



# **Revised Financial Business Plan**

**Penelope LTD (SwEng Group 2)**

School of PET

14<sup>th</sup> February 2023

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# 1 Executive Summary

This document is intended to provide a comprehensive overview of the financials, structure and goals of Penelope LTD. The focus will be on the company's first product, "Fauna Finder". This document will discuss any potential risks or challenges that may arise and the measures that will be taken to mitigate them. Overall, this plan is designed to provide a clear and detailed road-map for Penelope LTD, to entice financial backing for "Fauna Finder" and set the stage for continued growth and expansion in the future.

## 1.1 The Product

Our app, "Fauna Finder", is a wildlife guide (focused initially and primarily on birds) for university campuses. The user is presented with the home page containing a list of local avian (and other wildlife) species upon launching the application. From this page, the user can change their location or view information about the application. Choosing a bird presents the user with a bird profile page containing the related information. This information includes an 'about me' video, their diet and a button that plays their call.

## 1.2 App Mission

Our mission is to promote environmental awareness and appreciation for nature by providing a user-friendly platform that educates and connects individuals with the diverse bird (and wildlife) species found on university campuses. Our app empowers individuals to explore, learn, and share their love for birds (and wildlife) with others.

## 1.3 Company Goals and Objectives

Penelope LTD was founded with the goal of providing secure and easy access to information anytime, anywhere. The company aims to achieve this vision by developing robust, comfortable, and user-friendly systems that not only appeal to users but also inform and educate them. The company's ultimate goal is to revolutionize the way people access and utilize information, making it a seamless and enjoyable experience.

Penelope's main objectives are:

- To develop and offer high-quality information access systems that meet the needs of the target market.
- To continuously innovate and improve the user experience of the systems.
- To establish a strong brand image and reputation for providing secure and easy access to information.
- To achieve sustainable financial growth and profitability through efficient operations and smart business strategies.
- To attract and retain top talent in the industry by creating a positive and inclusive work environment.

## 1.4 Organisation and Management

The company has implemented a clear hierarchy for roles and responsibilities. The Project Manager will have ultimate decision-making authority and will be responsible for maintaining a positive and productive work environment for all staff. The Project Manager will also be required to maintain regular communication and updates with the directors of each of the company's six main teams and departments, which include: the Financial Team, led by the Financial Director; the Software Team, led by the Software Manager; the Quality Assurance (QA) Team, led by the QA Director; the Design and Media Team, led by the Design and Media Director; the Marketing Team, led by the Marketing Director; and the Documentation Team. In the Projected Hours document, many of the team members are included in the software team, this is because every member of the group must contribute to the software.

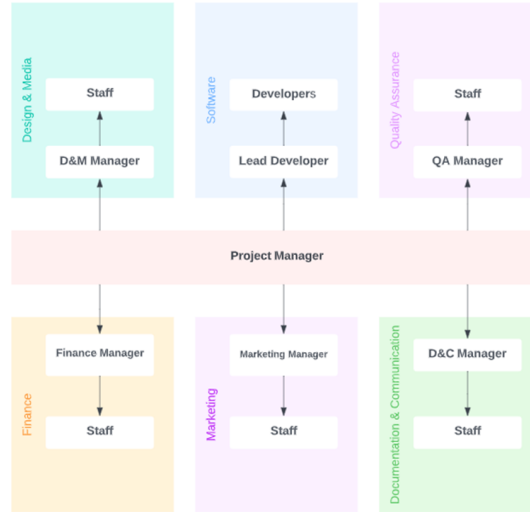


Figure 1: Shows how Penelope LTD has structured its departments.

Team	Members (Managers in Bold)
Project Manager	<b>Connall Shurey</b>
Finance	<b>Thomas Richardson</b> Ophelia Korontinis
Documentation	Ana Monteiro Ophelia Korontinis
Marketing	<b>Oscar Goeffron</b> Thomas Richardson
Design & Media	<b>Dawid Zaboroski</b> Oscar Goeffron
Software	<b>Giuseppe Barillari</b> Harry Harrison Alan Brookes
Quality Assurance	<b>Ethan Cude</b> Roman Kulev

## 1.5 Quality Control

Penelope is an android application development company that was founded at the University of York in late 2022 by students. The company follows strict industry standards and takes into account customer feedback and performance to deliver high-quality products. Penelope operates with the goal of providing "secure and easy access to information anytime, anywhere". The company follows agile methodologies and has a quality policy that aims to deliver products that meet or exceed customer requirements and provide continuous improvement within the company. The organisational structure of Penelope includes Finance, Marketing, Documentation, Design and Media, Quality Assurance, Software and a Project Manager. The Finance team tracks project finances, the Marketing team focuses on improving marketing efforts, the Documentation team manages and tracks the company's technical documents, the Quality Assurance team ensures the quality of results developed by the company and the Software team helps translate client requirements into technical specifications and the Project Manager bridges the gap between all other teams by organising them and making sure all are on track.

Penelope follows an Agile project management methodology, following the four central Agile values of prioritizing individuals and interactions, working software, customer collaboration, and responding to change. The product development cycle of Penelope is split into five distinct phases to provide predictability to the project. The Initiation Phase defines what the product will be and creates a product vision and project definition, including customer requirements and communication. The Planning Phase outlines how the product will be created and includes defining employee roles and responsibilities, determining budget and schedules, and creating a road-map for the

project. The Execution Phase is the actual creation of the product, and the Control and Monitoring Phase involves monitoring progress and adjusting if necessary to align with the project plan. The Closure Phase confirms that the product meets the requirements defined in the initiation phase. Penelope places emphasis on effective customer communication and thorough requirements analysis to ensure customer satisfaction.

## 1.6 Marketing Strategy

The “Fauna Finder” app is a unique and innovative solution for bird-watching, wildlife interest and nature education on university campuses. Our goal is to pitch the idea of the app to many universities up and down the country, the universities can then purchase a subscription to introduce their campus into the app and distribute it among their students and local community. This is an alteration to the typical target market for mobile applications as instead of targeting the user, we will be targeting the universities. By implementing this strategy we can achieve continuous, large subscription purchases by fewer customers rather than one off small purchases by many.

Starting with the University of York we aim to increase awareness and usage of the app among students and faculty, with the goal of expanding to other universities in the future. In this strategy, we will outline the key tactics that will be used to achieve these goals, including identifying our unique selling points, developing a strong brand, creating engaging content, and leveraging partnerships and collaborations. By implementing these strategies, we aim to increase app usage, as well as generate revenue for the company.

### 1.6.1 Content Creation

As we continue to develop and refine our bird and wildlife guide app, it is important that we consider our strategy to effectively reach our target audience. The following are a few ideas that we can suggest the universities do in order to bring in more app users:

- Leverage social media platforms, such as Instagram and Twitter, to showcase the content added by the universities and highlight the locality aspect of our app.
- Create campus-specific promotions, such as bird-watching events and educational resources for students.
- Create educational content, such as blog posts and info-graphics, that highlight the app’s features and the valuable information it provides on different species, their habitat, and behaviour.
- Utilise online and offline advertising, such as Google AdWords and print ads in local newspapers, to increase brand awareness and reach a wider audience.
- Develop a referral program that rewards current users for introducing new users to the app.
- Create a viral marketing campaign where users can share their bird sightings and identification successes on social media to increase visibility and interest in the app.

### 1.6.2 Unique Selling Point (USP)

Our Unique Selling Proposition (USP) is threefold: user-generated content, campus-specific information, and educational resources.

First, the user-generated content feature of our app sets it apart from others in the market. By allowing universities to upload their own images of birds and wildlife for identification by other users, we create a localised community of users that can help each other with identification. This not only makes the app more interactive and engaging for users, but also helps to improve the accuracy and completeness of the identification information available within the app.

Second, although there are many bird and wildlife guides available for the application user to download, our app will be sold directly to the universities and so will, in essence, be a bird and wildlife guide for that university. This means we will be presenting the universities with a totally customisable app where they can add different animals specifically to their area. By providing detailed information on the species that can be found there, we make the app a valuable resource for students and faculty at that university. This campus-specific information is not available in other bird identification apps and gives our app a competitive advantage.

Finally, our app provides educational resources, such as information on different bird and wildlife species, their habitat and behaviour. This makes it a valuable resource for students studying biology or environmental sciences, or anyone else interested in learning more about their local community of fauna. The app can also be used as a

tool for research and study, as it provides detailed information on species found on the university campus, which is different from other apps available in the market.

Overall, our USP is that our app is a unique and valuable resource for identification, conservation and education. It offers a unique combination of user-generated content, campus-specific information and educational resources that sets it apart from other bird identification apps available on the market.

### **1.6.3 First Year Budget**

#### **1.6.3.1 The first three months after development is complete**

The biggest expense we will face in the first three months is the continued development and maintenance of the app as well as the customer support we will be providing to the University of York. This budget will be given to the marketing department 10 weeks before the end of the development period (Summer Term Week 1).

Customer Support: £257.50

Development: £250

Maintenance: £425

Marketing research and monitoring: £187.50

Total: £1120

#### **1.6.3.2 The next three months**

The biggest expense in the next few months will be the cost of travel for our sales team to reach 4 universities per month.

Travel Expenses: £350

Marketing research and monitoring: £187.50

Total: £537.50

#### **1.6.3.3 The subsequent six months**

The biggest expense in the next few months will be the cost of travel for our sales team to reach 8 universities per month.

Travel Expenses: £700

Marketing research and monitoring: £93.75

Total: £793.75

### **1.6.4 Distribution Plan**

It is crucial that we have a solid distribution plan in place as it will be the foundation for the company making money from the app. Our initial app is tailored specifically for the University of York's campus, providing detailed information on the birds that can be found there, making it a valuable resource for students and faculty at that university. We plan on starting small, putting all our focus into making the app perfect and helping the first university get acquainted with it. Then, we will slowly expand, marketing to more universities and keeping realistic growth.

However, as we plan on expanding to other campuses, it is important that we have a strategy in place to ensure that our app is easily accessible to a wider audience. We plan to target the universities with larger student enrollment as they will be more inclined to see the benefits of our app when put to a large scale. We will also only target campus based universities as they are likely to have large open spaces where a more varied set of birds (and wildlife) will inhabit.

Our distribution plan includes a variety of different tactics to ensure that our app reaches as many potential users as possible. We do this by suggesting different ways the universities can introduce users to the app. Firstly, we will suggest leveraging social media platforms, such as Twitter and Instagram, to raise awareness of our app among the target audience. We will also be suggesting online advertising, such as Google AdWords, to target individuals who are likely to be interested in our app. Additionally, we could reach out to influencers in the bird and wildlife-watching community to help promote our app and increase its visibility.

We will also put forward for consideration utilising traditional marketing techniques, such as flyers and posters to increase awareness of our app on the campus. We will suggest targeting student societies, such as the biology and environmental science societies, to ensure that our app is reaching the right audience.

In addition, we will point out that reaching out to potential partners and collaborators, such as bird and wildlife-watching clubs and organisations, will help increase the visibility of our app as this will unlock their existing networks and reach a wider audience.

Overall, our distribution plan is designed to ensure that our app reaches as many potential users as possible, while also targeting the right audience to ensure that our app is being used by the people who will benefit from it the most.

#### **1.6.4.1 The first three months after development is complete**

In the beginning, the plan is to pitch the app only to the University of York, a mid-size campus, at a reduced rate in exchange for feedback on the app. This will act as a sort of trial period for the app. The reason for doing this is so we can give our software developers extra time and useful information needed to iron out any bugs or implement small features. Furthermore, it will provide essential experience for key areas of our company, preparing them for future pitches to larger universities. These areas include our sales team (who with more experience are more likely to sell subscriptions) and customer/tech support (who will help the university administrators get familiar with the app and the process of uploading new birds and wildlife).

#### **1.6.4.2 The next three months**

Once the trial period for the app is over, we will spend the next three months targeting four universities each month. This will give our, still relatively inexperienced, sales team more chances to practise delivering our product. The plan includes using the University of York's good word of mouth and meetings with the university's administrators to sell them on our app. We foresee selling to every one out of four universities in this period.

#### **1.6.4.3 The subsequent six months**

Once the first six months of sales have been completed, the team will then start targeting eight universities a month, repeating techniques developed previously but convincing and selling much quicker. Again, we foresee selling to every one in four universities in this period.

#### **1.6.4.4 The following years**

In the subsequent years, we will reduce the number of new universities that we try to sell to and focus more on renewing the current subscriptions and maintaining the app. This means the company will be able to develop new products while the current application is maintained with just a skeleton crew of support staff and maintenance programmers.

### **1.6.5 Risk Analysis**

#### **1.6.5.1 During Development**

<b><u>Risk</u></b>	<b><u>Issue and Possible Solution</u></b>	<b><u>RAG Impact</u></b>
Software development has fallen behind on delivery.	There will be a large financial impact in terms of additional labor costs. As a result, it may be necessary to release the product in an unfinished state with the understanding that additional work will be completed as funding becomes available. This could happen for many reasons such as, loss of a team member (temporarily or permanently), training required (in order to use a specific piece of software for example) or an foreseen issue that becomes much harder than we originally thought.	Red
Under-predicting hours	This will result in the company going over budget for the project and if we cannot find the money elsewhere, will result in the company going insolvent and eventually bankrupt. There is some cash predicted to be left over and this can be used to pay any overtime, but there is a finite limit.	Red
Over-predicting hours	This will just result in the company having more cash left over in the final week.	Green

### 1.6.5.2 Post-Development

Risk	Issue and Possible Solution	RAG Impact
Little interest in a bird/wildlife guide.	If market research indicates that there is a lack of interest in the current product and there is a preference for alternative content, we have the ability to adapt and adjust our strategy accordingly. The app's content can be updated with relative ease, such as a train guide as an example. However, it should be noted that there will be additional costs associated with re-branding the product and the company to align with this new direction.	Amber
Universities are not buying.	This will have a significant impact on finances as if the up-take is slow, the sales progression will be pushed back, resulting in less revenue and possible issues. To combat this, the sales team should be sourced from outside the company and have a proven record selling similar products to similar buyers.	Red
The University of York is unwilling to be our test user	This will have a small impact on finances and our plan as we would have to suggest a different campus based university (added travel cost) or increase the incentive for York.	Green

## 2 Financial Plan

### 2.1 Cash Flow Forecast for the First 39 Weeks of Trading

The projected cash flow for the development period is presented in the Cash Flow Forecast, depicting anticipated expenses and incomes from the first week of the Autumn term to the tenth week of the Summer term, inclusive of holiday periods. The forecast is derived from a bank loan of £52,000 and takes into account the projected number of weekly working hours for each department. The projection in the Projected Hours document was done by department as it made more sense to break down any future work by department rather than group member (as many members are involved with multiple teams). It should be noted that during the Autumn term, the first few weeks were the introduction to the module and working hours were thus significantly reduced for the rest of the term as Penelope LTD was being set up.

Considering Figure 2, it is evident that without the required loan, the company will be unable to meet its financial obligations, resulting in insolvency within the first week. Ultimately leading to the declaration of bankruptcy. Therefore, the loan is essential for the business to commence operations, and without it, the venture would not be feasible.

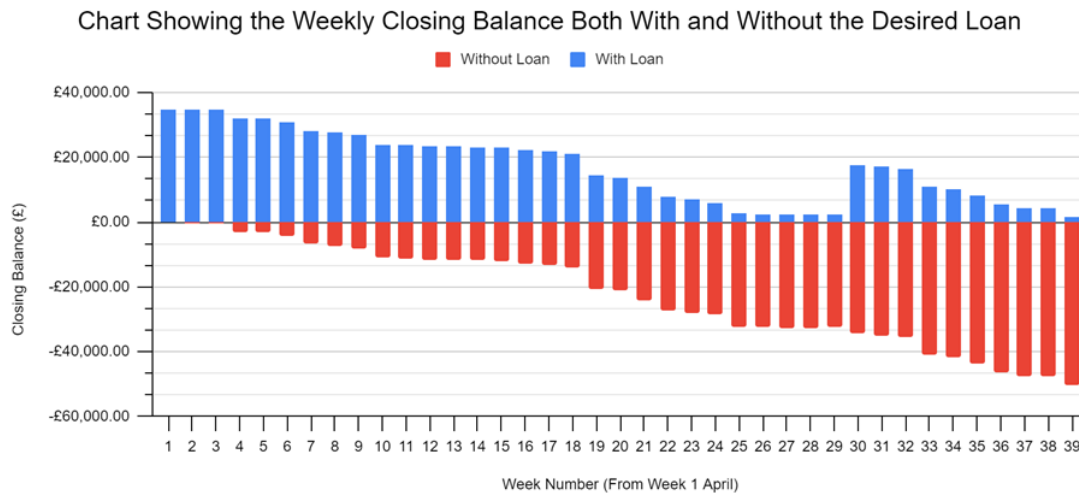


Figure 2: shows the weekly closing balance of the accounting period both with and without the loan.



Figure 3 shows how our income will be spent during the development period. It's clear that rent and wages are going to be the biggest expense. There's no way around not paying wages as the team cannot be expected to work for free. However, in the future (post-development) the company could move to being completely run online. This would introduce costs of its own but would eliminate the cost of rent.

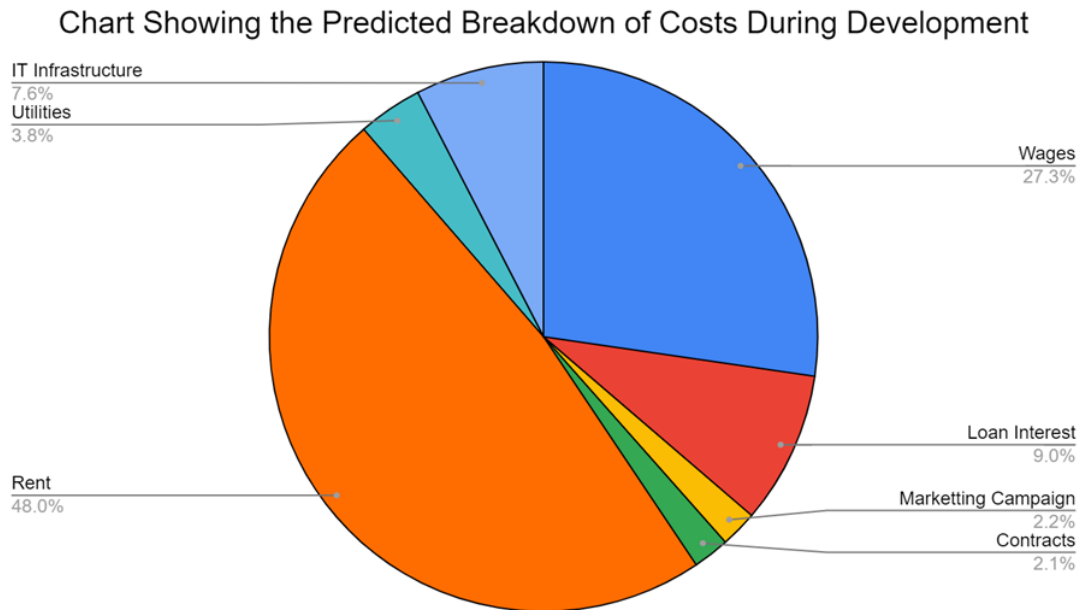


Figure 3: shows what we will be spending on during the period.

The weekly interest cost is calculated based on an Annual Percentage Rate (APR) of 16.86% in addition to the £52,000 bank loan. The weekly payment amount has been determined using a compound interest calculation model. "Contracts Out" refers to the engagement of external contract programmers to perform work that will be integrated into the project, whereas "Contracts In" pertains to revenue generated from completing work for external companies.

Figures 4 and 5 are graphical representations of the data shown in the Projected Hours document, which is a calculated estimation of how many hours each person will spend working on the project for the development period. This data is used in the cash flow forecast in order to get a reasonable prediction of how much we will be spending on wages. In Figure 4 you can see how some departments will have busy periods then quiet ones. While other departments will just have a steady amount of work throughout. Many departments will see an increase in hours when approaching the deadline for a related deliverable. There is a large peak in the software team's predicted hours during the spring term time, this is because this is when we are allotted timetabled lab sessions. Therefore, this is when most of the group will contribute to the programming. Figure 5 shows the trend of the groups total weekly hours. It is clear that the team will be busier toward the end of each term and when the bigger deadlines are coming up.

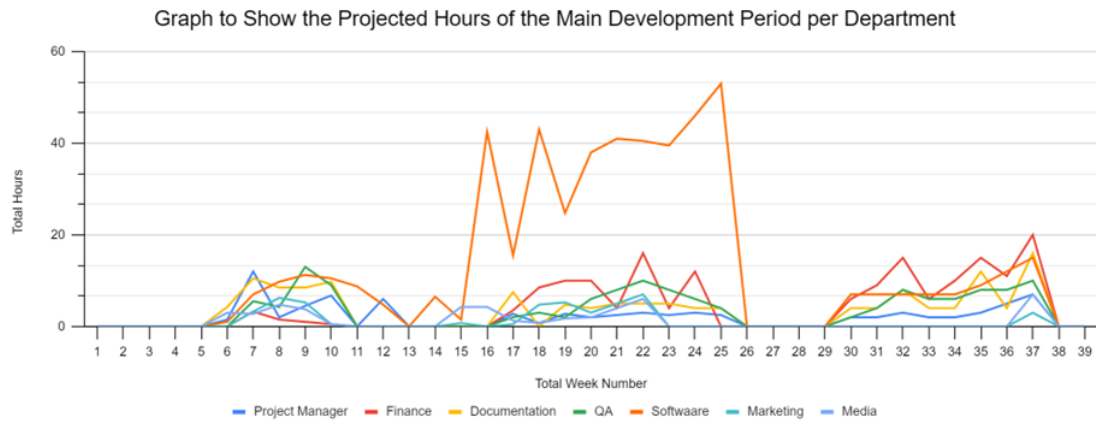


Figure 4: shows the predicted weekly hours for each department as well as the average worker's (Omitting the holiday periods as no one is scheduled to work then).

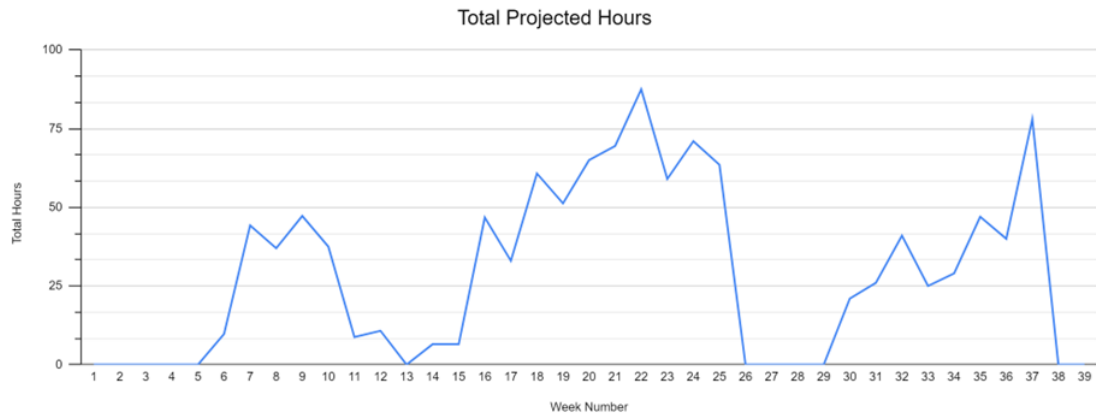


Figure 5: shows the predicted weekly hours for everyone in total.