# GNG2101 Deliverable G Report

# Eye Gaze Camera Cover

Submitted by

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# Introduction

As we have completed our final prototype, we have entered the production phase of our final product. As we had concluded that much of our circumstance was taken for granted due to having access to the university's facilities, we have gone ahead and analyzed the various financial aspects of our business in order to ensure the success of our product. Through the results of our analysis of such elements such as the variable cost, estimated income statement and a NPV analysis of our business for the next 36 months, we have come to a better understanding of the potential of our product and refined our business model in a matter which will allow us to maximize our profits and reflects our findings.

# List of Variables Cost

| ***List of Variables Cost*** | | |
|---|---|---|
| **Costs($)** | **Software Program(Prototyping)** | **Software Program(High-Volume Manufacturing)** |
| **Fixed/Overhead** | | |
| Rent(Studio Apartment) | 1'525 | 2'225 |
| Lease | 0 | 0 |
| Salaries | 250'000 | 400'000 |
| Utility bills | 250 | 400 |
| Insurance | 1'780 | 2'280 |
| Equipment Rental | 0 | 0 |
| Equipment | 15'145 | 23'567 |
| **Direct** | | |
| Raw materials | 0 | 0 |
| Factory labour wages | 0 | 0 |
| Programs | 750 | 1'250 |
| Licenses | 2'375 | 5'400 |
| **Indirect** | | |
| General maintenance expenses | 0 | 15'500 |
| Electricity | 90 | 200 |
| Staff welfare expenses | 1'500 | 4'200 |
| Sales and marketing | 0 | 10'100 |

| | | |
|---|---|---|
| Office staff salary(Becky) | 0 | 50’450 |
| **Total costs** | 273’415 | 515’572 |
| **No of units produced** | 0 | 0 |
| **Cost per unit** | 0 | 5’000 |

**Table 1.1: List of Variables Cost**

## *Income Statement*

Loan: $200’000
Simple Interest: 5%
Tax: 25%

| ***Income Statement*** | | |
|---|---|---|
| Sales | | 750’000 |
| Cost of Goods | - | 0 |
| *Gross Profit* = | | 750’000 |
| **Operation Expenses** | | |
| Marketing | 10’100 | |
| General and Admin Expenses | 350’000 | |
| Depreciation + | 10’000 | |
| *Total Operating Expenses* = | 370’100 | |
| Operating Income = Gross Profit – Total Operating Expenses | | 379’900 |
| Interest Expense | - | 10’000 |
| *Earnings Before Tax* | | 369’900 |
| Income Tax | | 92’475 |
| **Net Income** | | 277’425 |
| | | |

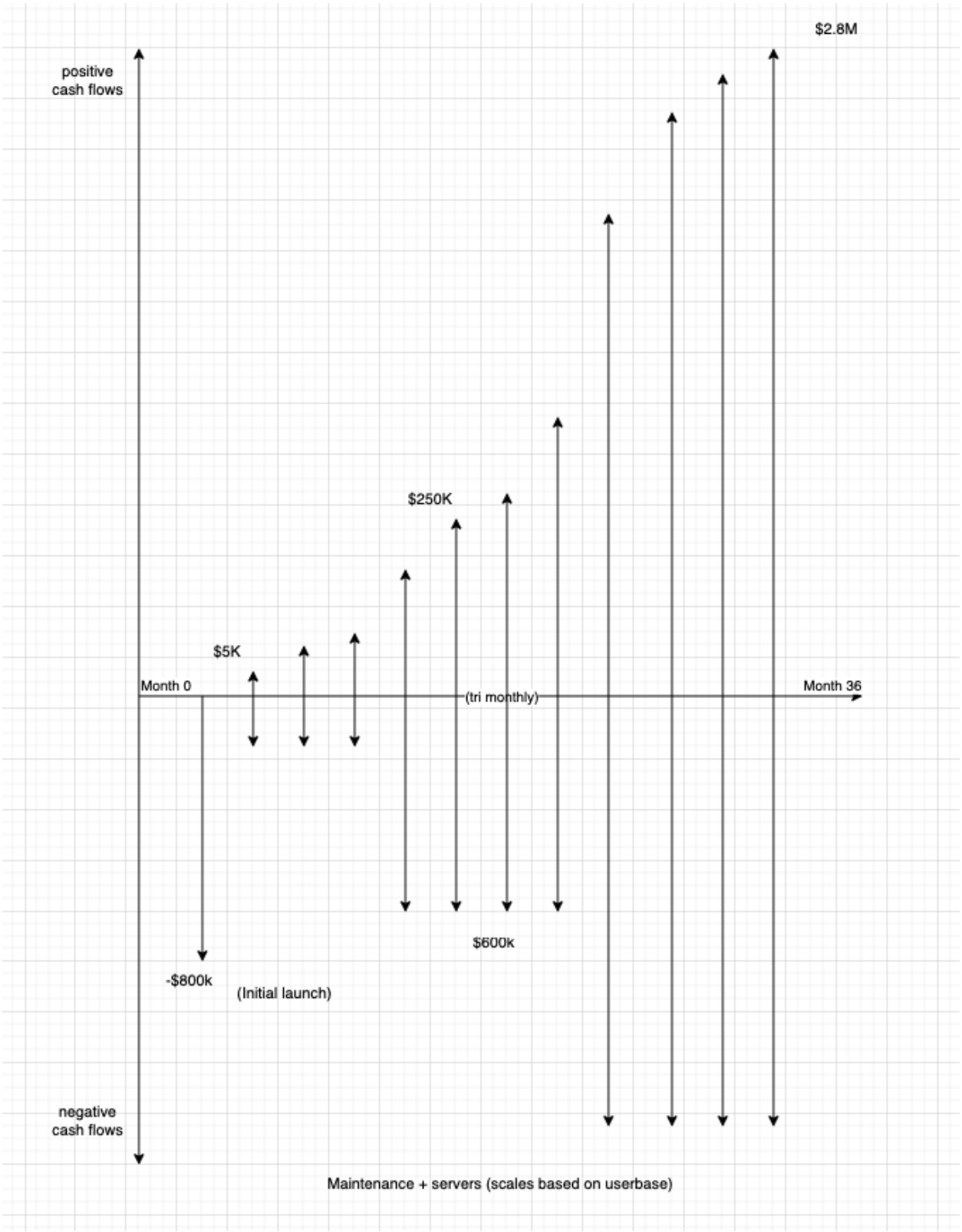
**Table 1.2: Income Statement**

# NPV Analysis

Through the analysis of our variable expenses and initial operating cost, our initial investment will sit at around 800k$. Additionally, we have evaluated ourselves to have a discount rate of about 14.2% per month based on our gross income and our operating cost. Pairing this rate with NPV analysis, we can determine the break-even point for our company and when we can hope to start generating profit as well as the amount of units sold it would require.

**Table 1.3: NPV analysis**

| Period | Cash Flow | PV-Formula | Net Present Value |
|---|---|---|---|
| Month 1 | -$800,000 | -800,000 | -$800000 |
| Month 2 | $5,000 | 5,000/(1+0.14)^2 | -3847.3 |
| Month 3 | $7,500 | 7,500/(1+0.14)^3 | $5062.3 |
| Month 4 | $8,000 | 8,000/(1+0.14)^4 | $4736.6 |
| Month 5 | $20,000 | 20,000/(1+0.14)^5 | $10387 |
| Month 6 | $40,000 | 40,000/(1+0.14)^6 | $18223 |
| Month 7 | $50,000 | 50,000/(1+0.14)^7 | $19982 |
| Month 8 | $60,000 | 60,000/(1+0.14)^8 | $21034 |
| Month 9 | $65,000 | 65,000/(1+0.14)^9 | $19988 |
| Month 10 | $70,000 | 70,000/(1+0.14)^10 | $18882 |
| Month 11 | $75,000 | 75,000/(1+0.14)^11 | $17746 |
| Month 12 | $90,000 | 90,000/(1+0.14)^12 | $18680 |
| Month 13 | $100,000 | 100,000/(1+0.14)^13 | $18207 |
| Month 14 | $130,000 | 130,000/(1+0.14)^14 | $20762 |
| Month 15 | $200,000 | 200,000/(1+0.14)^15 | $28019 |
| Month 16 | $250,000 | 250,000/(1+0.14)^16 | $30723 |
| Month 17 | $400,000 | 400,000/(1+0.14)^17 | $43120 |
| Month 18 | $450,000 | 450,000/(1+0.14)^18 | $42553 |
| Month 19 | $500,000 | 500,000/(1+0.14)^19 | $41474 |
| Month 20 | $550,000 | 550,000/(1+0.14)^20 | $40019 |
| Month 21 | $650,000 | 650,000/(1+0.14)^21 | $41487 |
| Month 22 | $750,000 | 750,000/(1+0.14)^22 | $41991 |
| Month 23 | $900,000 | 900,000/(1+0.14)^23 | $44201 |
| Month 24 | $990,000 | 990,000/(1+0.14)^24 | $42650 |
| Month 25 | $1,300,000 | 1,300,000/(1+0.14)^25 | $49127 |
| Month 26 | $1,500,000 | 1,500,000/(1+0.14)^26 | $49724 |
| Month 27 | $1,500,000 | 1,500,000/(1+0.14)^27 | $43617 |
| Month 28 | $1,600,000 | 1,600,000/(1+0.14)^28 | $40812 |
| Month 29 | $1,700,000 | 1,700,000/(1+0.14)^29 | $38030 |
| Month 30 | $1,800,000 | 1,800,000/(1+0.14)^30 | $35320 |
| Month 31 | $1,900,000 | 1,900,000/(1+0.14)^31 | $32712 |
| Month 32 | $2,000,000 | 2,000,000/(1+0.14)^32 | $30205 |
| Month 33 | $2,200,000 | 2,200,000/(1+0.14)^33 | $29140 |
| Month 34 | $2,400,000 | 2,400,000/(1+0.14)^34 | $27890 |
| Month 35 | $2,600,000 | $2,600,000/(1+0.14)^35 | $20650 |
| Month 36 | $2,800,000 | $2,800,000/(1+0.14)^36 | $25037 |
| Sum PV | | | $208343.6 |


$2.8M
positive
cash flows
$250K
$5K
Month 0
(tri monthly)
Month 36
$600k
-$800k
(Initial launch)
negative
cash flows
Maintenance + servers (scales based on userbase)

Through the analysis of our cash flow diagram, we have determined that we should break even around month 24-25.

## Economic Assumptions

Developing a software product tends to have different types of constraints in economics and development since we are working with different domains of things. So, we had to carefully research and come up with the most critical assumptions that we had to take. The assumptions included the type of market we will be competing in, place of operation, numbers of employees needed, and demand.

First, the type of market that we are engaging in is very small however it is critical in our society. Our target market would be disabled people who are using the Tobii Dynavox for communication. In the Tobii device, there is a critical issue where the camera would disturb any infrared rays getting emitted around it. Therefore, when our clients want to use a tv remote or a second camera for a different device it will be disturbed, and they will not be able to use it normally. Since there are more than 2 million people in the US and about 3 million Canadians who use assisting devices like Tobii if not that product itself. So, we assumed that about 1.5 million people would be actively using our product alongside with the Tobii. This is a very important assumption as it would be the key to how we want to get our revenue. The answer to this question is that we would use a monthly subscription since the number of users would be very little and simple selling the product once wouldn’t be enough to generate enough revenue to keep us in business.

In terms of the place of operation, we wanted a place that would fit at max around 10 people and at the same time it wouldn't be too expensive like an office. So opted in for renting a studio since we can organize the rooms into different offices based on the section, they are working in. We have determined that based on current rent prices it would be cheaper for us by 25% to rent an apartment other than office. Therefore, we would be able to invest that money saved in reaching more people and promoting our product.

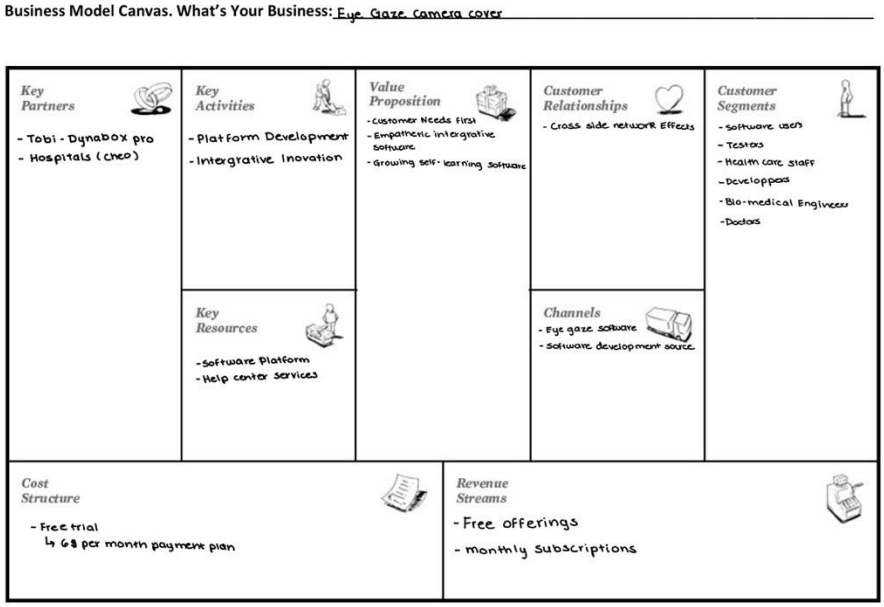
For demand and competitors, we have determined that currently there is no competition to us unless Tobii have released a service that fix this issue. So, to solve this and make sure we have 100% of the market we will strike a deal with Tobii that they will use our product to solve the current issue faced by the cameras and that they will try to help us into integrating it more into their system.

To make it reasonable since a lot of our customers would already have to pay a lot of money to purchase the Tobii device and other services, we decided to make it as a monthly subscription of 6$ per month. At full potential where the 1.5 million users are actively paying for this subscription, we would be making 9 million per month. However, if we sold it only to 150,000 people, we would still be able to generate revenue.

## Type of Business Model

Our group has opted into a subscription business model to entice customers to our product. We would offer a two-week free trial period for the user to attract customers into using our product and have a glimpse of how astonishing our product is. We would then offer monthly subscription payments of 6 dollars which will lower the deterrent to users of our product in turn creating more users of our product. As well we will be able to generate a stable income from recurring subscriptions and not rely on attracting new customers every month to be able to generate income. Overall, the subscription model would be the best option for our product as it will generate the most customers as weel as the most revenue.

## Triple Bottom Line Business Model




## Core Assumptions on Business Model

Our product will attract loyal customers as they will continue to automatically resubscribe every month as they enjoy using our product. We assume customers will enjoy using our product so they will continue to resubscribe. This is highly feasible as we feel like our product will meet their needs. This will cause a stable income as we will not need to keep on attracting lots of new customers every month as we will have a stable income from the loyal customers.

## Conclusion

Proceeding with our economic assumptions as well as our graphical financial analysis we have produced a concrete plan for our business going forward. Our team is extremely excited to see how we can continue to further integrate our product into reel life application, starting with the fundamentals of our business plan. Empathetic effective software. Through our business model to keep customers engaged throughout their software journey, we are offering monthly payments for the most hands-on, updated innovative experience. Although this sector covers our business plan our priority has always been the customer user experience and we look forward to continuing to prioritize our customers' needs in our engineering process.

## Wrike Snapshot

https://www.wrike.com/frontend/ganttchart/index.html?snapshotId=RJ5w1g2jZOg1qVWL3AAjqEVjTYZDz6mm%7CIE2DSNZVHA2DELSTGIYA