**GNG2101**

Deliverable H: Economics Report

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# Table of Contents

[1. Introduction](#_4d34og8) 1

[2. Variable, Fixed, and Indirect Costs](#_e72zz6w3y3le) 1

[3. Income Statement](#_khnas751upit) 2

[4. Net Present Value Analysis](#_e72zz6w3y3le) 2

[5. Assumptions](#_kwdimm1wjpfy) 3

6[. Conclusions](#_3rdcrjn) 6

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# 1. Introduction

This report will follow the development of an income statement for our company. The report will first list and classify costs that are associated with our business, based on the manufacturing and sale of the Multi-Reminder app. We will then present a 3-year income statement for the business. The income statement will include sales revenue, costs of units sold each year, gross profit, operating expenses, and operating income. The break-even point will be determined in this report by developing a Net Present Value analysis. A NPV analysis is used to compare costs and profits over multiple years based on present value. Lastly, we will discuss and justify any assumptions made in developing this report.

# 2. Variable, Fixed, Direct, and Indirect Costs

|  |  |  |
| --- | --- | --- |
|  | Variable OR Fixed | Direct OR Indirect |
| Salary | Fixed | Direct |
| Marketing Campaign | Variable | Indirect |
| Electronics (ex. computers) | Fixed | Indirect |
| Copyright | Fixed | Indirect |

# 3. Income Statement Over 3 Years

|  |  |
| --- | --- |
| Sales/revenues total | $789000 |
| Costs of goods sold | $0 |
| **Gross profit** | $789,000 |
| Operating expenses   * Salary $675,000 * Marketing $90,000 * Deprecation $3000 | $768,000 |
| **Operating income** | $30,000 |

# 4. Net Present Value Analysis

Computers = $5000

App = N\*0

Total Direct Material Cost = $5000

1st year = $39,900

2nd year = $159,600 → $152,000 in NPV

3rd year = $598,500 → $ 542,857.14 in NPV

Break even point with only direct material cost

1st year cost = $5000

$5000 = $3.99\*N

N = 1254 units

When only looking at the direct material cost, we will break even at 1,254 units.

Break even point with operating expenses included

1st year cost = $5000 + $266,000 (in operating expenses)

= $271,000

2nd year cost = $251,000 (in operating expenses) → $239,047.61 in NPV

3rd year cost = $251,000 (in operating expenses) → $227,664.40 in NPV

Total cost of all 3 years = $773,000 → $737,712.01 in NPV

$737,712.01 = 3.99\*N

N = 184,891 units

When taking into account our operating expenses, we will break even after selling 184,891 units, in the middle of our third year.

# 5. Assumptions

Due to the pandemic, it is assumed that the team is working from home and is not renting a work space.

In the first year, we are estimating to sell 10,000 units. We are expecting this number to quadruple to 40,000 units sold in the second year and almost quadruple again for 150,000 units sold in the third year. Over a span of 3 years, we’re making the assumption that we’ve sold 200,000 units total.

We have assumed the cost per unit will be $3.99. Similar successful reminder apps have a similar price

It is assumed that each employee has a salary of $45,000 each year with no raise or bonus in the first 3 years. The salary is relatively low as these are new employees entering the work field. The employees will also receive stake in the company to compensate for the relatively low salary.

There will only be 5 employees at the company for the first three years.

It is assumed that the company will spend $40,000 on marketing the first year, then $25,000 each year for the following 2 years.

It is assumed that the cost of a computer is $1000 and will last 5 years, resulting in a $200 depreciation each year per laptop.

It is assumed that the interest rate per year is 5% because it is a reasonable number.

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# 6. Conclusion

In conclusion, we were able to determine all of our costs associated with our business and the revenue streams that we can make. We determined the direct, indirect, variable and fixed costs. Over three years, we will have an operating income of $30,000. We then used NPV analysis to determine our break even point. Our break even point determined using only direct material cost is at 1,254 units. When taking into account our operating expenses, we will break even at 184,891 units in the middle of our third year