

# DocDuck Financial Summary Report

SWEEng Group 1

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## Version Log

<b>DocDuck Financial Summary Report Version</b>	<b>Release Date</b>	<b>Changes</b>	<b>Contributors</b>
1.0	10/05/24	Initial Version. Created Sections: ALL	htsm500    jrb617 lw2380    ttc515 rw1834

# 1 Introduction

This is a Financial Summary Report for DocDuck for the first 32 weeks of development. In this report, we aim to provide a comprehensive overview of our financial performance, as well as highlight key metrics and insights that shape our current and future financial position.

The first part of this report will discuss our financial health and performance as a whole. Our finances start from the beginning of the development period, which began on the 1st week of the 1st Semester (the week commencing the 25th of September), and ends at the last full week completed, which is week 32 (the week commencing the 29th of April). The second part of this report will cover our plans for the future, including how we plan to market our product, as well as a forecast for our first year after launch.

## 2 DocDuck's Performance Review

This section of the report will cover DocDuck's financing, as well as a review of how the department functioned as a whole.

### 2.1 Financial Review

This section of the report will cover how DocDuck has managed itself financially from the start of the year up until the end of week 32. The first item reviewed will be the team's variance across the course of the company's lifetime, followed by the cash flow of the company, and finally any changes made to the Financial Business Plan.

#### 2.1.1 Variance

Our variance is calculated by the formula

$$\text{Variance} = \text{ActualHours} - \text{ProjectedHours}$$

This means a negative variance shows our team was working under-budget, whilst a positive variance means we were over budget, and going over our projected hours.

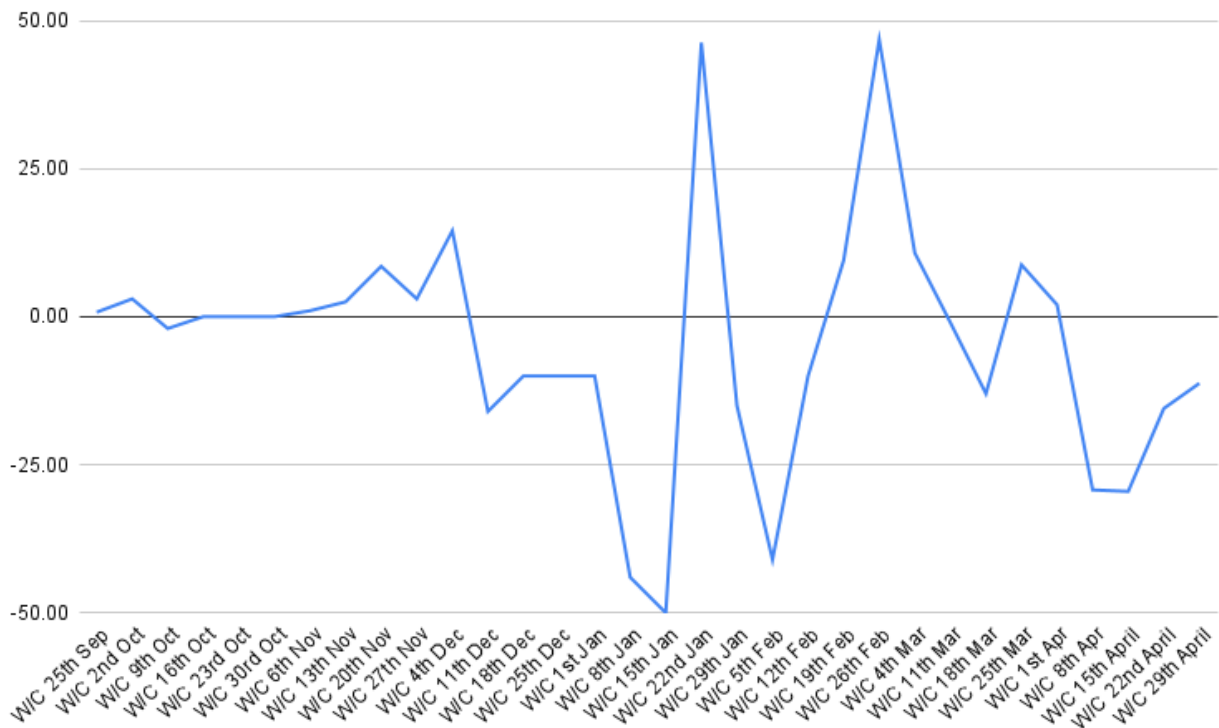


Figure 1: A chart showing variances across the 32 weeks of development.

It is clear from Figure 1 that as a company we have experienced several notable spikes, resulting in both over-working and under-working. These will be explained shortly. It is however important to note that because we have several positive and negative spikes of roughly equal sizes, these spikes cancel each other out.

**2.1.1.1 January**

As is clear from Figure 2 below, January was a tumultuous month for our company. We had three weeks of nearly zero hours logged, followed by a week of nearly double the projected hours, at 96.25 hours logged for the team.

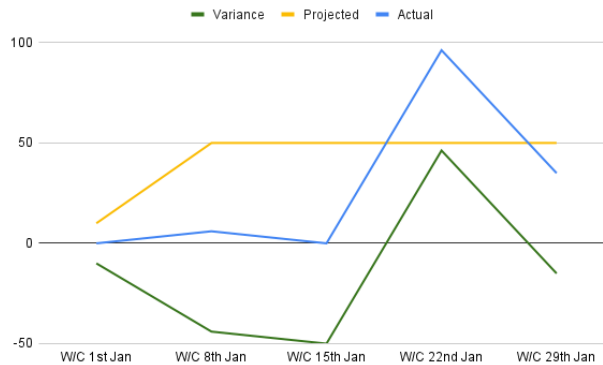


Figure 2: The variance breakdown for January.

The week commencing 15th January was projected at 50 hours, and yet as a team we completed zero hours. This is because all members of our group had numerous exams for other modules, and as such SWEng was placed to the side momentarily. The budget for this week was projected at 50 hours, as when the projection was first made, the exam timetable had not been released and as such it was assumed to take place earlier.

The following week, the week commencing the 22nd January was on the opposite scale, and as a team we clocked 96.25 hours. This can be attributed to the schedule for the tender presentation being released. Everyone finished exams and immediately picked up the slack from the week previously, as well as work towards the next major goal of creating the tender presentation, which took place the following week.

**2.1.1.2 February and March**

February and March were also high in variance, as is clear from Figure 3 below.

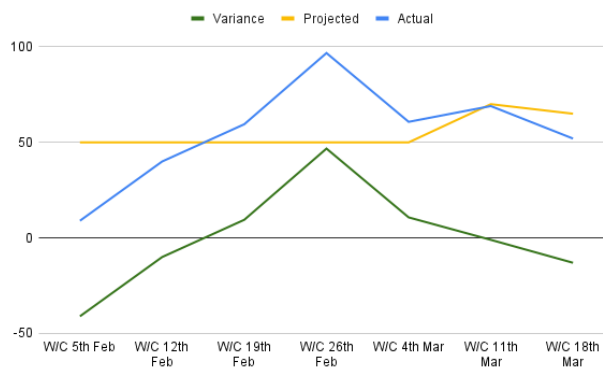


Figure 3: The variance breakdown from 5th February until 24th March.

On the week commencing the 5th February, our Project Manager kindly suggested that the team take a week off, as a way of celebrating our good progress. This was out of the blue and as such could not have been predicted for in the projection of hours. The following 2 weeks, the team got back on track and was closely around projection.

The week commencing the 26th of February as a team we logged 96.75 hours of work, which was explained in Financial Report 2 [1]. This was due to numerous members of our team falling ill, which meant that other members were forced to step into unfamiliar territory in order to stay on track and meet upcoming deadlines, both internal and external.

2.1.1.3 April

Finally, the variance across April will be discussed.

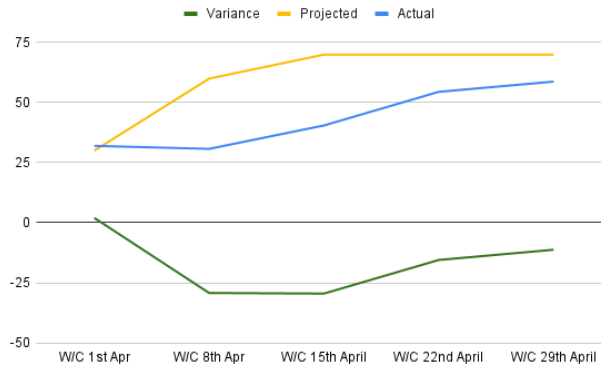


Figure 4: The variance breakdown for April.

Our variances dropped during this month, not as severely as previously discussed, but still substantially, as seen in Figure 4 above. Due to unforeseen circumstances, we were forced to halt some areas of development until we had sorted our problem, which required a meeting with the customer. This is why our variances dropped to -29 for 2 weeks, whilst we sorted out this issue. Some areas of development were still thankfully able to continue despite this, and once the problem was solved, we were able to resume full development.

2.1.2 Actual VS. Projected Cash Flow

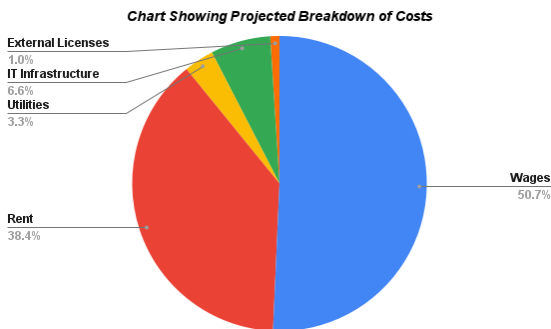


Figure 5. Projected breakdown of expenditure for the first 32 weeks of development.

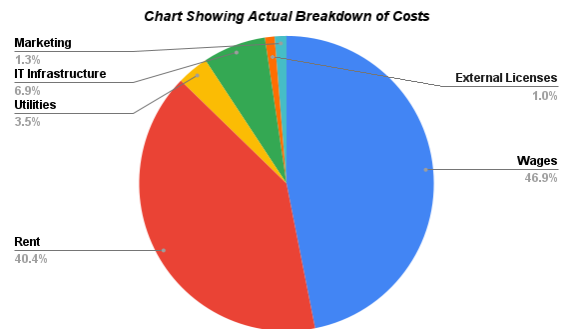


Figure 6. Actual Breakdown of expenditure for the first 32 weeks of development.

As can be seen in Figures 5 and 6 above, when projecting our cash flow we did not account for marketing. This was due to us originally planning on handling the marketing of our product through free advertising platforms, however we revised this strategy so as to better reach our target audience. As such, £600.00 was decided as the amount to be set aside for us to effectively market our product in the right direction.

It can also be seen that we as a company spent less on wages than was projected, due to our company working quicker and more efficiently than previously imagined. The full amounts will be discussed in the Profits and Loss section.

### 2.1.3 Projections for Weeks 33 - 37

Table 1 below is the projected expenditure of weeks 33 – 37. This is used in order to predict the final profits and losses that our company will be generating by the end of the development period.

Week:	Labour Hours:	Labour Costs:	Utilities:	Rent:	Licences & Contracts:
W/C 6th May	50	£1000.00	£600	£2,334.55	£3.09
W/C 13th May	50	£1000.00	£0	£0.00	£3.09
W/C 20th May	50	£1000.00	£0	£0.00	£3.09
W/C 27th May	50	£1000.00	£0	£0.00	£3.09
W/C 3rd June	50	£1000.00	£600	£2,334.55	£3.09
<b>TOTALS:</b>	250	£5,000.00	£1,200.00	£4,669.10	£15.45
–	–	–	–	<b>Full Total:</b>	<b>£10,884.55</b>

Table 1: Company Cost Table

### 2.1.4 Profit Loss Statement Table

Category	Amount
Sales Revenue (Contracts In)	£2,900.00
Contracts Out	£2,000.00
<b>Gross Profit</b>	£900.00
<b>Operating Expenses</b>	
Rent	£23,345.50
Utilities	£2,000.00
IT Infrastructure	£4,000.00
Wages	£26,685.00
<b>Net Profit</b>	£(55,130.50)
Interest Accrued	£10,116.00
<b>Profit Before Tax</b>	£(65,246.50)

Table 2: Profit and Loss Table

As Table 2 shows, DocDuck will have spent £65,246.50 by the end of the development phase. Moreover, it is clear to see that we made £900.00 profit from our contracts, as we bought 2 contracts for £1,000.00 each, yet sold 3 contracts, 2 of which were priced at £1,000.00 each, and the third priced at £900.00.

### 2.1.5 Closing Balance

In our forecast, it was predicted that by this week (week 32) we would have spent £48,616.78 and as such be left with £11,383.22 from our loan of £60,000.00 total. However, We actually spent £45,651.78 and as such are left with £14,348.22, which is a positive of £2,965.00. Given that it is predicted that until the end of the developmental period (week 37) it is expected that we will spend a total of £58,536.18, which given our loan of £60,000.00 and our extra £900.00 from our 3rd contract, this provides us with an expected **£2,363.82 left over**, which will be used to pay off accrued interest, as well as wages for the future.

### 2.1.6 Financial Business Plan Alterations

We did make alterations to the Financial Business Plan, as we increased the hours from week 25 - week 32, in order to better make use of our unspent liquid assets. This can be seen in the revised Financial Business Plan [2].

## 2.2 Quality Assurance Review

### 2.2.1 Introduction

Maintaining integrity and reliability within DocDuck is a very important process to ensure minimal problems throughout the development process. The purpose of this review is to highlight our processes, where they succeeded, where they failed, and how they stack up to the QA Manual we established at the start of development.

### 2.2.2 Successes

The QA Manual [4] was a very useful tool to outline the responsibilities of the different roles within the company, and how to quantify the quality of work through the use of QA metrics. This standardisation across the company made it clear for every member what will they will be held accountable for and the risks associated with their role.

Within the QA manual we also outlined how our development will take place, we decided on “Agile Design and Planning” [4] which was outlined in the QA manual. The processes within this design methodology were thought out and outlined within the manual for all members of the company to read and follow. Clear guidelines were laid out to minimise confusion and keep development on track. These guidelines worked well as a reference point throughout development.

### 2.2.3 Failures

Due to our short development period it proved difficult to adhere to the standards laid out in the QA Manual. Sections such as “4.2.2 Test-Driven Design” [4] became problematic through development due to changes in the course of the project and a limited time frame.

The clear outline of processes laid out in the QA manual became quite the chore to adhere to for nearly all members of the company through our tight development schedule. All tasks outlined in the QA manual did get completed however not necessarily in the order and structure that were initially decided on.

### 2.2.4 Conclusions

In future, the processes the company outlines in the QA manual will need to be reviewed for suitability with future projects. Short development time does not leave adequate time to adhere to the standards we outlined. Maybe a different development style would suit the company more in future.

## 2.3 Department Review

### 2.3.1 Revised Company Structure

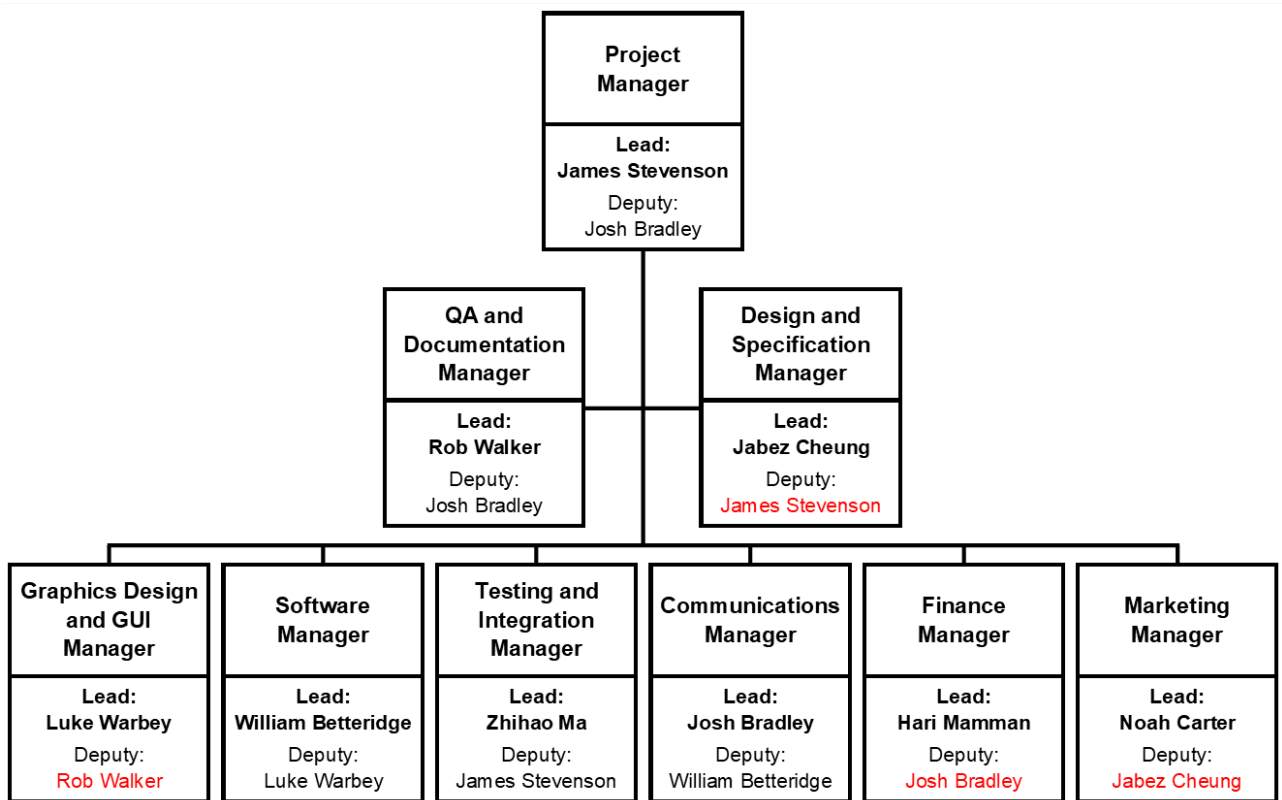


Figure 7: Updated Role Hierarchy (changed roles shown in red).

As per Figure 7 above, a few minor changes have been made to the company structure. James has taken over from Luke, Rob from Jabez, Josh from Noah and Jabez from Hari. The purpose of this change was to reallocate people to the areas best suited for them, redistribute the workload and increase redundancy. Previously the Finance and Marketing Managers were each other's deputies leading to the possibility of critical shortfalls in areas where both teams were required to work simultaneously.

### 2.3.2 Company Effectiveness

Overall, the structure of the company worked effectively. Tasks were allocated appropriately, accounting for individual skill and ability. The workload for each section or task was distributed to ensure that it was evenly split amongst the team based on availability and the requirement to work outside of the company. This ensured that each team member had an appropriate and well-defined workload.

The allocation of Deputy Managers allowed for more effective collaboration and redundancy within each specific area. This helped to establish a collaborative environment where it was never a single person's responsibility to complete a task and to mitigate any negative effects stemming from a single person's inaction.

To ensure that the entire company worked effectively and were as informed as possible, weekly meetings and progress reviews were held. These were intended to allow for the monitoring and allocation of work based on the weekly plan. This helped to drive collaboration between groups with related assigned tasks and ensure that as many members of the group were informed of section progress as possible. To ensure progress and transparency, all group members had unrestricted access to all documents and plans.

### 2.3.3 Areas of concern

Insufficient oversight and monitoring proved to be the most detrimental area within the structure of the company. While weekly meetings were held, the necessary timescale required to review every team member's contribution necessitated only a brief summation of progressed work. In a number of cases, this proved to be insufficient to assess the efficacy of progress. Attempts to monitor progress via documentation were impeded by being poorly matched to company personnel leading to them being often neglected or completed purely for the purpose



of being completed. Insufficient time planning often resulted in last-minute rushes to complete tasks for their assigned deadlines leading to an uneven distribution of worked hours throughout the development cycle.

#### **2.3.4 Suggested Improvements**

An important improvement to maximise efficiency is to further refine the review structure to minimise unproductive time. This can be achieved through smaller meetings with only the most necessary team members present to minimise time spent waiting on another review when unrequired. This would also serve to allow individual reviews to be longer and more in depth to identify and deal with prescient issues.

A key improvement to the company structure is to more clearly define the roles and responsibilities of each group member, including the specific tasks required at specific times. This will serve to ensure that each member is up to date with any changing responsibilities attached to their role and minimise overlap.

Refining the organisational and documentational structure of the company is another aspect which will improve efficiency. A redefinition of the company's communication channel to a layered structure with different channels for different tasks/groups would serve to enable more effective communication and prevent important messages from being hidden. The documentation structure could be redefined to cut down on unnecessary files and folders to simplify the search process and maximise efficiency.

## 3 Next Steps

This section of the report will focus on the future planning that DocDuck needs, including how we need to market ourselves to reach our audience, how we plan to sell our product and at what price, and what we can expect as a forecast for our first year.

### 3.1 Marketing Strategy

This section of the report will cover DocDuck's marketing strategy and how we as a company plan to sell our product to our target audience.

#### 3.1.1 Target Audience

We are intend to operate using a B2B marketing strategy, and thus target other companies. However, as we ourselves are a startup, we plan on marketing toward other companies that are likewise startups.

DocDuck would be ideal for these startups, as our intent is to be an application that increases the efficiency of the maintenance engineering team, by providing an easy and efficient way for engineers to access, edit, track and create documentation, as well as provide easy and clear communication between admins engineers and operators. Products in the market with low prices have many limitations, that might not fulfil their needs, while options with more features are often designed for larger scale companies and might not be suitable for our potential customers, especially given the high price.

We want to provide customers with a product which has a high price-performance ratio. They can pay a smaller price but still get a good product without too many compromises, and they can even potentially upgrade their subscription plan when the company grows into a larger scale, showing that we can potentially grow with our customers needs.

#### 3.1.2 Unique Selling Points (USPs)

We have several USPs which are listed from the marketing plan [3] as follows:

- Cheaper than competitors  
We provide a cheaper solution for customers as a small-scale business
- Comprehensive Repair Logging System  
Low price doesn't mean fewer features, full features of the app are already available at the lower tier of the subscription
- Advanced Security Features  
Keep data and password safe from attacks with BCrypt hashing algorithm
- User-Friendly Interface  
UI can be customised, displaying machines with different layouts
- Machine Health Status Overview
- Role-Based Access Control
- Efficient Booking System  
Look for the type of machine needed, book it, and it is sorted within a minute
- Notifications and Online Help Requests

### 3.2 Sales

This section will discuss the price we plan on selling our product at, as well as how we plan on selling to customers, and then keep our customer base, with room to grow.

#### 3.2.1 Selling Price

We will charge **£15 per 50 assets up to 200 assets**; some of our competitors do not offer plans for customers with such low asset amounts, which is a hole in the market we plan on filling. Customers that have more than 200 assets will be able to get a quote from us, free of charge, in order to determine if we are the right fit for their needs.

### 3.2.2 Sales Strategy

Laid out below is our sales strategy, where we intend to incorporate a Get, Keep, Grow strategy to entice customers, keep them with us, and have them spread the good word about DocDuck.

#### 3.2.2.1 Get

Free trial:

We are offering a 14-day free trial to new customers. This is enough time for businesses to gauge whether our software is what they need. If it is successful, we will have a new customer!

Advert: We will place adverts mainly by purchasing advertising posts on social media and let the algorithm find our potential customers. Other forms of advertising will be utilised as well including online ads (e.g. website), email ads, and participating conferences/exhibitions events. 5-10% of all our profits will be used in order to constantly advertise our product through these mediums.

#### 3.2.2.2 Keep

Multi-Channel Customer Service:

We will answer customer's questions and solve their issues through multiple channels to make our customer service effective and accessible. This will be including email, video calls and social media DMs.

Loyalty Scheme:

Users will get a discount the longer they subscribe to our service, including the price for monthly/annual subscription plans and upgrading fees.

#### 3.2.2.3 Grow

Social media reputation build:

We will build up our reputation using social media so that we can share successful examples of businesses subscribing to our service.

#### 3.2.2.4 Referral

Discount code: Referrals can be given out so that for each referral, users will be both incentivised and rewarded for sharing and joining.

### 3.2.3 Forecast of the First Year

We are expecting that the sales in the first month will be low, as the advertising algorithm from Google and across social media needs time to reach our target customers.

After that, the sales will increase in the following 3 months as customers are attracted by our 14-day free trial period and small price afterwards compared to our competitors (our lowest tier subscription starts at £15 whereas many of the others start at £50+). Sales would then go back to a lower number but stably go up for the rest of the year, and it is estimated that we will reach 300 customers in the first year, assuming that we are to grow in a linear pattern, similar to our competitors have done, and assuming that all our customers have 50 assets or less. By doing this, we predict to reach a gross profit of £25,350.00 after 1 year.

Given that we expect to finish our developmental period with £2,363.82, this gives us a total cost of £27,713.82. This will unfortunately not be enough to completely cover our expenditure, but it will considerably help us. We plan on using 5% of our profits at least in order to continue to advertise our product, meaning that by the end of the first year we will have spent £1,385.69 on continuing to advertise our product, which will increase our customer base further.

This forecast can be seen in Figure 8 below:

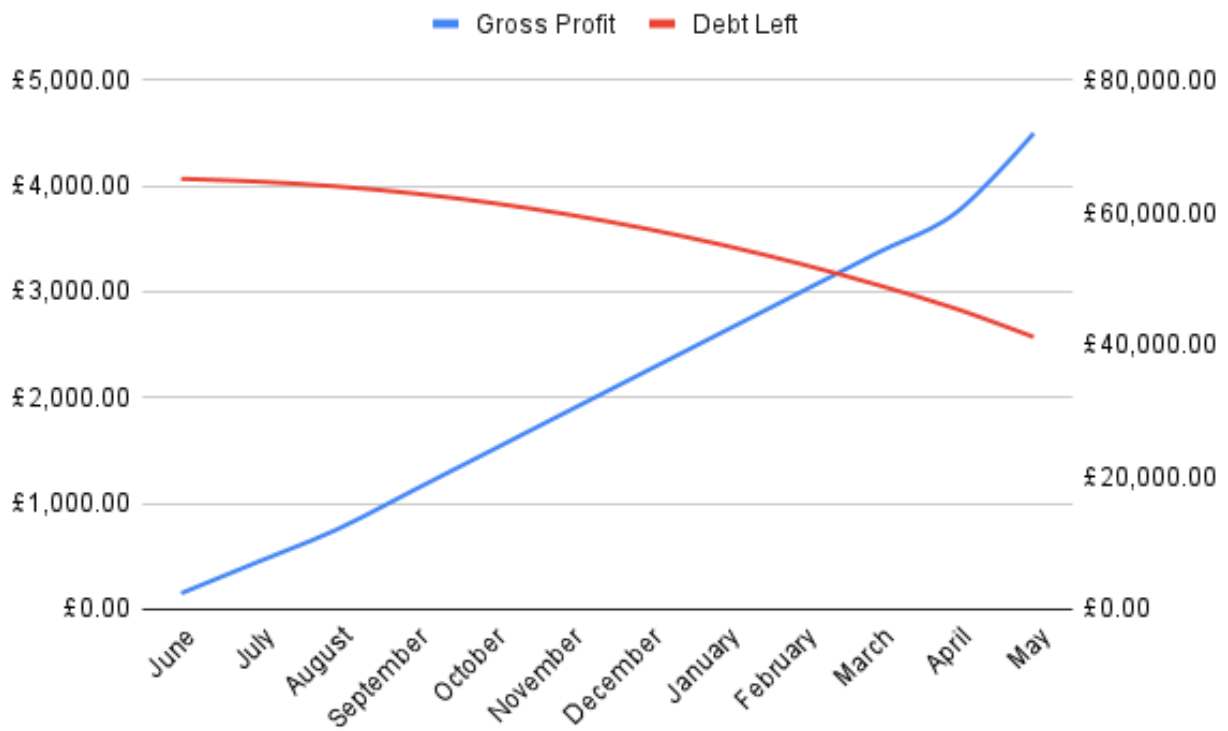


Figure 8: Graph showing our forecasted First year and how our debt will decrease across this year.

If we are able to stick to this forecast, then by year 2 we will be able to have paid off our loan and begin making a profit.

### 3.3 Risks

Risk Description	Likelihood (1-5)	Impact (1-5)	Priority (1-25)	Mitigation
Delay in product development due to unexpected technical challenges	4	4	16	Regularly conduct thorough testing of all functionalities to identify technical challenges early as possible, saving money and functionality promises for financial backers. Allocate additional time and wage opportunities in the project (safe with the new grant money). Scale back long term automation features (XML GUI BUILDER) for better user experience on release with promised features for financial backers.
Insufficient market demand for DocDuck	3	3	9	Allocate some budget to conduct market research surveys among potential users to gauge interest and identify pain points. Showcase the unique features and benefits of DocDuck through effective marketing channels such as social media, online ads and targeted email campaigns.
Inadequate financial planning leading to budget overruns	3	4	12	Regularly review project expenses and adjust budget allocations accordingly. Explore cost-saving measures such as utilising open-source resources and negotiating discounts with service providers. Communicate budget constraints with the team to ensure efficient resource allocation.
Technical issues during product demo affecting credibility	4	5	20	Conduct extensive rehearsal sessions for the product demo to identify and address potential technical glitches. Prepare backup plans and alternate demonstration methods in case of system failures. Provide comprehensive training to presenters to handle unexpected situations confidently.
Limited supervisor support causing communication issues, impacting project progress	5	4	20	Establish clear communication channels with supervisors and proactively seek feedback and guidance. Utilise online resources, forums, and documentation for self-learning and problem-solving. Collaborate closely with teammates to share knowledge and support each other in overcoming challenges (Push back deadline if possible).

Table 3: Risk Log for DocDuck Project

This risk log outlines potential challenges for DocDuck. Each risk is categorised based on its RAG (Red, Amber, Green) status, with corresponding financial impact and priority levels. Mitigation strategies are provided to address these risks proactively.

## 4 Summary

Overall, this financial summary report has covered numerous aspects of both the developmental period and our plans for the future.

In the financial review, the report highlighted how we as a company have had significant variance peaks and troughs, but it has been shown that they have mostly cancelled themselves out. The breakdown in cash flow and overall spending vs actual spending showed how overall we predicted very similarly to what was achieved, with only a notable absence from predictions being the lack of a marketing budget.

Our future marketing plans are an excellent outline of how we plan to release our product to the world and also how we plan on remaining afloat after release. The marketing plan also outlines our Unique Selling Points, and how we are ideal for smaller companies and those that have recently formed.

In summary, this plan outlines how our developmental and departmental areas have had several successes and failures, as well as how we have addressed any failings. The areas highlighted in this report will help to guide the company in the future to make well thought out ideas and decisions, in order to ensure that we are financially successful throughout the lifetime of our product.

## References

- [1] DocDuck, "Financial Report 2", March 2023
- [2] DocDuck, "Financial Business Plan", 2023
- [3] DocDuck, "DocDuck Marketing Plan", April 2023
- [4] DocDuck, "Quality Assurance Manual", 2023