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FROM: Team Nugget [Nate Saul (nmsaul@purdue.edu),
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DATE: March 11th, 2022

SUBJECT: D5 Financial Analysis

In this memorandum we will be talking about our financial analysis for our product. First we will give a clear summary of the costs associated with direct labor. We will also be discussing the key results and conclusions, an analysis on if our product is a good investment, and whether or not our product is profitable. Finally, we will be talking about ways to redesign to reduce costs.

Direct labor costs associated with the development and manufacturing of our product amounts to $134,264. This number encompasses all R&D related activities which are fully accrued by the fourth quarter and is calculated by summing the DL (Direct Labor), OH (Overhead Costs), and G&A costs (General and Administrative).

From the financial analysis, the product looks profitable. The pay-back period is at the beginning of the 8th period. At the end of the entire period, the rate of return on investment (ROI) reaches 46.83%, and the net present value (NPV) is at $737,230. Even if the interest rate changes greatly, our Rate of Return (ROR) is 69.19%, meaning that unless interest reaches historic heights, our product will continue to return a profit, therefore showing our product is a good investment.

After observing our financial analysis for the conditions we had outlined in phase 1, we decided that they were no longer accurate as the price for our product had greatly exceeded what our anticipated cost was. After scaling our sales based on the price we found that we were no longer profitable, which warranted a change in perspective. We changed our main competitor based on the functions our product will perform and did another phase of market research, deciding that we will occupy 1.6% of the handicapped door opening market in the U.S and adjusted our unit sales accordingly. After re-framing our business, we found that the product is still profitable, simply less than using our old, invalid assumptions.

In order to maximize profits, there are some ways we could redesign our product in order to reduce costs. One way we could do this is by using cheaper materials. In doing this, we would have to make sure the product could still be sustainable even with cheaper parts. Another way to reduce costs would be to redesign the product to use more mechanical parts than fluid parts. You can see this in our Bill of Materials because our biggest costs are associated with fluid parts.

If you would like any further details, please contact us at any of the following emails: Nate Saul (nmsaul@purdue.edu), Samuel Graham (graha205@purdue.edu), Dingming Lu (lu807@purdue.edu), or Luke Bame (lbame@purdue.edu).

Sincerely,
Nate Saul

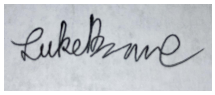
Nate Saul

Samuel Graham

SG

Dingming Lu

Luke Bame



Attachment:

- Team Nugget Financial Analysis.xlsx
- FA Spreadsheet.png
- Networth chat(no interest).png
- Networth char(w/ interest).png