BitLabs

Business Plan

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Executive Summary

Software used for the production of music, known as digital audio workstations (DAWs), are increasing in popularity, with a market value forecasted to reach $1.5 billion dollars in 2026 [1]. Additionally, the improvement in computing power of laptops suggests that an increasing number of musicians are integrating DAWs into their live performances. The current most popular DAW, Ableton Live [2], was developed to accommodate live performances in reaction to this [3]. DAWs facilitate many musical functions that would alternatively require more expensive pieces of hardware, one example being applying effects to the sound of an instrument, which would conventionally be achieved by using an effects pedal or effects rack.

External control of DAWs is typically achieved using MIDI controllers. These devices have manual input elements (knobs, pads, sliders, encoders) to interface with the software. This manual form of input is, however, incompatible with playing an instrument, whereby the hands are occupied. This means that instrumentalists are left unable to control the effects and sounds being created inside the DAW whilst performing. BitLabs' hardware-software product OrBit provides an exciting opportunity for all musicians who perform and produce music digitally, by giving control over DAWs through movement. The device can be attached to an instrument or to the body, where it will sense the musician's motion and send this data wirelessly to the OrBit software. The motion data can then be used to control parameters of a wide range of effects and instruments hosted inside the DAW.

Once launched, OrBit will be sold via e-commerce sales channels to generate revenue. Customer acquisition will be aided through the distribution of the free OrBit mobile app which is being developed in parallel with the device. The app replicates some of the functionality of OrBit and will give potential customers a feel for how it can be used. Prompts to purchase the device from the webstore will be shown regularly within the app. Another source of revenue will be the sale of proprietary device accessories and software add-ons. Several products used for attaching the device have been developed, including a wrist strap and clip-on mechanism, and will be available for purchase separately. Finally, downloadable effect packs that can be loaded into the OrBit software will be sold via the webstore. These packs will include musical effects with presets that are designed specifically for use with the device, offering musicians new creative potential.

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1. Offering

OrBit offers a means of controlling music software that focuses on expression and versatility (refer to Appendix D). Using motion to control musical effects and sounds provides two extra dimensions of expression when compared to a single knob or slider found on conventional MIDI controllers. As a result, a much wider range of sonic results can be achieved. Another advantage over conventional input methods is that motion control does not require use of the fingers, which would be occupied when playing an instrument. OrBit therefore allows instrumentalists to actively control musical effects and sounds whilst performing.

There are currently three direct competitors that use motion for musical control (refer to Appendix E), one of which has been on the market since 2013 (Hot Hand USB [4]); the other two are approaching market readiness after successful crowdfunding campaigns (Neova [5] and Wave [6]). OrBit differentiates itself from these competitors with its form factor. The competitor products are all designed as rings to be located on the finger, which can be obstructive when refined finger dexterity is needed, whereas OrBit avoids this obstruction with its versatile attachments. The system uses magnets to connect the device to a peripheral (currently a wristband, clip or suction cup mechanism) that allows OrBit to be fixed to a variety of locations.

Another advantage of OrBit over its competitors is its hybrid interface. It features a large rotary dial, a central button and 12 LEDs, which facilitate ancillary functions that a musician would likely need when performing. Functions include the ability to select which effects are to be used, changing the Dry / Wet of the effect and giving visual feedback. The competitor devices either only have motion sensing capability (HotHand and Neova) or have a very small set of buttons fitted onto the ring (Wave). No interface would mean that a musician would need to use their laptop or an additional MIDI controller, which presents intrusiveness and less immediacy in a performance setting.

OrBit's unique design is of value and will be registered in the UK, EU, and other strategically identified countries. Given that the underlying technology of the OrBit device is ubiquitous, the device itself cannot be patented. Searching worldwide databases has yielded no conflict with the OrBit system and current patents. The existence of multiple similar devices on the market is further evidence of this, and so BitLabs has freedom to operate.

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2. Team

BitLabs was founded by four entrepreneurs with a background in design and engineering. The team is based in London, and combines interests in different areas of music and performance.

Paolo Rüegg

CEO

Alex Gourlay

CTO

Fan Mo

UX / UI Designer

Ian Kegler

Industrial Designer

Paolo Rüegg has previously worked on motion sensing technologies in the field of soft robotics, as well as delivered products for design consultancies. His skills include project management and hardware and software engineering.

Alex Gourlay has experience programming musical interfaces within industry and developing smartphone applications. He has been producing music using software for 5+ years.

Fan Mo has undertaken a user-centred field study in San Francisco and has experience in PCB design and manufacturer liaising.

Ian Kegler has experience designing with manufacturing considerations in mind and liaising with factories whilst working for a startup design consultancy.

To date, the BitLabs team has delivered:

- A physical prototype with full UI capability
- A software plugin for Ableton (DAW)
- A functional mobile app that emulates the UI and sensing capabilities of OrBit

Please refer to Appendix A for a detailed timeline of BitLabs' history.

Future development of OrBit relies on knowledge of motion sensing technologies, industrial design, design for manufacture, project management and deployment. The team's diverse skill set will allow BitLabs to make good judgement in the majority of cases, but there are some key work packages that need to be outsourced.

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Outsourcing

Internal shortcomings include electrical engineering and C++ software development (the language used for distributable DAW plugins). In order to circumnavigate this, work packages requiring these skills will be outsourced to electrical engineers and software development companies respectively.

As the product is developed, external counsel and guidance will be sought to determine the manufacturability of the design. This will then be verified when negotiations begin with manufacturing partners.

The team has limited experience with marketing. However, the marketing requirements of the company will be less important before the product is fully developed. As the product nears official release, marketing will play an increasingly key role. It will be decided closer to the time whether or not any consultants or staff need to be taken on in an official capacity, or if the team will be able to satisfy the requirements with some external guidance. Imperial Enterprise Lab will be used to source guidance and consultation when necessary, in addition to personal networks.

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3. Market

The Device

The music retail market had a total value of £438.2 million in 2016 - 2017, it is predicted to reach £458.4 million in 2019 and is segmented into eight sectors. BitLabs' target market sits across Amplification and DJ Equipment (15.5%) and Accessories (9%). According to a report from IBIS World, MIDI controllers and digital instruments are identified as an area of growth [7]. Based on the available market data, the total addressable market of OrBit is estimated to be £112.3 million.

The Software

The OrBit software can be used in both music composition and production. The global music composition software market was valued at $79.2 million in 2017 and is forecast to increase at compound annual growth rate (CAGR) of 21.4% during 2018 - 2023 [8]. Analysts forecast the global music production software market to grow at a CAGR of 8.65% during the period 2018-2022 [9]. The projected market size in 2026 is $1.65 billion [10].

Target User Base and Business Model

The user base of OrBit is segmented into subgroups that range from beginners to professionals; they are categorised as consumers, prosumers and professionals (refer to Appendix E). The required functionality of the product is different for users within these subgroups. Based on primary and secondary research, BitLabs has decided to target OrBit towards prosumers. The ratio between spending power and required functionality of this subgroup, as well as its size, are the most favorable.

BitLabs is implementing an innovative business strategy (refer to Appendix E). A smartphone-based version of the product will be released in tandem with the development of OrBit. The cross-platform app will be offered free of charge, and is designed to replicate the appearance and functions of the physical device. This will allow anyone with access to a smartphone to get a sense of what the physical device can achieve. The app gives users motion control of music software, enabled through the orientation sensors embedded in smartphones. By taking advantage of the ease of spreading digital assets, the addressable market is expanded globally.

Enchancia and Wave rings, direct competitors of OrBit, are in the pre-order stage and are to be sold directly through online platforms. Compared to the business strategies of their respective holding companies, BitLabs can provide a universally accessible experience of the product functionality at no cost.

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4. Traction and Route to Market

User Buying Behaviour

BitLabs recognises that the success of OrBit is highly dependent on how the core product is made available to potential customers. Rigorous user research was conducted in order to establish the needs and buying behaviour of the target user base (refer to Appendix D). The paradigm for purchasing musical equipment was identified as *trying before buying.*

A musician who wants to buy a guitar effect is likely to watch video reviews about it, but unlikely to invest in it until he or she has tried it.

Furthermore, musicians' buying choices are made within a social context. Specifically, this consists of musical partners (bands, producers, etc.), but also unacquainted idols. Therefore, the buying decisions of target users are influenced by the recommendations of their social environment.

A musician is more likely to buy a music tech product if they can use it within their musical group or attain the sound of somebody they idolise.

Route to Market

Trying out a physical product requires access to either an existing owner or a partnered retail space. As a consequence, the success of OrBit would be limited by the density of global distributors. With the revolutionary, app-reinforced business model, BitLabs bypasses this distribution bottleneck. The buying behaviour of the customer base is matched by allowing them to try the functionality before investing, and to be recommended the product independent of their location. The app acts as an advertisement platform for OrBit, but also allows the user to engage with BitLabs' development process, feature releases and the community (refer to Appendix D).

Customer Acquisition

The challenge of advertising the app remains. Following the initial hype through the Kickstarter campaign, BitLabs is following a three-point marketing approach (refer to Appendix D) to acquire new customers:

- Social Media Presence
- Artist Spotlighting
- Community Building

Since BitLabs is using purely digital traction channels, the customer acquisition cost (CAC) is kept to a minimum, projected to be £4.27 over the first two years (refer to Appendix C). The customer lifetime value (CLC) is projected to be £193, including the base price of OrBit and average software and hardware add-on spend.

Distribution Channels

Digital distribution channels include Apple's App Store and Android's Play Store. The mobile application will give users the opportunity to physically order OrBit directly through BitLabs' online store. Retail channels such as music stores are planned for the future, but not upon initial release.

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5. Impact

Expansion of Musical Expression

Music allows for a unique form of self-expression and connectedness [11]. OrBit can enhance musical expression by giving musicians full control over digital effects while they are playing. Individuals may use their movements to raise their stage presence while performing as they are not tethered to any stationary effect devices.

Expanded User Group

Many instrumentalists have so far been excluded from using instantaneous DAW effect control during their performances. OrBit allows musicians that rely heavily on their hands to reap the benefits of digitalisation by providing an interface that works for them.

New Digital Possibilities

OrBit gives musicians a new way of experimenting, allowing them to further explore and pursue their creative potential. With higher level of creative freedom, new musical expression may be achieved, adding value to the music industry and popular culture.

Future Avenues

With the community created around OrBit, individual users will be able to connect with each other, learn innovative ways to use the product and exploit the potential of digital music.

One of the future development goals for OrBit is to connect multiple devices. This would allow multiple users, whether performers or audience, to be connected and co-create music. As OrBit has a favourable form factor and is intuitive to use, it can also be used in educating people who just started experimenting with digital music. In the future, an educational mode of OrBit could be developed to meet this demand.

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6. Project Management

The delivery of OrBit is planned for February 2021. The main components of work to be carried out between May 2019 and self-sustaining revenue generation include: two fundraising stages, a finalised product design, a finalised software, manufacturing and distribution.

Key Milestones

Stage 1: Crowdfunding & Fund Matching

The crowdfunding campaign will be launched in September 2019 (w.p. 3). Provided this is successful, secondary funding will be sought in the form of angel investment (w.p. 4). If, by December 2019, the second round of funding is unsuccessful, all monies remaining from the campaign will be returned to those who pledged.

Stage 2: Product and Software development

Fully functioning electronic prototypes and specifications will be developed (w.p. 5.1, 5.2, 5.3). This will be followed by a revised product design (w.p. 5.5), driven by the geometric constraints of the outsourced PCB design (w.p. 5.4). Concurrently, the design of the software platform will be revised and a specification written (w.p. 6.1, 6.2). The development of this to a fully functional software plugin will then be outsourced to a software developer (w.p. 6.3).

Stage 3: Manufacturing and Distribution

After the design of the product and the software have been finalised, formal negotiations with manufacturing partners can begin (w.p. 5.8). Meanwhile, distribution partners in key locations around the globe can be located (w.p. 8.1). Once the manufacturing contract has been completed, the details of possible deals with distributors can be worked out (w.p. 8.2).

During all of the aforementioned stages, considered efforts will be made to stay in contact with backers and potential users. In addition to cultivating the existing community after the campaign, efforts should also be made to further publicise the product leading up to its final release (w.p. 7.1, 7.2, 7.3).

Dependencies

Although it is possible that secondary funding could be secured before the crowdfunding campaign has concluded, it is most likely to be dependent on a successful campaign. The development of a fully functioning prototype, outsourcing of the product electronics design and refinement of the product design are all dependent on two successful rounds of funding. Potential manufacturing partners can be identified any time after the second round on fundraising has been completed. Once the product design has been refined, manufacturing agreements can be finalised. Following the development of the device and the software, a successful manufacturing run and the establishment of a distribution network, OrBit will be ready for release.

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7. Risk

As a tech startup, BitLabs faces risks that could hinder its route to market. Lack of market need, lack of cash and having the wrong team are cited as being the most common causes of failure in startups [12]. By choosing Kickstarter as the primary means of finance, BitLabs also exposes itself to risks specific to crowdfunding. Mitigation strategies have been developed in response to all the identified risks and are outlined in the risk register (refer to Appendix B).

The most severe risk identified is that of a larger company producing a directly competing product that offers some of OrBit's unique selling points. This risk would become more probable if the Kickstarter campaign proves popular, as a larger music tech manufacturer may want to capitalise on the demand. Music tech companies such as Native Instruments, Akai and Novation would have greater resources and industry knowledge at their disposal. This could allow them to get to market earlier whilst OrBit is still in development, which would most likely eat into BitLabs' customer base. A competitor product could also be launched after OrBit reaches market and would also take away from the number of potential customers.

Another severe risk posed is being unable to successfully develop OrBit into a sellable product. If actualised, a strategy for remedying the situation would have to be implemented. According to Kickstarter's own terms and conditions, this would involve refunding any remaining money received, informing backers on the situation and bringing the project to "the best possible conclusion" [13]. Beyond this, as an act of consideration, the team would make further developments to the app and distribute it as a free premium version, along with free add-ons to the OrBit software to all backers.

Less probable but highly impactful risks, such as a disaster damaging places of manufacture or the failure of parts deliveries, have also been included. In these examples, OrBit is not likely to be liable for the cost of the event as manufacturing and distribution will be outsourced to other companies. However the knock-on effect of these sorts of events will still have to be mitigated if BitLabs are to fulfill product deliveries to customers in good time.

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8. Funding

This section outlines the funding sources and cash flow management strategies. Please refer to the financial plan (Appendix C) for detailed projections, covering the time from May 2019 to April 2021, two months after the projected delivery of OrBit.

Sources of Funding and Income

BitLabs is pursuing investment from several sources. A primary crowdsourcing campaign is aimed at securing initial funding and building a larger community. Secondary angel investment is also sought upon a successful Kickstarter campaign, in order to ensure fund matching. An initial personal investment is made by the founders in order to help with cash flow management. The funding amounts were determined as a result of the projected costs with respect to work packages, as detailed in the financial plan.

Income Source	*Amount*	*Estimated Time*
Crowdsourcing Campaign	£150,000 (138k net)	October 2019
Angel Investment	£100.000	December 2019 at the latest
Personal Investment	£15,000	May 2019

Key Expenses

Work Packages (WP) are distinct sets of the development targets that are allocated a specific budget for external expenses (such as materials or services). WPs can be executed internally, externally, or in a mixed fashion, as reflected in the budget and project management. There are 39 work packages with a total projected cost of £125,500 over the first two years.

Payroll compensates all employees for their services and is currently set at £1000 per person per month. This amounts to a total cost of £88,000 from the start of the Kickstarter campaign to scheduled product delivery.

Overheads include any other costs to keep the business running. The projected cost until product delivery is £9,840.

Key Savings & Cash Flow Management

BitLabs will not be taking up permanent offices. In order to guarantee cash flow, work packages have been designed to run asynchronously, in order to ensure productivity is not lost in case of cash squeezes. The cumulative total in the financial plan contains monthly cash flow projections.

Fund Matching Failure

BitLabs recognises that it will not be able to deliver the full hardware product without primary and secondary funding. Should funding not be secured at any stage, the enterprise will halt development. If primary funding fails, secondary funding will not be sought. Should secondary funding fail, Kickstarter backers will be refunded the remaining crowdfunding fund (minus Kickstarter and payment fees), and will receive a premium version of the mobile app. Work packages are distributed in a way to minimise expenses until secondary funding is secured, in order to repay the maximum amount possible to backers in the case of fund matching failure.

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9. Choice of Funding Pathway

BitLabs has chosen crowdfunding as the primary means of funding, and angel investment as the secondary pathway, for the following reasons.

Community

A crowdfunding campaign is not only a way of funding, but also a great opportunity to build a community, even before the product is launched. As the performing industry has a strong focus on learning and sharing, it is important to create a community for the users.

Hype

BitLabs wants its users to be excited about OrBit. A crowdfunding page is easy for people to share around the Internet. Eye-catching visuals and videos can communicate the product to consumers in an accessible and engaging way. Combined with social media marketing, a crowdfunding campaign also allows BitLabs to reach a large number of people who are potential backers to the project.

Feedback and Validation

The concept of OrBit can be further validated through a crowdfunding campaign, so that BitLabs can better understand the demand for OrBit. It also creates a source of user data (e.g. comments and questions on the Kickstarter page) which is valuable for gaining insights for further product development.

Comparison with Other Funding Methods

Unlike an Indiegogo campaign, Kickstarter requires approval before a campaign can be launched and are thus more credible. A successful Kickstarter campaign is a good validation of the concept and demand, sustaining product development and helping to attract funding from angel investors.

Equity investors expect the company to have bigger impact and return than backers in a crowdfunding campaign. Therefore, BitLabs will seek equity investment after a successful campaign, due to the market validation it will provide.

Projects suitable for grant funding are research-based. They tend to have bigger social impact and greater commercial potential. Since OrBit is a non research-based consumer product in the technology and entertainment industry, a crowdfunding campaign is the most suitable. To ensure fund matching, BitLabs will seek further funding from angel investor networks after a successful Kickstarter.

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References

[1] Transparency Market Research (2018). Digital Audio Workstations Market. Available from: www.transparencymarketresearch.com/digital-audio-workstations-market.html [Accessed 8th May 2019].

[2] The Top 11 Most Popular DAWs (2015). ASK AUDIO. Available from: ask.audio/articles/the-top-11-most-popular-daws-you-voted-for [Accessed 8th May 2019].

[3] Tusa, Scott. Getting Started with Ableton Live. O'Reilly Digital Media.

[4] Hot Hand USB. Source Audio. Available from: www.sourceaudio.net/hot-hand-usb.html [Accessed 11h May 2019].

[5] Neova | A Unique Connected Ring for Musicians. Enhancia. Available from: www.kickstarter.com/projects/1618180096/neova-a-unique-connected-ring-for-musicians/description. [Accessed 11th May 2019].

[6] Wave - control sounds with motion. Genki Instruments. Available from: www.kickstarter.com/projects/1618180096/neova-a-unique-connected-ring-for-musicians/description. [Accessed 11th May 2019].

[7] ThoughtShift. (2019). Music and Musical Instrument Retail Market Trends and Statistics By Tim Bogan @ThoughtShiftUK. [online] Available at: https://www.thoughtshift.co.uk/music-and-musical-instrument-retail-trends-and-statistics/

[8] Psmarketresearch.com. (2019). Music Composing Software Market | Industry Share Report, 2023. [online] Available at: https://www.psmarketresearch.com/market-analysis/music-composing-software-market

[9] WIRE, B. (2019). Global Music Production Software Market Analysis & Forecasts 2018-2022, With an Expected CAGR of 8.65% - ResearchAndMarkets.com. [online] Businesswire.com. Available at: https://www.businesswire.com/news/home/20180807005399/en/Global-Music-Production-Software-Market-Analysis-Forecasts

[10] Transparency Market Research (2018). Digital Audio Workstations Market. Available from: www.transparencymarketresearch.com/digital-audio-workstations-market.html [Accessed 8th May 2019]

[11] Schulkin, J. and Raglan, G. (2019). *The evolution of music and human social capability*.

[12] Quake Capital. *The Top 10 Reasons Startups Fail* (2018). Available at: medium.com/swlh/the-top-10-reasons-startups-fail-ab3196d70568. [Accessed 14th May 2019]

[13] Kickstarter. *Terms of Use.* (2018). Available at: www.kickstarter.com/section4?ref=faq-basics_creatoroblig [Accessed 14th May 2019]

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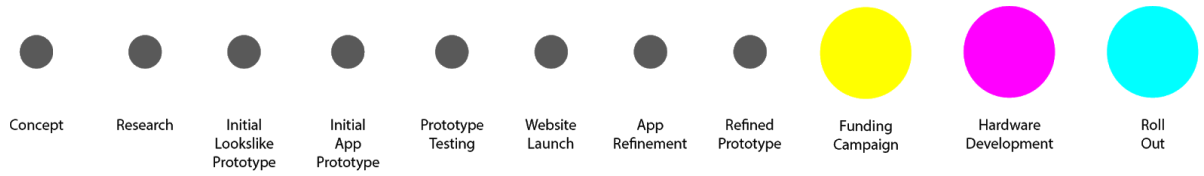
Appendix

A. Project Plan

Please find work packages (w.p.) for the first two years outlined here, on the sheet 'Project Plan', in addition to the table below.

Timeline



Milestones

Stage 1: Crowdfunding & Fund Matching	*Stage 2: Product and Software development*	*Stage 3: Manufacturing and Distribution*
1) Functional app development		
2) Looks-like prototype		
3) Crowdfunding campaign		
4) Angel Investment		
	5) Development of hardware product	Factory negotiations, tooling and first manufacturing run
	6) Development of software platform	
		7) Cultivation of community
		8) Preparation of hardware distribution
		9) Release of software platform
		10) Release of hardware product

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Work Packages

ID	Milestone	Name	Description	Estimated Time (weeks)	Dependencies	Internal/External	Type of External
1.1	Functional app development	Front-end app development	Implement looks-like interface in mobile app	<1	2.1	Int	
1.2		Device motion tracking	Develop system for calibrating and measuring motion	<1		Int	Quaternion maths specialist
1.3		Desktop software development	Develop desktop software package (Max4Live and node.js server)	1		Int	
1.4		App & desktop software development and deployment	Software developed further and application operates and is available on all desired mobile platforms	4	1.1, 1.2, 1.3	Int	
2.1	Looks-like prototype	Finalise UI	Design simple intuitive interface to control product	<1	NA	Int	
2.2		Develop physical design	Finish detailed product design in order to prototype	1	2.1	Int	
2.3		Works-like UI prototype	UI prototype with external electronics	1	2.2	Int	
2.4		Looks-like portable prototype	Prototype to be shown in situ	1	2.2	Int	
3.1	Crowdfunding campaign	Video - shooting	Additional material shot providing more information about project story, project team and how the product is used	<1	2.3, 2.4	Int	
3.2		Video - editing	Re-editing of webite video and combination with new material	1	3.1	Int	
3.3		Additional content	Additional content for the campiagn including text, images and gifs	1	2.3, 2.4	Int	
3.4		Hype building and advertising	Connections and potential buyers brought on-board before crowd funding release	4		Int	
4.1	Angel Investment	Finalise ask	Define exactly what our ideal angel agreement would look like	2		Int / Ext	Angel Consultant (1 hour)
4.2		Deck finalised	Development of pitch deck including product/business/financial information	2	3.3	Int / Ext	Have several contacts look over it
4.3		Pitch practice	Refining of pitch	4	4.2	Int	
4.4		Angel target research	Research into who best to approach	8		Int	
4.5		Angel pitching	Pitch our ass off and hope something sticks	8	4.1, 4.2, 4.3, 4.4	Int	
5.1	Development of hardware product	Further user-testing	Engage with user-base and test proposed product functionality and UI	2	2.1, 2.2, 2.3, 2.4	Int	
5.2		Develop functioning prototype	Develop fully functioning electronic prototype taking user-research into account	8	5.1	Int	
5.3		Produce full electronics specification	Use prototype to develop full electronics specification	<1	5.2	Int / Ext	Have an electronic engineer look over it
5.4		Develop board for manufacturing	Develop the product electronics for manufacture based on the updated product specification	8	5.3	Ext	Outsource electronics design
5.5		Develop product design	Develop the design of the physical product taking into account user research, manufacturing constraints and the electronics specification	8	5.1, 5.4	Int / Ext	Manufacturing engineer consultant
5.6		Update product specification	Update specification to include constraints from the developed product design	<1	5.5	Int	
5.7		Find manufacturing partner(s)	Find manufacturing partner(s) who will make physical components, make and assemble electronic components and assemble final product	8		Int	
5.8		Liaise with factory and tooling	Ensure quality and negotiate contract with manufacturing partners	8	5.6, 5.7	Int / Ext	Legal costs
5.9		Verification of samples	Verify production samples	8		Int / Ext	
5.10		First manufacturing run	First round of manufacturing, batch of 1000	4		Ext	Manufacturing partner
5.11		Transport to distribution partners	First batch sent to distribution partner	4		Ext	Key locations outlined in report
6.1	Development of software platform	Revised software specification	Define functionality and specification of software platform	2		Int	
6.2		Design interface	Develop the UI of the software platform	4	6.1	Int	
6.3		Develop software	Develop and code software	12	6.1, 6.2	Ext	Outsource software development
7.1	Cultivation of community (Marketing)	Email newsletters	Setup and maintainance of weekly newsletters	NA		Int	
7.2		Social media	Setup and maintainance of social media presence	NA		Int	
7.3		Musician endorsements	Musicians approached and brought onboard to endorse the product	NA		Int	
8.1	Hardware distribution and release	Distribution partners identified	Identify distribution partner(s)	8		Int / Ext	Distribution expert consultant
8.2		Distribution negotiations	Negotiate distribution deal with partner(s)	4	5.8	Int / Ext	Legal advice
8.3		Marketing material and pre-launch campaign	Design and manufacture marketing material for distributors	4	8.1	Int	
8.4		Create online store	Develop website to include online retail and software download	4	8.1	Int / Ext	Outsource hosting of online store, find payment service
9.1	Release of software platform	Release software online	Develop website to include software download	<1	6.3	Int	
9.2		Customer service/support	Respond to queries pertaining to the software	NA	9.1	Int	
10.1	Release of hardware product	Release of product online	Make hardware product available online	<1	5.11	Int	
10.2		Customer service/support	Respond to queries pertaining to the hardware product	NA	10.1	Int	

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B. Risk Register

Please find the risk register here.

Risk No.	Risk Category	Risk	Impact	Probability	Risk Rating	Mitigating Action	Contingency Action	Control Rating	Residual Risk
1	Competition	A larger music tech company releases a competing product	2	3	6	Protect the design, get to market as quickly as possible	Try and match competitor on price, add new features of competitor product to OrBit	1	5
2	Product	Team is unable to deliver product after successful funding	3	2	6	Make the company limited liability	Offer refunds, detailing exactly how funds were used, alongside premium app version + software.	1	5
3	Funding	VC funding not acquired	3	2	6	Create a strong offering, approach as many VC firms as possible	Look for an angel investor	2	4
4	Customer Base	The addressable market is smaller than expected	2	2	4	-	Adjust financial plan to accomodate lower revenue	1	3
5	Catastrophe	Disaster heavily damages manufacturing facilities	3	1	3	Maintain good relationship with other manufacturers	Inform buyers of delays to their orders.	1	2
6	Catastrophe	Disaster heavily damages storage facilities	3	1	3	Store stock across different locations. Insurance.	Claim losses on insurance	2	1
7	People	Key team member departs	1	2	2	Have all members sign NDA.	Search for replacement team member	1	1
8	Product	Device is faulty	3	1	3	Extensive testing and quality control.	If a critical fault, make product recall. If non-critical, halt manufacturing and ammend design	2	1
9	Product	Scope creep	1	2	2	Weekly review sessions on whether new routes of development should be taken on features	Cut down deliverables and product	1	1
10	Supplies	Parts for manufacturing are failed to be delivered	3	1	3	Keep in regular contact with suppliers	Hold production and delay orders of other parts	2	1
11	Technological Change	DAWs become outdated as a music production/performance tool	3	1	3	-	Adapt product for compatability with new music platform	2	1
12	Competition	Another company infringes on BitLabs IP	2	1	2	Protect the design in as many countries as feasibly possible	Shame them on social media	2	0
13	Exchange Rates	Weaker GBP causes increase in imported supply costs	1	2	2	Retail product with a profit margin accounting for forecast future increases in supply costs	-	2	0
14	Funding	Kickstarter target is not met	3	1	3	Create a strong offering, advertise the Kickstarter project on social media channels	Refund existing backers -> take down Kickstarter page -> Further develop product -> Try again	3	0
15	IT	OrBit server goes down	2	1	2	Make product functional offline	Seek technical assistance	2	0
16	Product	OrBit infringes on 3rd party IP	2	1	2	Review international patents monthly	If mitigating action is taken, infringements will be flagged and removed from design. If on production model.. prepare for potential lawsuit	2	0
17	Supplies	Increase in import duties	1	2	2	-	-	2	0
18	Reputational	Offensive or controversial material is made public	3	1	3	Have all company posts checked by at least 2 individuals.	Offer appropriate apologies. Disciplinary action for wrongdoer.	3	0
19	Reputational	Company gains poor customer service reputation	2	1	2	Ensure customer service is adequately staffed to meet needs. And that CS workers are well educated on the product.	-	2	0
20	Distribution	Products damaged during distribution	2	1	2	Insurance, have surplus manufactured and stored if cash permits.	Reclaim losses on insurance (most likely distributors cover).	2	0
21	Fraud	Personal data leak	2	1	2	Implement strong cyber security practices	Disconnect server. Send out apology email to those affected. Make improvements to security of system.	3	-1
22	IT	BitLabs webstore goes down	1	1	1	-	Seek technical assistance	2	-1
23	Product	Software is faulty	1	2	2	Extensive testing.	Debug and release as software update	3	-1
24	Supplies	Stock components increase in price	2	1	2	-	Look for cheaper exact alternative	3	-1
25	Technological Change	New components emerge that outperform components of the device	1	2	2	-	Try and incorporate new components into future design	3	-1

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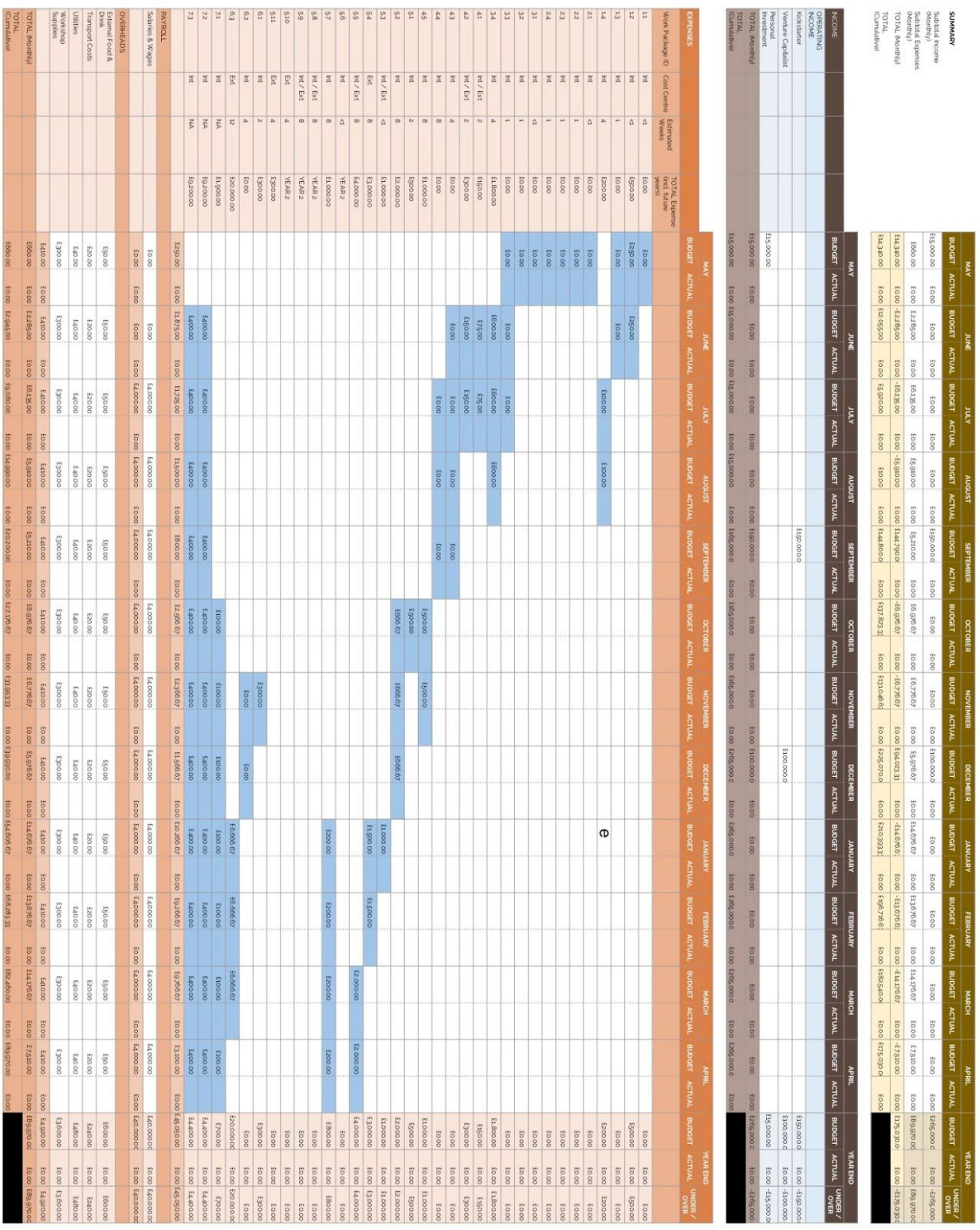
C. Cash Flow Forecasts and Financial Projections

Please find the digital version of the financial plan for the first two years here, on the sheet 'Financial Year 1', 'Financial Year 2' and 'Customer Acquisition Cost & Lifetime Value'. Cash Flow forecasts can be taken from row eight [TOTAL (Cumulative)].



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BitLabs Financial Plan | Year Two

SUMMARY	MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		YEAR END		
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	UNDER / OVER
Subtotal Income (Monthly)	£175,030.0	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£175,030.0	£0.00	-£175,030.0
Subtotal Expenses (Monthly)	£5,910.00	£0.00	£11,976.67	£0.00	£11,976.67	£0.00	£12,176.67	£0.00	£6,510.00	£0.00	£6,560.00	£0.00	£27,310.00	£0.00	£27,710.00	£0.00	£6,210.00	£0.00	£5,310.00	£0.00	£5,310.00	£0.00	£5,310.00	£0.00	£133,370.0	£0.00	£133,370.0
TOTAL (Monthly)	£169,120.0	£0.00	-£11,976.67	£0.00	-£11,976.67	£0.00	-£12,176.67	£0.00	-£6,510.00	£0.00	-£6,560.00	£0.00	-£27,310.0	£0.00	-£27,710.0	£0.00	-£6,210.00	£0.00	-£5,310.00	£0.00	-£5,310.00	£0.00	-£5,310.00	£0.00	£41,660.00	£0.00	-£41,660.0
TOTAL (Cumulative)	£169,120.0	£0.00	£157,143.33	£0.00	£145,166.67	£0.00	£132,990.0	£0.00	£126,480.0	£0.00	£119,920.0	£0.00	£92,610.00	£0.00	£64,900.00	£0.00	£58,690.00	£0.00	£53,380.00	£0.00	£48,070.00	£0.00	£42,760.00	£0.00			

INCOME				MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		YEAR END		
				BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	UNDER / OVER
OPERATING INCOME																														
Leftover from Year 1				£175,030.0																								£175,030.0	£0.00	-£175,030.0
TOTAL				£175,030.0	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£175,030.0	£0.00	-£175,030.0
TOTAL (Cumulative)				£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00	£175,030.0	£0.00			

EXPENSES				MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		YEAR END		
Work Package ID	Cost Centre	Estimated Weeks	TOTAL Expense (incl. past years)	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	UNDER / OVER
5.6	Int	<1	£400.00	£400.00																								£400.00	£0.00	£400.00
5.7	Int	8	£1,000.00	£200.00																								£200.00	£0.00	£200.00
5.8	Int / Ext	8	£20,000.00			£6,666.67		£6,666.67		£6,666.67																		£20,000.0	£0.00	£20,000.0
5.9	Int / Ext	8	£2,000.00									£1,000.00		£1,000.00														£2,000.00	£0.00	£2,000.00
5.10	Ext	4	£40,000.00													£20,000.0		£20,000.0										£40,000.0	£0.00	£40,000.0
5.11	Ext	4	£800.00															£400.00		£400.00								£800.00	£0.00	£800.00
6.1	Int	2	YEAR 1																									£0.00	£0.00	£0.00
6.2	Int	4	YEAR 1																									£0.00	£0.00	£0.00
6.3	Ext	12	£30,000.00																									£0.00	£0.00	£0.00
7.1	Int	NA	£1,900.00	£100.00		£100.00		£100.00		£100.00		£100.00		£100.00		£100.00		£100.00		£100.00		£100.00		£100.00		£100.00		£1,200.00	£0.00	£1,200.00
7.2	Int	NA	£9,200.00	£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£4,800.00	£0.00	£4,800.00
7.3	Int	NA	£9,200.00	£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£400.00		£4,800.00	£0.00	£4,800.00
8.1	Int / Ext	8	£400.00							£200.00		£200.00																£400.00	£0.00	£400.00
8.2	Int / Ext	4	£250.00											£250.00														£250.00	£0.00	£250.00
8.3	Int	4	£4,000.00													£2,000.00		£2,000.00										£4,000.00	£0.00	£4,000.00
8.4	Int / Ext	4	£500.00																	£500.00								£500.00	£0.00	£500.00
9.1	Int	<1	£400.00																			£300.00						£300.00	£0.00	£300.00
9.2	Int	NA	£300.00																			£100.00		£100.00		£100.00		£300.00	£0.00	£300.00
10.1	Int	<1	£200.00																			£200.00						£200.00	£0.00	£200.00
10.2	Int	NA	£300.00																			£100.00		£100.00		£100.00		£300.00	£0.00	£300.00
				£1,500.00	£0.00	£7,566.67	£0.00	£7,566.67	£0.00	£7,766.67	£0.00	£2,100.00	£0.00	£2,150.00	£0.00	£22,900.00	£0.00	£23,300.00	£0.00	£1,800.00	£0.00	£900.00	£0.00	£900.00	£0.00	£900.00	£0.00	£80,450.00	£0.00	£80,450.00
PAYROLL																														
Salaries & Wages				£4,000.00		£4,000.00		£4,000.00		£4,000.00		£4,000.00		£4,000.00		£4,000.00		£4,000.00		£4,000.00		£4,000.00		£4,000.00		£4,000.00		£48,000.0	£0.00	£48,000.0
				£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£4,000.00	£0.00	£48,000.0	£0.00	£48,000.0
OVERHEADS																														
External Food & Drink				£50.00		£50.00		£50.00		£50.00		£50.00		£50.00		£50.00		£50.00		£50.00		£50.00		£50.00		£50.00		£600.00	£0.00	£600.00
Transport Costs				£20.00		£20.00		£20.00		£20.00		£20.00		£20.00		£20.00		£20.00		£20.00		£20.00		£20.00		£20.00		£240.00	£0.00	£240.00
Utilities				£40.00		£40.00		£40.00		£40.00		£40.00		£40.00		£40.00		£40.00		£40.00		£40.00		£40.00		£40.00		£480.00	£0.00	£480.00
Workshop Supplies				£300.00		£300.00		£300.00		£300.00		£300.00		£300.00		£300.00		£300.00		£300.00		£300.00		£300.00		£300.00		£3,600.00	£0.00	£3,600.00
				£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£410.00	£0.00	£4,920.00	£0.00	£4,920.00
TOTAL				£5,910.00	£0.00	£11,976.67	£0.00	£11,976.67	£0.00	£12,176.67	£0.00	£6,510.00	£0.00	£6,560.00	£0.00	£27,310.00	£0.00	£27,710.00	£0.00	£6,210.00	£0.00	£5,310.00	£0.00	£5,310.00	£0.00	£5,310.00	£0.00	£133,370.0	£0.00	£133,370.0
TOTAL (Cumulative)				£5,910.00	£0.00	£17,886.67	£0.00	£29,863.33	£0.00	£42,040.00	£0.00	£48,550.00	£0.00	£55,110.00	£0.00	£82,420.00	£0.00	£110,130.0	£0.00	£116,340.0	£0.00	£121,650.0	£0.00	£126,960.0	£0.00	£132,270.0	£0.00			

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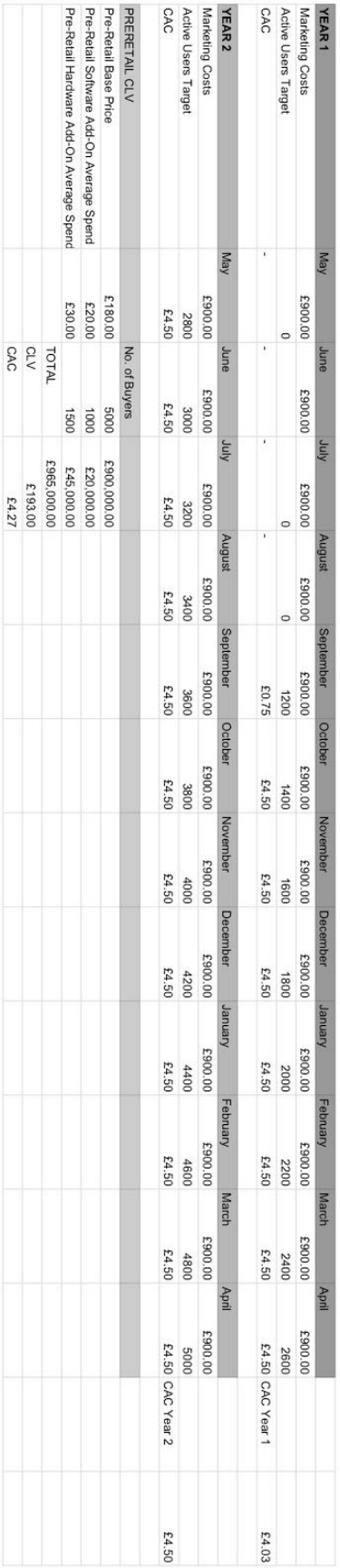
Customer Acquisition Cost & Customer Lifetime Value



YEAR 1		May	June	July	August	September	October	November	December	January	February	March	April		
Marketing Costs		£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00		
Active Users Target		0		0	0	1200	1400	1600	1800	2000	2200	2400	2600		
CAC		-	-	-	-	£0.75	£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	CAC Year 1	£4.03
YEAR 2		May	June	July	August	September	October	November	December	January	February	March	April		
Marketing Costs		£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00	£900.00		
Active Users Target		2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000		
CAC		£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	£4.50	CAC Year 2	£4.50
PRERETAIL CLV			No. of Buyers												
Pre-Retail Base Price	£180.00		5000	£900,000.00											
Pre-Retail Software Add-On Average Spend	£20.00		1000	£20,000.00											
Pre-Retail Hardware Add-On Average Spend	£30.00		1500	£45,000.00											
			TOTAL	£965,000.00											
			CLV	£193.00											
			CAC	£4.27											

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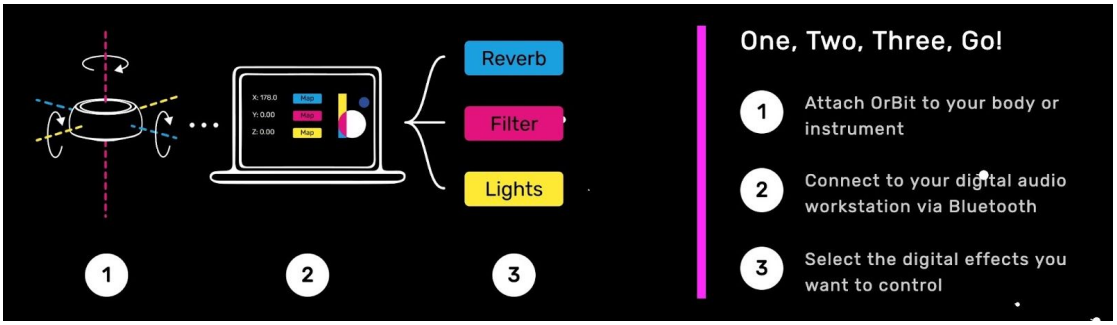
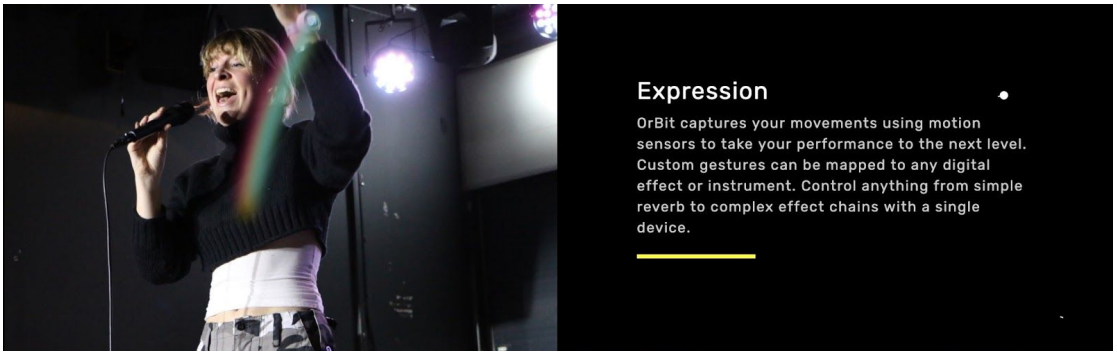
D. Offering

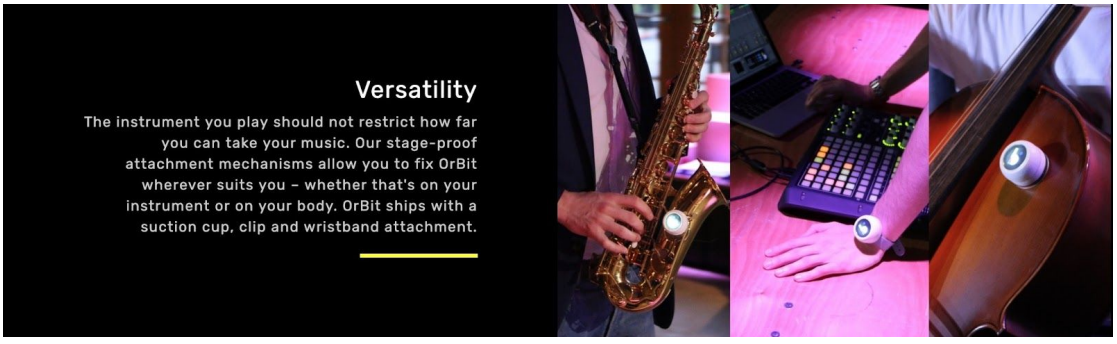
Please find BitLabs' public-facing website here including the initial concept video. It contains all the relevant information about the product offering.

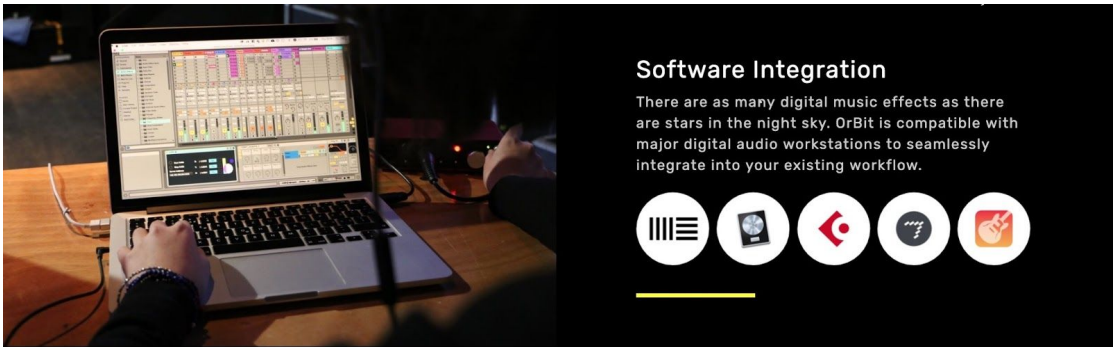
Core Functionality



Product DNA







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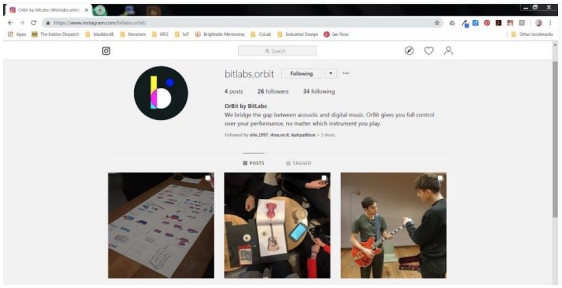
Marketing Strategy



Social Media

We will use targeted advertising to match viewers with musical aspirations to our adverts.

Featured Artists

BitLabs will exploit its location in London, a musical hotspot, to spotlight local and international musicians using our product.

Community

BitLabs knows that the music scene is highly connected, which is why we aim to provide a community platform. Presets can be distributed and downloaded by users. By making our mobile prototype accessible to both beginners and experienced musicians, we want to share the excitement our product can bring with everyone.

User Research: Engagement

Musician Surveys

Using low-fidelity prototypes, user feedback was collected in order to understand where instrumentalists might like to put the device. This informtion was directly used in the development of the first generation of attachments. Almost all interviewees were willing to attach the device to their instrument and said suction cups were an appropriate means of attachment.

Performance Session

Our most recent user engagement was filming our promotional video during which we gathered strong positive feedback. Vocalists, in particular, enjoyed controlling elements of their performance that they previously had no access to.

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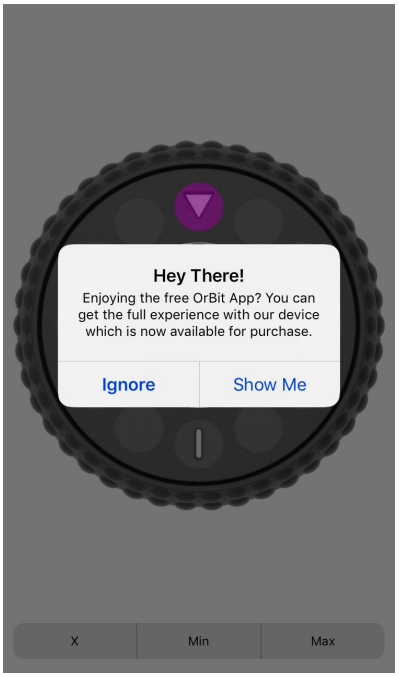
User Research: Testimonials

Natalie
Jazz Singer
OrBit turned the music I was making at the moment into a completely one-off show. I value original performance and love that each show could become a whole different atmosphere depending my movements!

Ben
Saxophonist
OrBit allows me to express myself when I'm playing in a unique and exciting new way.

Chiara
Singer-Songwriter
Pedals are messy. OrBit solves that problem. You program the different effects that you need and change them with simple movements

App



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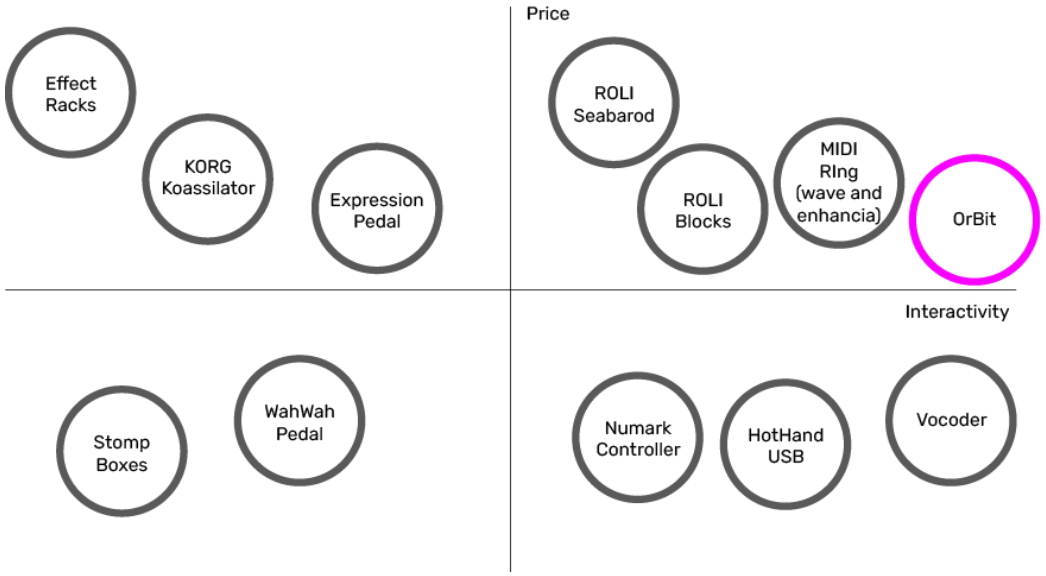
E. Competitions

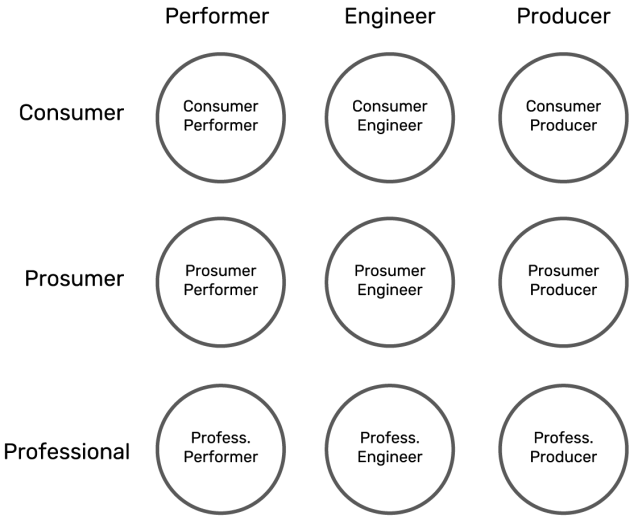
Benchmark Analysis



Business Strategy

Free	Paid	
Lite Software	Full Software	Subscription
Mobile Application	Orbit Device and Accessories	Direct Sales

User Base Segmentation



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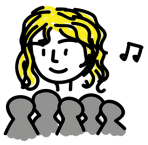
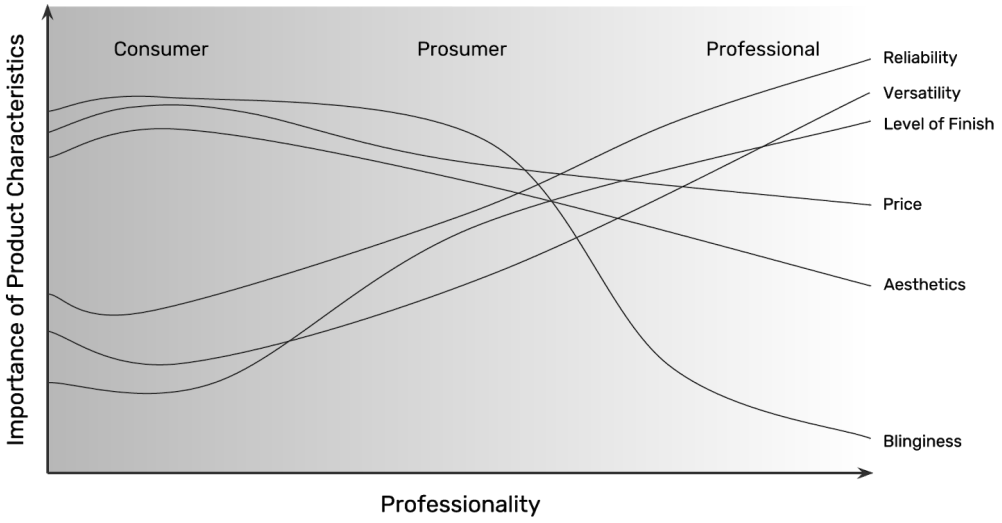
User Preference Analysis

		
Consumer	Prosumer	Professional
Consumers may not have much music experience but have a general interest in music gadgets. They usually have a limited budget for a device and use it primarily for entertainment. The interaction needs to be fun for them in order to keep them interested.	Prosumers have more experience with music products and buy them primarily to expand their musical possibilities. They hope the device can be a tool which improves their music and helps them gain more exposure. They might tend to buy a product which is more of a tool rather than a toy. More importantly, OrBit needs to give them useful feedback and allow them to interact with music in a meaningful way.	For music professionals or performing artists precise control over their performance is very important. Therefore, their requirements on functionality are higher than any other user group. The device must be robust, reliable and exact.



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