Product Support', 'Frequently Asked Questions', 'Servic inquiries' and there is also an 'Contact' link. http://www.bang-olufsen.com/en-US/customer-service
20. Overall assessment	What are the overall best and worst features of th app?	

4) AnB Home Anywhere

	App Name and Logo	AnB Home Anywhere
1. Objective/Problem	What is the objective, problem, or challenge?	The 'AnB Home Anywhere'-app allows to control your buildings anywhere you are on your mobile phone using 3G or Wifi. You can control your lights, shutters, alarm key pads and video surveillance system.
2. Purpose / Goals / Objectives	How clear are the purpose and goals of the app at a glance from name, tagline, and imagery?	If you think further, the name tells you that you can control your hom anywhere you are. You can easily close the curtains, shut down the lights, see the vide surveillance system, …
3. Target audience	Which population(s) does the website serve?	This app is targeted at people who want to control all system like the lights, curtains, … of their home.
4. Users	Is there any information about users through images, stories, or testimonials or about site usage?	

5. Ratings, reviews & feedback	What are the ratings, reviews, and feedback (with links)?	On iTunes there are no reviews.
6. Downloads	How many users and downloads are there?	There are less than 1000 downloads.
7. Research	Was there any research used?	

8. Design	How professional is the design? Characterize the design (modern, dated, simple, crisp…) and if the design works given the site purpose and users.	 The design is simple and clean. The app uses iPhone standards and the features are optimized to work with touch.
9. Layout and navigation	What sections does the website have? Are sections delineated by content type, roles, or user needs? How usable and organized are the layout and navigation (including labels and menus)? Do they make apparent the options a user has?	The application has 15 versions from 21-12-2010 till the last version of 18-01-2013.
10. Branding	Does the home page identify the organization behind the site? Does it make clear their purpose and goals in general and for the website in particular?	The application works only with AnB Security S.A. products.
11. External affiliations	Is there branding from other organizations, accreditation (such as HONcode), sponsorship, Google ads, or advertising?	

12. Authors and oversight	Are authors listed and, if so, are their credentials available? Is there an advisory board or clinician involvement? Is there a review process?	
13. Readability	Is the content easy to understand? What reading level is it?	
14. User-generated content	What are the user-generated components (including discussion forums, blogs, user-submitted videos, wikis, social bookmarking, ratings, and reviews)? Is user-generated content clearly delineated from expert content?	
15. Policies	Are there explicit privacy policies or ones for how user-generated components managed, organized, or moderated?	
16. Registration	Do users register and, if so, what can they do befo and after registering?	To create an installer account, you need to have a professional securi product or an electrical installer or to be an AnB customer and to hav access to the AnB webshop named iZone.

To be able to use the Home Anywhere Computer app you have login into your installer account. |
| 17. Cost | Is there a cost and if so, what is it? | This is a free application. |

18. Social media and content sharing	Which, if any, social media is used? Can content be shared?	
19. Support	Is there a website or support forum for users?	On the website of the company you can contact the manager of the commercial and technical division. http://www.anb-sa.be/nl/contacts.php
20. Overall assessment	What are the overall best and worst features of the app?	

5) WeMo

	WeMo
App Name and Logo	
1. Objective/Problem What is the objective, problem, or challenge?	The app controls the WeMo Switch and WeMo Motion. It controls stuff in your home from anywhere. Belkin's new WeMo system is a family of simple, ingenious products that use your iPhone and your home Wi-Fi network to connect you to the things and people you love. The WeMo App runs on your iPhone and controls any electronic device you plug into a WeMo Switch – If you can plug it in, you can turn it on or off with WeMo. And WeMo Motions lets you control the devices when motion is detected. Have the floor lamp go on when you enter the living room, and turn off when you leave.
2. Purpose / Goals / Objectives How clear are the purpose and goals of the app at a glance from name, tagline, and imagery?	The name doesn't tell you much about the app. It refers to the WeMo Switch and WeMo Motion.
3. Target audience Which population(s) does the website serve?	This app is targeted at people who want to control all systems you can plug into a switch.

4. Users	Is there any information about users through images, stories, or testimonials or about site usage?	
5. Ratings, reviews & feedback	What are the ratings, reviews, and feedback (with links)?	These are the reviews of iTunes of the app: - "Fonctionne pas bien très déçu !!!!" - "Plutôt content. Pas de problèmes à signaler. La programmation de déclenchement est fort pratique. Serait encore plus top si on pouvait accéder aux appareils hors de chez soi et pas uniquement sur le réseau de la maison." - "Werkt echt prima. Even goed nadenken in het begin, en wat geduld hebben natuurlijk. En ook niet te vergeten dat op veel routers op de WPS knop moet duwen om de switch de eerste keer verbinding te laten maken hè! Verder prima apparaat, wordt snel uitgebreid ;-)" - … Other reviews:

		- "Great when it works, but half the time it simply does not. If you try to find the devices in the app on your phone, sometimes they simply do not show up. Needs a lot more work before I would buy it again." - … http://www.badappreviews.com/iosapps/66810/wemo - "I don't understand why this should cost $100 or $40 for another switch. It is an outlet with a wifi controlled switch. Are there not $5 alternatives?" - "Amen brother. This is a case of wrapping a piece of poop in a shiny box and trying it to sell it as if it were a lump of gold." - … http://www.wired.com/reviews/2013/03/belkin-wemo/
6. Downloads	How many users and downloads are there?	There are 54.000 downloads.
7. Research	Was there any research used?	

8. Design	How professional is the design? Characterize the design (modern, dated, simple, crisp…) and if the design works given the site purpose and users.	The design is simple and clean. The app uses iPhone standards and the features are optimized to work with touch.
9. Layout and navigation	What sections does the website have? Are sections delineated by content type, roles, or user needs? How usable and organized are the layout and navigation (including labels and menus)? Do they make apparent the options a user has?	The application has 12 versions from 25-03-2012 till the last version of 16-07-2013.
10. Branding	Does the home page identify the organization behind the site? Does it make clear their purpose and goals in general and for the website in particular?	The application works only with WeMo Switch and WeMo Switch + Motion. Otherswise the app can't control any electronic device. You need to plug it into one of the two switches.
11. External affiliations	Is there branding from other organizations, accreditation (such as HONcode), sponsorship, Google ads, or advertising?	

12. Authors and oversight	Are authors listed and, if so, are their credentials available? Is there an advisory board or clinician involvement? Is there a review process?	
13. Readability	Is the content easy to understand? What reading level is it?	
14. User-generated content	What are the user-generated components (including discussion forums, blogs, user-submitted videos, wikis, social bookmarking, ratings, and reviews)? Is user-generated content clearly delineated from expert content?	
15. Policies	Are there explicit privacy policies or ones for how user-generated components managed, organized, or moderated?	
16. Registration	Do users register and, if so, what can they do befo and after registering?	
17. Cost	Is there a cost and if so, what is it?	This is a free application, but you need to buy the WeMo Switch (€49,99) and WeMo Switch + Motion (€99,99).

18. Social media and content sharing	Which, if any, social media is used? Can content be shared?	On the social media facebook you can find a lot of information about the WeMo app. https://www.facebook.com/Belkin/app_512043472154538 On Twitter you can also find information about the application WeMo. https://twitter.com/BelkinWeMo
19. Support	Is there a website or support forum for users?	On the website of Belkin you can find information of the switches and the app. http://www.belkin.com/us/wemo
20. Overall assessment	What are the overall best and worst features of the app?	

Appendix 8 : planning - partnership

ID		Task Mode	Task Name	Duration	Start	Finish	Predecessors
1			**Internal beta testing**	**36 days**	**Mon 1/07/13**	**Mon 19/08/13**	
2	✓		Internal testing	30 days	Mon 1/07/13	Fri 9/08/13	
3	✓		Monitor feedback on content	11 days	Mon 15/07/13	Mon 29/07/13	2SS+10 days
4	✓		Monitor feedback on user experience	11 days	Mon 15/07/13	Mon 29/07/13	2SS+10 days
5			Implement changes	15 days	Tue 30/07/13	Mon 19/08/13	4
6			Creating landing page with mail subscription	12 days	Mon 2/09/13	Tue 17/09/13	
7			**Creating content**	**9 days**	**Tue 20/08/13**	**Fri 30/08/13**	
8			Demo video's	5 days	Tue 20/08/13	Mon 26/08/13	5
9			Screenshots	1 day	Tue 20/08/13	Tue 20/08/13	5
10			Press releases	4 days	Tue 27/08/13	Fri 30/08/13	8
11			Slideshare	2 days	Tue 27/08/13	Wed 28/08/13	8
12			**Build our online presence**	**90 days**	**Wed 18/09/13**	**Tue 21/01/14**	
13			Creating social media accounts	1 day	Wed 18/09/13	Wed 18/09/13	6
14			Build and customize profils	4 days	Thu 19/09/13	Tue 24/09/13	13
15			Follow - contact - like bloggers, developpers,	5 days	Wed 25/09/13	Tue 1/10/13	14
16			Participate in forums and comment on articles, tweets,	80 days	Wed 2/10/13	Tue 21/01/14	15
17			**Fine tune website**	**40 days**	**Tue 20/08/13**	**Mon 14/10/13**	
18			**Design features**	**15 days**	**Tue 20/08/13**	**Mon 9/09/13**	
19			App icon	5 days	Tue 20/08/13	Mon 26/08/13	5
20			Create badge where the app can be downloaded	5 days	Tue 27/08/13	Mon 2/09/13	19
21			Call To Action: mailing-list subscription form and	5 days	Tue 3/09/13	Mon 9/09/13	20
22			**Content features**	**25 days**	**Tue 10/09/13**	**Mon 14/10/13**	
23			Social Media info: links to our social media accounts	1 day	Tue 10/09/13	Tue 10/09/13	21

	Task		Inactive Summary		External Tasks
	Split		Manual Task		External Milestone
	Milestone	◆	Duration-only		Deadline
Project: Whizzbit planning	Summary		Manual Summary Rollup		Progress
Date: Thu 15/08/13	Project Summary		Manual Summary		Manual Progress
	Inactive Task		Start-only		
	Inactive Milestone	◇	Finish-only		

Page 1

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
24		Contact/Support info	1 day	Wed 11/09/13	Wed 11/09/13	23
25		App promotional video	1 day	Thu 12/09/13	Thu 12/09/13	24
26		Blog	3 days	Fri 13/09/13	Tue 17/09/13	25
27		Testimonials and user reviews	3 days	Wed 18/09/13	Fri 20/09/13	26
28		Download links	1 day	Mon 23/09/13	Mon 23/09/13	27
29		Keywords research and implementations	10 days	Tue 24/09/13	Mon 7/10/13	28
30		Screening of website by native english speaker	5 days	Tue 8/10/13	Mon 14/10/13	29
31		**Getting our app tested by third party sites**	**44 days**	**Wed 2/10/13**	**Mon 2/12/13**	
32		Identify and contact influencers of niche market	20 days	Wed 2/10/13	Tue 29/10/13	15
33		Distribute app to third party sites for testing	5 days	Wed 30/10/13	Tue 5/11/13	32
34		Monitor feedback from third-party sites	20 days	Tue 5/11/13	Mon 2/12/13	33SS+4 days
35		Fine tune app based on feedbacks	5 days	Tue 3/12/13	Mon 9/12/13	34
36		Prepare Apple's Application	2 days	Tue 10/12/13	Wed 11/12/13	35
37		Launching app on Apple store	1 day	Thu 12/12/13	Thu 12/12/13	36
38		Subscribe to an analytics service/Monitor marketing	1 day	Fri 13/12/13	Fri 13/12/13	37
39		**Getting our app reviewed**	**13 days**	**Mon 16/12/13**	**Wed 1/01/14**	
40		Finding press and blog contacts	5 days	Mon 16/12/13	Fri 20/12/13	38
41		Create a good pitch	3 days	Mon 23/12/13	Wed 25/12/13	40
42		Contact press and blog contacts	5 days	Thu 26/12/13	Wed 1/01/14	41
43		Social sharing	35 days	Fri 13/12/13	Thu 30/01/14	37
44		Monitor feedback	60 days	Fri 13/12/13	Thu 6/03/14	37
45		Improving app and pushing updates	80 days	Fri 7/03/14	Thu 26/06/14	44

Project: Whizzbit planning Date: Thu 15/08/13	Task	Inactive Summary	External Tasks		
	Split	Manual Task	External Milestone		
	Milestone ◆	Duration-only	Deadline ↓		
	Summary	Manual Summary Rollup	Progress		
	Project Summary	Manual Summary	Manual Progress		
	Inactive Task	Start-only			
	Inactive Milestone ◇	Finish-only			

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ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
46		**Partnership with IO board constructors**	**17 days**	**Fri 7/03/14**	**Mon 31/03/14**	
47		Gather information on IO board constructors	5 days	Fri 7/03/14	Thu 13/03/14	44
48		Purchase and test with the IO boards from the	1 day	Fri 14/03/14	Fri 14/03/14	47
49		Prepare communication and contents	5 days	Mon 17/03/14	Fri 21/03/14	48
50		Make contact	5 days	Mon 24/03/14	Fri 28/03/14	49
51		Set up meeting	1 day	Mon 31/03/14	Mon 31/03/14	50

Project: Whizzbit planning Date: Thu 15/08/13	Task	Inactive Summary	External Tasks		
	Split	Manual Task	External Milestone		
	Milestone	Duration-only	Deadline		
	Summary	Manual Summary Rollup	Progress		
	Project Summary	Manual Summary	Manual Progress		
	Inactive Task	Start-only			
	Inactive Milestone	Finish-only			

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Appendix 9 : planning - selling technology

ID		Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		📌	**Internal beta testing**	**36 days**	**Mon 1/07/13**	**Mon 19/08/13**	
2	✓		Internal testing	30 days	Mon 1/07/13	Fri 9/08/13	
3	✓		Monitor feedback on content	11 days	Mon 15/07/13	Mon 29/07/13	2SS+10 days
4	✓		Monitor feedback on user experience	11 days	Mon 15/07/13	Mon 29/07/13	2SS+10 days
5			Implement changes	15 days	Tue 30/07/13	Mon 19/08/13	4
6	▦		Creating landing page with mail subscription	12 days	Mon 2/09/13	Tue 17/09/13	
7			**Creating content**	**9 days**	**Tue 20/08/13**	**Fri 30/08/13**	
8	▦		Demo video's	5 days	Tue 20/08/13	Mon 26/08/13	5
9	▦		Screenshots	1 day	Tue 20/08/13	Tue 20/08/13	5
10	▦		Press releases	4 days	Tue 27/08/13	Fri 30/08/13	8
11	▦		Slideshare	2 days	Tue 27/08/13	Wed 28/08/13	8
12			**Build our online presence**	**90 days**	**Wed 18/09/13**	**Tue 21/01/14**	
13	▦		Creating social media accounts	1 day	Wed 18/09/13	Wed 18/09/13	6
14	▦		Build and customize profils	4 days	Thu 19/09/13	Tue 24/09/13	13
15	▦		Follow - contact - like bloggers, developpers,	5 days	Wed 25/09/13	Tue 1/10/13	14
16	▦		Participate in forums and comment on articles, tweets,	80 days	Wed 2/10/13	Tue 21/01/14	15
17			**Fine tune website**	**40 days**	**Tue 20/08/13**	**Mon 14/10/13**	
18			**Design features**	**15 days**	**Tue 20/08/13**	**Mon 9/09/13**	
19	▦		App icon	5 days	Tue 20/08/13	Mon 26/08/13	5
20	▦		Create badge where the app can be downloaded	5 days	Tue 27/08/13	Mon 2/09/13	19
21	▦		Call To Action: mailing-list subscription form and	5 days	Tue 3/09/13	Mon 9/09/13	20
22			**Content features**	**25 days**	**Tue 10/09/13**	**Mon 14/10/13**	
23	▦		Social Media info: links to our social media accounts	1 day	Tue 10/09/13	Tue 10/09/13	21

Project: Whizzbit planning Date: Thu 15/08/13	Task	▬▬▬	Inactive Summary	⊏ ⊐	External Tasks	▬▬▬	
	Split	··············	Manual Task	▬▬▬	External Milestone	◇	
	Milestone	◆	Duration-only	▬▬▬	Deadline	⬇	
	Summary	�⎯⎯▮	Manual Summary Rollup	▬▬▬	Progress	▬▬▬	
	Project Summary	▮⎯⎯▮	Manual Summary	▮⎯⎯▮	Manual Progress	▬▬▬	
	Inactive Task		Start-only	⊏			
	Inactive Milestone	◇	Finish-only	⊐			

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ID		Task Mode	Task Name	Duration	Start	Finish	Predecessors
24			Contact/Support info	1 day	Wed 11/09/13	Wed 11/09/13	23
25			App promotional video	1 day	Thu 12/09/13	Thu 12/09/13	24
26			Blog	3 days	Fri 13/09/13	Tue 17/09/13	25
27			Testimonials and user reviews	3 days	Wed 18/09/13	Fri 20/09/13	26
28			Download links	1 day	Mon 23/09/13	Mon 23/09/13	27
29			Keywords research and implementations	10 days	Tue 24/09/13	Mon 7/10/13	28
30			Screening of website by native english speaker	5 days	Tue 8/10/13	Mon 14/10/13	29
31			**Getting our app tested by third party sites**	**44 days**	**Wed 2/10/13**	**Mon 2/12/13**	
32			Identify and contact influencers of niche market	20 days	Wed 2/10/13	Tue 29/10/13	15
33			Distribute app to third party sites for testing	5 days	Wed 30/10/13	Tue 5/11/13	32
34			Monitor feedback from third-party sites	20 days	Tue 5/11/13	Mon 2/12/13	33SS+4 days
35			Fine tune app based on feedbacks	5 days	Tue 3/12/13	Mon 9/12/13	34
36			Prepare Apple's Application	2 days	Tue 10/12/13	Wed 11/12/13	35
37			Launching app on Apple store	1 day	Thu 12/12/13	Thu 12/12/13	36
38			Subscribe to an analytics service/Monitor marketing	1 day	Fri 13/12/13	Fri 13/12/13	37
39			**Getting our app reviewed**	**13 days**	**Mon 16/12/13**	**Wed 1/01/14**	
40			Finding press and blog contacts	5 days	Mon 16/12/13	Fri 20/12/13	38
41			Create a good pitch	3 days	Mon 23/12/13	Wed 25/12/13	40
42			Contact press and blog contacts	5 days	Thu 26/12/13	Wed 1/01/14	41
43			Social sharing	35 days	Fri 13/12/13	Thu 30/01/14	37
44			Monitor feedback	60 days	Fri 13/12/13	Thu 6/03/14	37
45			Improving app and pushing updates	80 days	Fri 7/03/14	Thu 26/06/14	44

Project: Whizzbit planning	Task		Inactive Summary		External Tasks	
Date: Thu 15/08/13	Split		Manual Task		External Milestone	
	Milestone		Duration-only		Deadline	
	Summary		Manual Summary Rollup		Progress	
	Project Summary		Manual Summary		Manual Progress	
	Inactive Task		Start-only			
	Inactive Milestone		Finish-only			

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
46		**Preparing faze for selling technology**	**50 days**	**Fri 7/03/14**	**Thu 15/05/14**	
47		Collecting "evidence" of app success	5 days	Fri 7/03/14	Thu 13/03/14	44
48		Deciding who should lead the sale process	1 day	Fri 7/03/14	Fri 7/03/14	44
49		Identifying potential acquirers	5 days	Fri 7/03/14	Thu 13/03/14	44
50		Getting to know our target companies	20 days	Fri 14/03/14	Thu 10/04/14	49
51		Identifying strategic fit	20 days	Fri 11/04/14	Thu 8/05/14	50
52		Making it easy to buy	5 days	Fri 9/05/14	Thu 15/05/14	51
53		**The selling process**	**66 days**	**Fri 16/05/14**	**Fri 15/08/14**	
54		Creating our Information Memorandum and Executive	10 days	Fri 16/05/14	Thu 29/05/14	52
55		Finding the right contacts	10 days	Fri 30/05/14	Thu 12/06/14	54
56		Making first contact	5 days	Fri 13/06/14	Thu 19/06/14	55
57		Following up	10 days	Fri 20/06/14	Thu 3/07/14	56
58		The management presentation	1 day	Fri 4/07/14	Fri 4/07/14	57
59		The next steps	30 days	Mon 7/07/14	Fri 15/08/14	58

Project: Whizzbit planning
Date: Thu 15/08/13

Task		Inactive Summary	External Tasks
Split		Manual Task	External Milestone
Milestone		Duration-only	Deadline
Summary		Manual Summary Rollup	Progress
Project Summary		Manual Summary	Manual Progress
Inactive Task		Start-only	
Inactive Milestone		Finish-only	

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Appendix 10 : survey results

What is your age ?	
Answer Options	**Response Count**
	2016
answered question	**2016**
skipped question	**26**

What is your annual household income ?		
Answer Options	**Response Percent**	**Response Count**
0 - 30000 dollars	1,8%	37
30000 - 45000 dollars	3,2%	64
45000 - 75000 dollars	28,9%	586
> 75000 dollars	66,1%	1340
	answered question	**2027**
	skipped question	**15**

Are you, in general, interested in technology ?		
Answer Options	**Response Percent**	**Response Count**
Yes	97,6%	1978
No	2,4%	48
	answered question	**2026**
	skipped question	**16**

Would you be interested in automating projects yourself in your home/business ?		
Answer Options	**Response Percent**	**Response Count**
Yes	84,5%	1718
No	15,5%	315
	answered question	**2033**
	skipped question	**9**

For which reasons would you want to automate ? (Select all that apply.)		
Answer Options	**Response Percent**	**Response Count**
Saving time	84,1%	1419
Saving money	74,0%	1249
For security reasons	41,1%	693
For the "wow" effect	29,9%	505
For monitoring	37,1%	626
As a hobby	28,8%	486
Other		19
	answered question	**1687**

	skipped question	355

Do you already use an app for automation purposes ?

Answer Options	Response Percent	Response Count
Yes	15,4%	259
No	84,6%	1426
	answered question	1685
	skipped question	357

Which app do you use or have you used ?

Answer Options	Response Count
	604
answered question	604
skipped question	1438

Do you mind that most of the automation apps are brand dependent ?

Answer Options	Response Percent	Response Count
Yes	44,0%	738
No	56,0%	939
	answered question	1677
	skipped question	365

Would you be interested in an app that is brand independent and which can be used with any type and any brand of input/output hardware ?

Answer Options	Response Percent	Response Count
Yes	95,2%	1600
No	4,8%	81
	answered question	1681
	skipped question	361

Are you willing to purchase the hardware material yourself ?

Answer Options	Response Percent	Response Count
Yes	81,1%	1364
No	18,9%	318
	answered question	1682
	skipped question	360

If not, what is the main reason ? (Select one answer.)

Answer Options	Response Percent	Response Count

	Response Percent	Response Count
No time	11,1%	34
No knowledge	31,1%	95
No interest	4,9%	15
No budget	52,8%	161
Other		12
answered question		305
skipped question		1737

Are you willing to do the installation yourself ?

Answer Options	Response Percent	Response Count
Yes	91,4%	1540
No	8,6%	144
answered question		1684
skipped question		358

If not, what is the main reason ? (Select one answer.)

Answer Options	Response Percent	Response Count
No time	19,0%	27
No knowledge	65,5%	93
No interest	5,6%	8
No budget	9,9%	14
Other		4
answered question		142
skipped question		1900

Would you be interested in programming yourself your own projects using simple Excel-like formulas (output = expression (input)) ?

Answer Options	Response Percent	Response Count
Yes	83,8%	1401
No	16,2%	271
answered question		1672
skipped question		370