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Business Plan



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Mission Statement

“Music can change the world – but only if it is available to everyone equally. Our mission is to share the gift of music with people for whom it would be otherwise inaccessible. At the same time, we hope to increase awareness of the unique and vibrant musical culture that exists amongst the deaf community.”



Executive Summary

ffeel better.

“MUSIC IS LIKE A DREAM,” Beethoven said. “One that I cannot hear.” As music-technology students, we passionately believe that music is a force for good in the world. We

feel it is unjust therefore that, three centuries after Beethoven, deaf music lovers are still almost completely overlooked by mainstream music platforms, who mix, master and stream music exclusively for those with normal hearing. So we have decided to use our range of skills and experience – encompassing music, sales, design and publishing – to do something about it. In consultation with a leading audiologist, we created **ffeel**, a simple, user-friendly

mobile app that makes music more powerful, accessible and enjoyable for this large and growing community.

We believe the time is right for **ffeel**. The deaf community has an increasingly vibrant music scene, with deaf artists, festivals, and even a new kind of star – the sign-language interpreter. In this scene, music is experienced in a unique

way through touch and sight. The community has a huge social-media presence that would give us, as non-deaf people, a channel through which to gain recognition as well as valuable feedback and participation in our product development.

To maximise **ffeel**'s social benefit, we will operate as a community interest company. Income will be derived



from app sales and advertising. However, in keeping with our philosophy of giving back to the community, we will also provide a free version of the app. It is our hope that **ffeel** will bring music into the daily lives of countless people who would otherwise miss out on one of life's greatest pleasures.

Objectives

Short Term

Have a clear vision of what we want to achieve and how we will achieve it

Get to know our customers

Get to know our competitors

Overcome any technical hurdles in our product development

Start to build brand recognition

Establish a positive social-media presence

Long Term

Bring members of the deaf community onto the staff

Reduce marketing costs by analysing past strategies

Increase market share by keeping product up-to-date and unique

Continuous product development and addition of new features

Become number one in our field

Feel good about what we do

Management Team

Peter Rees

TECHNICAL DIRECTOR

I am a Music Tech student with a background in publishing, illustration and design. I have managed numerous book projects from inception to publication, overseeing small teams including designers, writers, editors, illustrators and researchers. I have written more than 70 published titles and edited more than 30 novels, and for ten years ran an artisanal fine-art printing business. As Technical Director, I will be overseeing the technical development of our product in consultation with experts in the field of audiology.

James Marshall Davies

RESEARCH DIRECTOR

I am a second-year student at UWTSD studying Music Technology. Prior to and alongside my studies I have worked within the hospitality and logistics sectors. I have achieved high standards in both, working to tight deadlines, attaining a high level of customer service and operating as part of a team. As Research Director, my responsibility will be to have a specialised knowledge of our market competitors and to be fully aware of our market and its requirements.

Adrienn Fuscics

MARKETING DIRECTOR

I have worked for Aldi, a leading discount supermarket chain, for the past four and a half years. As a management-team member, I have to motivate and manage staff and deal sensitively with customers. Communication is key to make sure everyone knows their job and works to a deadline. Prior to Aldi, I worked mainly in the catering business where there was a strong focus on excellent customer service. As Marketing Director, my responsibility will be to identify innovative ideas to grow awareness of our product.

Stephen Thomas

FINANCE AND OPERATIONS DIRECTOR

I have previous experience in managing finances and operations, having been joint owner of local steel-forging business Gwladaidd Steel and assistant manager and finance manager of AT property maintenance. As Finance and Operations Director, my role will be to ensure that the company meets all of the applicable legislation set in place by local and national governments, as well as working to ensure that all of the company's finances are in order.

The Product



ffeel is an app for Android and iOS devices that enhances the experience of music for people with severe to profound hearing loss. Many deaf people love music. But their unique experience of music – focusing on rhythm and bass, and using touch and sight as well as hearing – is ignored by traditional music platforms.

We aim to rectify this with **ffeel**, a free utility that sits on your smartphone between any regular music source and the phone's audio output. As the music plays, **ffeel** dynamically emphasises frequencies in the critical 'feel' zone, boosts rhythmic content, and improves perception of musical elements that might otherwise be inaccessible to a deaf listener. Our ambition is not to provide a musically 'correct' rendition, but to deliver music

the way deaf people already enjoy it – only with much greater clarity and power.

Unlike most other solutions, **ffeel** requires no expensive and unwieldy special hardware to use. However, we anticipate that even users of existing products, such as the Subpac vibrating backpack, will benefit from **ffeel**'s ability to add coherence and impact to low frequencies. Hearing-aid users, who are poorly served by existing 'music modes' (Chasin, 2016), will also find that **ffeel** delivers greater precision, clarity and musicality in any listening mode.

So how does it work?

ffeel contains two modules: the first consists of a number of dynamic, under-

the-hood musical processes, and the second lets each user set up the app according to his or her unique requirements. **ffeel**'s clear, uncluttered interface enables easy adjustments for different types of music. **ffeel** can even tell the phone to vibrate in time with your music!

ffeel has been developed in consultation with Rhys Meredith, Consultant Clinical Scientist and Head of Audiology for ABMU Health Board (Swansea). Importantly, **ffeel** will be built using existing, open-source music technologies in novel ways, thus significantly reducing

R&D costs. We anticipate eventually licensing the underlying tech to organisations looking to increase their reach into the deaf community.

ffeel
helps you
feel more.

Market description

*Through online forums, we contacted members of the deaf community to ask them about their relationship with music, and how our application could improve their experience of it. We learned that people in the deaf community have **a strong passion for music.***

However, many current solutions that claim to improve their experience of it are expensive, inconvenient or inaccessible. The few applicable apps that exist on the market consist of very basic amplifiers, noise-reduction software and hearing-aid emulators.

We believe **ffeel** has a strong entry position within the market as one of very few such apps that are committed purely to enhancing the musical experience of each individual user. In addition, we also believe we can actually enhance the benefits people receive from existing hardware-based solutions. According to WHO, hearing loss is

a growing problem, affecting more than 400 million people worldwide. Our target audience is people with severe or profound hearing loss who have been hard of hearing all their lives. As **ffeel** brings the music into a more recognisable 'feel zone' for the user, boosting percussion and enhancing key frequencies, the user will be able to more coherently follow their favourite music. The effect will be strongest for those who have gone through life perceiving music in this unique, touch-based way.

The change in the deaf demographic will bring in younger people who will want to get as much out of music as



The Market

Direct communication with the deaf community is essential.

their hearing counterparts. After researching journals and speaking with some in the deaf community through social-media platforms, I have found that many rely on their handheld devices for day-to-day activities, but that there are no real competitors on the marketplace making apps dedicated purely to the deaf musical experience.

Market Environment Considerations

Changes to government law and circumstances (such as law changes post-Brexit) may cause issues for **ffeel** when it comes to how we distribute our application and how far or fast

we can expand. Not only that, any changes in copyright laws may infringe on our how well we can operate with other software.

With our company being a CIC dedicated to giving back to the community, we have many avenues to explore to find funding, and with a small start-up cost, we can make a strong argument for funding based on a ratio of cost to benefit. Although government funding is reliant on how the political parties' manifestos align, in the past year the number of new CIC registrations has been on the rise (gov.uk, 2018).

For **ffeel** to gain a solid foundation within the marketplace, direct communication with the deaf community is essential. We must be responsive to customer feedback, and gain brand recognition and acceptance throughout the community. With predictions of an increase in hearing loss among young people, we have a unique opportunity in the market as one of the only app developers specialising in products for the hearing impaired.

Lastly, with large companies and scientific advancements in the auditory sector, there is a chance that our technology may become redundant as new products arise that allow for even more control over one's hearing.

That said, we have the knowledge and opportunities to adapt to such developments, working alongside other upcoming tech companies to constantly refine and improve the deaf experience of music.

Competition

The app market is highly competitive: by the end of 2017 both App Store and Google Play store collectively had over 5 million apps available and generated over £70 million, which studies predict will continue to rise (App Annie Content, 2017). Comparable products to ours include apps from Bio Aid, Resound and Siemens, which replicate hearing aids; we could see these as competitors or potential future partners. Similarly, we believe **ffeel** could work with companies like Microsoft, Samsung and Sony as a standard OEM app, so that deaf people can calibrate their music player to their requirements with the touch of a button. Other apps in the same general category include equalisers, amplifiers and bass

boosters for the general public.

In hardware, the ability to emit subsonic vibrations has been utilised by companies like Subpac (see sidebar, right) and Body Sonic dancefloors. These niche products work by massively enhancing the bass energy of the music, but they are expensive and bulky, and we don't necessarily see them as direct competitors.

Through our research we have discovered that **ffeel's** USP is that it benefits a minority community in an area that most people overlook or are unaware of. Being a CIC, we aim to give back to this community, making the application accessible to everyone for free, with the option to upgrade for a small fee. We believe we truly can make a difference to music lovers in the deaf community.

Competitor Profiles

COMPETITOR ONE Subpac is a backpack created for those who want to really feel their music. Worn like an ordinary backpack, the device vibrates in time with the sounds heard by the wearer. The hardware is an innovative way of experiencing music, but, with a retail price of around £350, isn't accessible to everyone.

COMPETITOR TWO Coocent sells a variety of software that alters audio, including music players, equalisers and bass boosters. The software is of a very high standard, and the company has a large customer base. Unlike these products, **ffeel** is targeted to a specific user group, bringing a personalised touch to each user's musical processing, which requires just a single, one-off calibration. Moreover, Coocent are not entirely committed to their music applications, as they also focus on other sectors.

COMPETITOR THREE Bio Aid markets an application that attempts to emulate hearing aids through your handheld device. This is a free and open-source piece of software, meaning anyone can use and modify the application's internal algorithms. The app, which is still at the beta stage, is highly customisable, but, unlike **ffeel**, hard to set up. The team behind this application consists of PhD graduates with expertise in the auditory field.

Overview of customers

Our customers are people with severe to profound hearing loss. Over 5 percent of the population worldwide has disabling hearing loss, and the number is expected to double in 30 years' time. In the UK there are 11 million people with some form of hearing loss. According to the charity Action on Hearing Loss (2018), in Wales alone the number is around 575,500, or one person in six.

Deafness can be caused by genetic factors, disease or infection, exposure to excessive noise, use of drugs or ageing. Around half of affected children in the UK are born deaf; they will grow up experiencing music in a unique way based largely on touch, and it is these people who are **ffeel's** natural customer base.

Hearing loss imposes a huge annual global cost, including health costs, educational support, loss of productivity and other effects. Unfortunately, a high number of children with hearing loss drop out of school, and a significant number of deaf adults have difficulty finding a job. The reasons for this include lack of access to appropriate

education and the psychological effects of isolation, loneliness and withdrawal caused by difficulties in communicating with the hearing world. Therefore, the development of assistive technologies, both software and hardware, is extremely important to

The Marketing Strategy



help lower the risks and help hearing-impaired people engage on an equal footing with hearing people. And since most people with disabling hearing loss live in low- or middle-income countries, affordability is key when it comes to these technologies. That is why we will always offer a free version of **ffeel**.

Key customer profiles

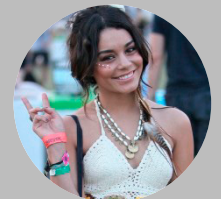
CUSTOMER ONE

Timmy Tune, 9 years old, school pupil. Loves music and dancing. Can only hear lower frequencies. Likes music with a lot of bass. Wants to be a dj when he grows up.



CUSTOMER TWO

Tammie Timbre, 25, sign-language teacher. Was born profoundly deaf. Discovered music at a young age. Teaches sign language and does voluntary work with deaf children. Social-media savvy. Plans her summers around gigs and deaf music festivals.



CUSTOMER THREE

Tom Tone, 28, online marketing director. Lost his hearing at the age of 10. Works for an online company advertising music events for the deaf community. Wants to make a difference.



The marketing plan

As with any new business, in-depth planning will be at the heart of our success. Competition is high and rapidly changing, and we need to ensure our product is skilfully positioned and promoted. To do so, we must thoroughly research our competitors and identify our product's unique selling points. The experiences of other entrepreneurs and professional mentors will be an invaluable asset.

Price

When choosing our pricing strategy for **ffeel**, we must consider several aspects, including fixed and variable costs, competition, company objectives, proposed positioning strategies and target customers. We believe **ffeel** is a unique product that provides a high-value experience for users. However, as a social enterprise, our main goal is public benefit, which means getting our product to as many people as possible in order to improve their music experience and quality of life. Accordingly, **ffeel** is priced to be easily affordable for anyone wishing to use it: it is free at the first tier, with an optional,

paid-for second tier with extra features.

Promotion

The burgeoning deaf cultural scene provides many opportunities to promote our product. These include music events and festivals, such as the Good Vibrations festival in the US, where we will run stalls and hand out low-cost branded gifts such as pens, badges, keyrings etc. We could run smaller events, such as silent discos, in spectacular locations with state-of-the-art lighting, and sponsor performers – for example, some of the new crop of 'superstar' sign-language interpreters who stand alongside the singers on-stage. Our slogan is: '**ffeel better**.' Our branding will play on the double 'ff' in **ffeel**, for example in poster tag lines such as '*ffull on*', '*ffit*', '*ffun time*', etc.

We are looking forward to growing awareness of **ffeel** through the many charities, schools and other organizations for deaf people. Another exciting possibility is working alongside mobile-phone manufacturers to place the app as an in-built feature in their phones. Finally, the deaf community is very active and visible online.



ffit.

ffeel better.

**Our team
culture is
inclusive,
open and
available**

Aside from our own website, we will use social-media channels such as Facebook and Instagram to engage with the community and keep it informed about news and developments. To assist with this, we will employ SEO specialists to ensure **ffeel** ranks highly in online searches.

Product

ffeel is unique software that adjusts musical frequencies and strengthens bass and rhythm to deliver a better musical experience to the listener. As deaf people can not hear music in the usual way, their experience of it is partly through vibration. No special hardware is required for **ffeel**: it works on any smartphone. Our logo is the word 'feel' spelled with a double 'ff', which refers to both the musical expression 'fortissimo', meaning 'to be played very loudly', and the soft 'ff' sound in the Welsh language.

Place

ffeel will be sold through existing online outlets such as Apple's App Store and Google Play. We will utilise app-store optimisation to establish the most effective ways for the app to be discoverable on app stores. It is also important to consider optimising our app-store ranking, if necessary via a specialist agency such as The ASO Project, Red Box Mobile or Incipia. Other options are to do A/B testing, to find out what changes work well

and what do not, and tracking the marketplace to put the app in a favourable business position (Lab Cave, 2018). Besides the big-name app stores, it is worth considering alternative app stores that, although smaller, would offer fewer competitors as well as add-ons such as promotional opportunities.



People

Our team culture is inclusive, open and available. In order to build trust and acceptance in the deaf community, we will be accessible on social media, welcoming contributions from the community itself in the form of blogs, videos or other content that can be hosted on our channels or website.

Operations

Trading status

We will operate as a CIC (community interest company), a type of limited liability company where profits benefit the community as opposed to the shareholders. CICs are governed by the Companies Act most recently updated in 2006.

<https://www.gov.uk/government/organisations/office-of-the-regulator-of-community-interest-companies>

Employment

We will follow UK laws on contracts of employment and working hours. The founding employees will initially be employed on a part-time basis, with others employed on a contract basis.

<https://www.legislation.gov.uk/ukpga/2006/46/contents>
<https://www.gov.uk/browse/employing-people/contracts>

Insurance

We will require public-liability insurance and business contents insurance.

cont.

VAT registration

In our first year of operations, we do not expect to surpass the taxable turnover limit of £85,000, therefore we would not be required to register for VAT. However, voluntary registration would allow us to reclaim the VAT element on start-up expenses.

<https://www.gov.uk/vat-registration>

Banking arrangements

We will use a community account (a banking account specifically for not-for-profit organisations). Co-operative Bank and Natwest are notable banks that offer these services.

<https://www.co-operativebank.co.uk/business/community>

Equal opportunities

We will follow the Equality Act 2010, which aims to encourage the identification and elimination of discrimination, sexual harassment, victimisation and their causes, and to promote equal opportunities.

<https://www.gov.uk/guidance/equality-act-2010-guidance>

Health and safety

We will follow the Health and Safety at Work Act 1974. Audits will be performed yearly by an independent health-and-safety assessor. This would protect the health, safety and welfare of anyone present on our premises.

<http://www.hse.gov.uk/legislation/hswa.htm>

Environmental policy

We will adhere to any applicable environmental legislation and conduct our business in such a way as to prevent pollution and to minimise as much as possible any adverse impacts on the environment.

Risk Factors and SWOT Analysis



Strengths

ffeel is a unique, innovative and affordable app with a clear product and brand concept. Its simplicity means it will be relatively cheap and simple to develop, maintain and update based on feedback from our customers. As a team, our experience and understanding of music technology gives us a head start, and we have the advantage of ongoing advice from a senior consultant audiologist, as well as access to experts in open-source music software and app development. Distribution is straightforward yet global, while the market is active and easily defined, and **ffeel** has the potential to occupy more than one niche within it.

Weaknesses

Our most obvious weakness is a lack of deaf people or people with sign-language skills on our team. This means we will have to research our market especially thoroughly, and engage sensitively with members of the deaf community. It would be useful for at least one or two members of the team to develop some facility in British Sign Language.

Additionally, we have no direct experience in app development and distribution, and our experience of running businesses

is limited. We will be entering a fiercely competitive market where simply getting eyes on the product is a major challenge, but we can alleviate this to an extent by maintaining a positive presence on social media. Although we believe our product concept is strong, there are still technical issues to be ironed out, and we will have to work hard to keep to our timeline.

Opportunities

Our market, the deaf community, is vibrant, has a strong sense of identity and a dynamic music scene – and it is growing, estimated to reach around 10 percent of the world's population by 2050 (WHO, 2018). Mobile-phone ownership, too, is expected to reach five billion this year (Statista, 2018). Even if our product only reaches a fraction of the crossover between these two groups, the opportunities are enormous.

We hope to be the first in our field to market an app of this type. Our product is agile and adaptable according to customer demand or technological developments. We believe that, as mobile-device

capabilities increase, we can continuously improve our offering and market appeal (for example, by offering lyric displays and other visual enhancements), while investigating opportunities for licensing our underlying technologies to other developers, streaming companies and even mobile-phone manufacturers.

Threats

Although the market is growing, it is also highly volatile: there will always be the threat of new entrants to the app marketplace, and our product may also be vulnerable to new developments in hearing aids, surgical interventions and other assistive technologies, some of which may not have been invented yet. Existing players could use their market power to eclipse our offering with their own. We may strike difficulties expanding our product. However, an effective PR-style promotional campaign and inclusive social-media presence will help us gain a foothold in the self-sufficient deaf community which might be hard to budge, especially if our competitors are perceived as bullying or overly corporate.

Financial Summary

Finance in

IN-APP PURCHASES A major income source for **ffeel** will be the paid-for, second tier app. We forecast a modest amount of sales in the initial months with steady growth associated with increasing promotional activity in the second year. The second tier will be available as an optional in-app purchase at £2.99.

IN-APP ADVERTISING Another important revenue stream will be in-app advertising, either through banner ads, where a monthly payment is received for every click or download of the advertised product, or through app sponsorship, where one company will pay a larger fee for exclusive rights over advertising or to create a custom app skin. Banner ads cost approx. £20–80/month dependent on how much advertising time is required.

START-UP GRANT We will be looking to secure start-up income through grants from the National Lottery, the Tudor Trust and other foundations that support community-interest companies with one-off payments or yearly grants. The Abbey Road Red Music Tech Incubator provides funding specifically for music-tech start-ups, while Jobs Growth Wales subsidises six months' worth of wages for up to five employees below the age of 25. The average grant made by the Tudor Trust in the 2017–2018 financial year was £60,685 (Tudor Trust Grants Review 2017–2018). With a start-up grant of £70,000, we would be able to reduce the amount needed in future grants by up to £20,000 due to the net profit from the previous financial year.

TOTAL FINANCE IN: APPROX. £79,893

Finance out

STAFF AND DIRECTOR COSTS The four initial members of staff will be employed on a part-time basis working approximately 20 hrs/wk, earning £8000/yr.

RENTS AND RATES A small office space will be needed for the running of the business. A 200 ft² office in Swansea costs on average £250/month, with business rates at approximately £5/month for the space.

CAPITAL EXPENDITURE A number of items will be needed initially to allow the day-to-day running of the office, including a number of computers to allow the building and maintenance of the app as well as other administrative work. Mobile devices for testing and development, and a camera and lighting rig for publicity and promotional use, will also be required. An Adobe Creative Cloud subscription is also a necessary expenditure.

UTILITIES Electricity and internet bills will amount to around £54/month for a 200m² office space in a shared building.

ADVERTISING AND PROMOTION Advertising will be done initially through the app stores on Apple and Android; Apple charge £99/yr and the Google store is a one-time payment of £25. Advertising will also be done on other online streams to maximise the reach of the app, at a cost of approximately £250 per quarter.

LEGAL A legal team member will be required on a consultancy basis for approximately 10 hours bi-annually.

INSURANCE Public liability insurance starts from £49/hr for an adequate amount of cover.

APP DEVELOPMENT AND MAINTENANCE App development will take around 40 hours at £100/hr plus VAT, with approximately five to 10 hours of maintenance and updates required yearly thereafter.

OFFICE SUPPLIES We will need to equip the office with tables, chairs and sundry other office items.

TRAINING AND DEVELOPMENT

Further training will be required by staff to minimise future costs; the initial cost of basic app-developer and accountancy courses would total approximately £800 each.

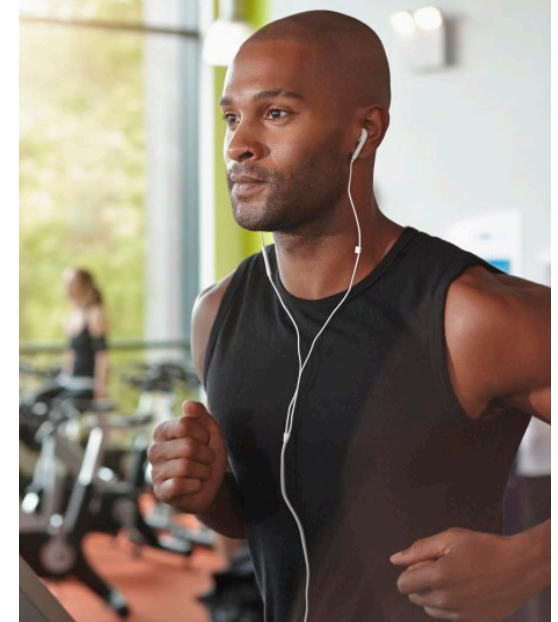
ACCOUNTANCY Accountants charge from between £10 p/h for junior accountants to £25/hr for senior accountants. This will result in a cost of approximately £1000/yr based on a senior accountant doing 10 hours of work every three months.

SEARCH-ENGINE OPTIMISATION

Search-engine optimisation (SEO) will be required to maintain high internet search rankings, for an initial seven hours at £80/hr plus VAT.

AUDIOLOGY An audiology consultant would be required for further in-depth research and development on the product at an estimated cost of £200/hr plus VAT.

TOTAL FINANCE OUT: £60,133

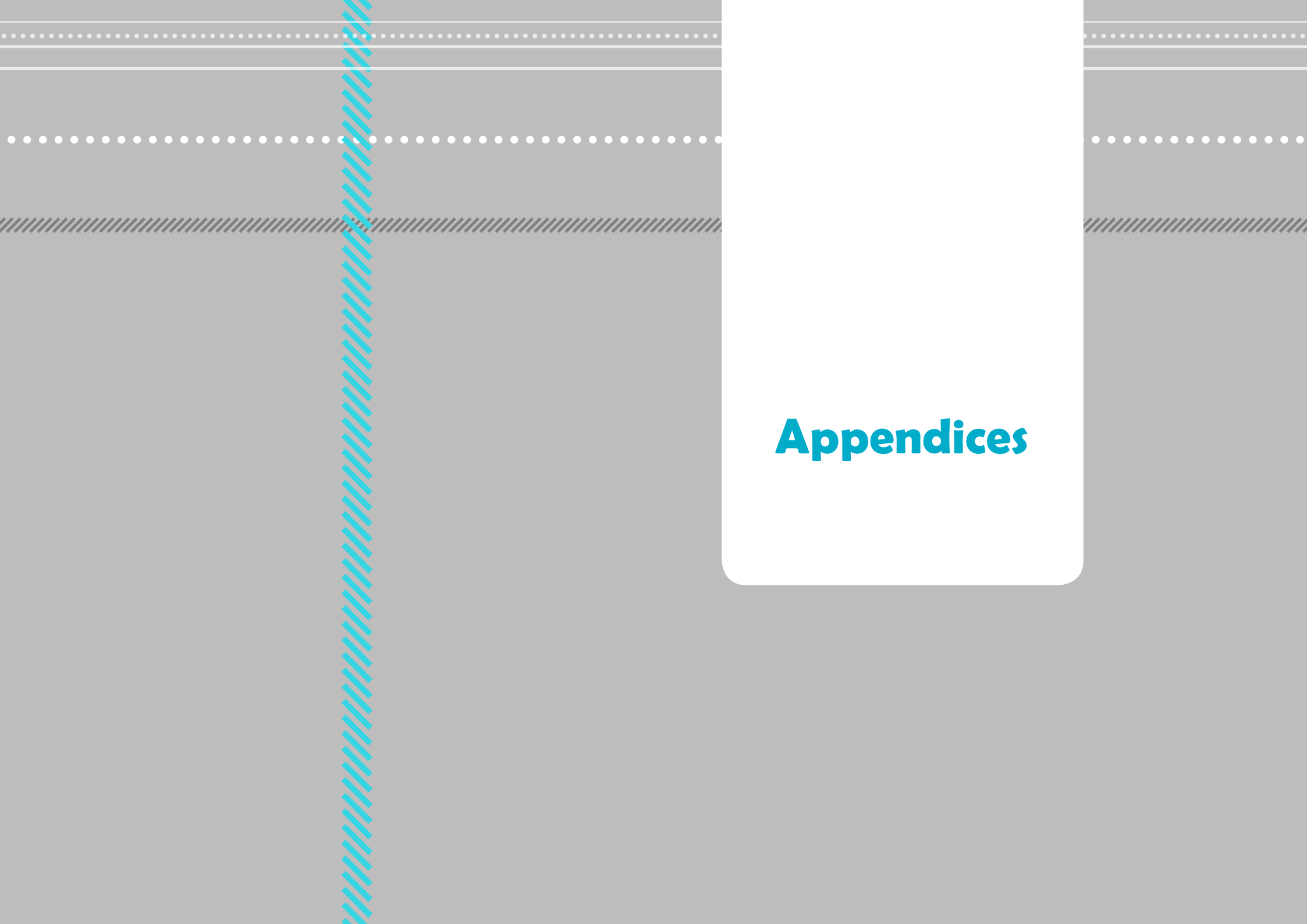


Summary

With a net profit of £19,760 in the first year of operations, and a considerable amount of the cash out being spent on one-off expenses bringing the second financial year's expenses down, the amount of grant money required will be less each year as we become more self-sustaining. In the second year, a larger scale worldwide promotion and release will increase our visibility worldwide, reducing the need for grants even further as our profitability grows.

One Year Cash-Flow Forecast

Income (£)	January	February	March	April	May	June	July	August	September	October	November	December	Total Year 1
In-app purchases	179	269	380	334	449	538	478	598	475	395	392	606	5,093
In-app banner ads	400	400	400	400	400	400	400	400	400	400	400	400	4,800
Start-up grant	70,000	0	0	0	0	0	0	0	0	0	0	0	70,000
Total income	70,579	669	780	734	849	938	878	998	875	795	792	1,006	79,893
Costs													
Staff & Director costs	2,666	2,666	2,666	2,666	2,666	2,666	2,666	2,666	2,666	2,666	2,666	2,674	32,000
Rent and rates	300	300	300	300	300	300	300	300	300	300	300	300	3,600
Capital exp. (equipment, IT etc)	9,800	0	0	0	0	0	0	0	0	0	0	0	9,800
Utilities	54	54	54	54	54	54	54	54	54	54	54	54	648
Advertising & promotion	124	250	0	0	0	250	0	0	0	250	0	0	874
Accounting	250	0	0	250	0	0	250	0	0	250	0	0	1,000
Legal	500	0	0		0	0	500	0	0	0	0	0	1,000
Insurance	49	0	0	0	0	0	0	0	0	0	0	0	49
App repairs and maintenance	4,000	0	0	250	0	0	0	250	0	0	0	250	4,750
Office supplies	800	0	0	0	0	0	0	0	0	0	0	0	800
Training & development	800	0	0	0	0	0	800	0	0	0	0	0	1,600
SEO	672	0	0	0	0	0	0	0	0	0	0	0	672
Audiology consultant	1,200	0	0	0	0	0	0	0	0	0	0	0	1,200
Technical assistance	1,920	0	0	0	0	0	0	0	0	0	0	0	1,920
Website	180	0	0	0	0	0	0	0	0	0	0	0	180
Companies House fee	40	0	0	0	0	0	0	0	0	0	0	0	40
Total expenditure	23,355	3,270	3,020	3,520	3,020	3,270	4,570	3,270	3,020	3,520	3,020	3,278	60,133
Net cash flow	47,224	-2,601	-2,240	-2,786	-2,172	-2,332	-3,692	-2,272	-2,145	-2,725	-2,228	-2,272	19,760
Bank balances													
Start of the month	0	47,224	44,623	42,383	39,597	37,426	35,094	31,402	29,130	26,985	24,260	22,032	
End of the month	47,224	44,623	42,383	39,597	37,426	35,094	31,402	29,130	26,985	24,260	22,032	19,760	



Appendices

Economic

- Changes to VAT can affect pricing.
- Funding may be hard to find.
- Interest rates may be volatile.
- Inflation requires a dynamic pricing strategy.

Political

- Brexit may have a negative effect on how tax laws and global trade work.
- Changes to copyright laws may impact on how freely the software can operate.
- Changes to Apple and Google app-store policies have in the past, and may in the future, affect the way developers deal with, for example, VAT.
- Government-supported funding schemes are subject to political whim.

Technological

- Emerging technologies may make existing tech redundant.
- Apps often have a lifecycle of popularity.
- Constant (and costly) R&D is a feature of the technology landscape.
- Copycat products are another feature of the technology landscape.
- Large companies have been involved with similar projects.

Social

- Uptake and use of technology is largely trend-directed.
- Uptake of paid apps is hard to predict.
- Products like ours are somewhat dependent on community acceptance.
- The deaf demographic may change.

PEST Analysis

References

Websites

Action on Hearing Loss (2018) *Impact Report Wales 2017*. Available at: <https://www.actiononhearingloss.org.uk/how-we-help/information-and-resources/publications/impact-reports/impact-report-wales-2017/> (Accessed 8 January 2019)

App Annie Content (2017) *Top Predictions for the App Economy in 2018*. Available at: <https://www.appannie.com/en/insights/market-data/predictions-app-economy-2018/> (Accessed 13 December 2018).

Gov.uk. (2019) *CIC Regulator: Annual Report 2017 to 2018*. Available at: <https://www.gov.uk/government/publications/cic-regulator-annual-report-2017-to-2018> (Accessed 06 January 2019).

Lab Cave (2018) *Common mistakes that you should avoid to improve your app visibility*. Available at: <http://www.businessofapps.com/insights/common-mistakes-improve-app-visibility/> (Accessed 18 December 2018)

Statista (2018) *Number of mobile phone users worldwide from 2015 to 2020*. Available at: <https://www.statista.com/statistics/274774/forecast-of-mobile-phone-users-worldwide/> (Accessed 06 January 2019)

Tudor Trust (2018) *Grants Review 2017–2018* Available at: https://tudortrust.org.uk/assets/file/TTT_Grants_List_2017-2018.pdf (Accessed 8 January 2018)

World Health Organisation (2018) *Deafness and Hearing Loss*. Available at: <https://www.who.int/news-room/fact-sheets/detail/deafness-and-hearing-loss> (Accessed 8 January 2018)

Journals

Michella Maiorana-Basas, M. and Pagliaro, C.M. (2014) 'Technology Use Among Adults Who Are Deaf and Hard of Hearing: A National Survey', *The Journal of Deaf Studies and Deaf Education*, Vol 19, Issue 3, pp 400–410. Available at: <https://doi.org/10.1093/deafed/enu005> (Accessed 8 January 2018)

Chasin, M. (2016) 'Music and hearing aids – the current state of affairs', *ENT & Audiology News*, Vol 25 No 4, pp 63–64

Cost figures

Banner advertising costs - <https://www.digitalinformationworld.com/2017/05/how-much-do-banner-ads-cost.html>

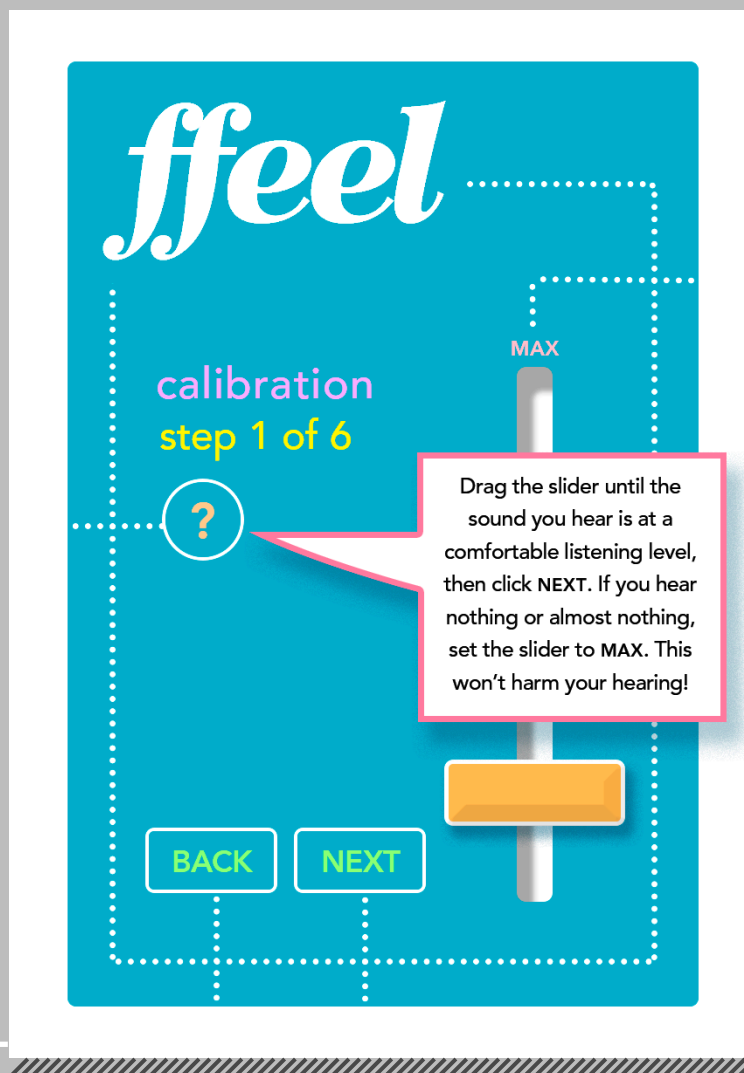
Office prices in Swansea - http://www.targetoffices.com/office-space/United-Kingdom/Swansea.aspx?source=targetDomestic++Office+Space_Swansea_%2Boffice%20%2Bspace%20

Rees, B. Head of Mobile, Syngency (New Zealand) Personal communication, December 2018

Meaden, C. CEO, Digital Nation Ltd, Swansea. Personal communication, December 2018

Taylor, T. Managing Director, Tim Taylor & Co (Accountants), Swansea. Personal communication, December 2018

Sample Designs



Screenshot



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