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Octavia

CONCEPTUAL DEVELOPMENT AND MARKET AND VIABILITY STUDY OF A MUSIC PRODUCTION SOFTWARE AND HARDWARE COMPANY

FINAL DEGREE STUDY

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Report

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To those who dedicate their time to beautifying life through making music.

ABSTRACT

The purpose of this work is to study the music production market in order to find a space in it that brings the opportunity to create a company that develops software and hardware specifically dedicated to music production and see if the company is viable to be implemented in real life.

To obtain results from this study, we will develop a marketing plan and an economic study. The first part of the marketing plan consists in developing an investigation with the objective to determine how the company should operate basing on the user's experience, followed by an analysis of the microenvironment, the macroenvironment, and the internal structure, that will conclude with a S.W.O.T. and C.A.M.E. of the company. Then, we'll set the different goals and strategies of the company, to end up determining the products, its price, the placement, and promotion. The final phase of the marketing plan is the determination of the KPIs and the consideration of the contingency plans. Finally, we'll develop the financial plan where the viability of the company will be evaluated.

After the study, we found that there are some changes that can be implemented in the music production companies. The different D.A.W.s that are on the market can be updated focusing on the online connectivity, which would bring a new world of possibilities. Even though the economic requirement to start a company of this kind is quite considerable, the viability study shows good results thought time and a promising future.

RESUM

L'objectiu d'aquest treball és estudiar el marcat de la producció musical per tal de trobar un espai que doni l'oportunitat de crear una empresa que desenvolupi software i hardware específicament dedicat a la producció musica, així com veure si es viable implementar-la en la vida real.

Per obtenir resultats d'aquest estudi, desenvoluparem un pla de màrqueting i un estudi econòmic. La primera part del pla de màrqueting consisteix en desenvolupar una investigació amb l'objectiu de determinar com ha d'operar l'empresa basant-nos en l'experiència dels usuaris, seguit d'un anàlisi del microentorn, el macroentorn i la estructura interna, que conclourà amb la D.A.F.O. i el C.A.M.E. de l'empresa. Després, establirem el diferents objectius i estratègies per acabar determinant els productes, els preus, la distribució i la promoció. La fase final del pla de màrqueting es la determinació dels KPIs i la consideració dels plans de contingència. Finalment, desenvoluparem el pla financer on la viabilitat de l'empresa serà avaluada.

Un cop realitzat l'estudi, hem trobat diversos canvis que poden ser implementats en les empreses de producció musical. Les diferents D.A.W.s que es troben al mercat poden actualitzar-se centrant-se en la connectivitat en línia, que aportaria un nou món de possibilitats. Tot i que el requeriment econòmic per començar una empresa d'aquest estil es força considerable, l'estudi de viabilitat mostra bons resultats en el temps i un futur prometedor.

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All tables are created by me.

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All graphics are created by me
except 6, 7, 8, 9, and 10,
which are from Google Trends.

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1. INTRODUCTION

1.1. Motivation

I been making music since 2018. Ever since, I had the opportunity to work with different products form different companies, both software and hardware, and I always tried to analyze what things are well developed and what could be improved, so all this time I been gathering some ideas on how to offer a better service and what is more valued by the users.

One thing I have learn in this time, is that the most valuable thing when creating music is comfort, because once you have an idea, the easier you can bring it to life, the better results will be obtained. So, from now on, ever decision that will be taken from the company must be chosen to accomplish the user's comfort.

I consider the final degree study a great opportunity to take a deep though into all the ideas I been gathering though the last years and study their viability in a context that I am familiarized with. That is why I proposed this topic.

1.2. Aim

The purpose of this work is to study the music production market in order to find a space in it that brings the opportunity to create a company that develops software and hardware specifically dedicated to music production, followed by a sales plan and a viability study.

The idea is to justify the development of new kinds of software and hardware to make music that gives the user a different experience distinguished from the existing companies. To accomplish this objective, we decided to implement a marketing plan.

Once the market is investigated, defined, and analyzed, we want to design the appropriate products to compete with the existing ones, by taking advantage of their errors and differentiating ourselves by adding features not seen before.

To finish, we need to develop a promotion plan, a sales plan, and a viability study to see if this proposal could be brought to reality, and what would be the expected results.

1.3. Scope

Here we can see the list of what this study will and won't include:

- **Investigate the target**. Find what does the target value and reject by doing surveys and interviews and then analyze them arriving to conclusions in order to set a starting point to develop the rest of the study.
- **Study the music production market**. Define and quantify the current situation of the market to have a clear view of how it is and how can it be approached by finding threats and opportunities.
- **Study the competence**. Define the different companies that are developing products dedicated to music production in order to find how can we compete with them by finding more threats and opportunities.
- **Develop the internal structure of the company**. Define how will our company be structured in order to find its strengths and weaknesses.
- **Design the appropriate strategies to be implemented on the company**. By gathering strengths, weaknesses, threats, and opportunities, develop a plan to bring the company to life and make it successful.

- **Develop conceptually the software product**. Define its behavior without getting into the programming.
- **Develop conceptually the hardware product**. Define its behavior and create a 3D model without getting into the electric circuit.
- **Make a promotion plan**. Develop a plan to announce the company and its products to the world in order to get the target attention.
- **Make a sales plan and study the viability**. Make a prediction of the costs and profits that the company will have to study its viability.

1.4. Requirements

Here we have a list of the requirements of this study:

- The marketing plan must follow this structure: investigation phase, analytical phase, strategic phase, operative phase, and control phase.
- The investigation phase must include both surveys and interviews, and the decisions taken on the following phases must be backed up by the results of these investigations.
- The 3D model of the hardware will be done with SOLIDWORKS software.

1.5. Background & Justification

The music production companies have been offering the same type of products for the last two decades adding only small improvements and features at a time. Due to their high level of establishment, none of them have had the need to make big changes and advances.

As we will see in future sections, music production has been growing, is growing, and it is expected to grow in the future, which places us in a remarkably interesting field to develop a company and their products.

With the possibilities that new technologies, the connectivity development, and the growing of the music producer's community, new features, functions, and ways of working could be created and implemented, which allows for new companies to create them and find a place in the market.

This study pretends to find and define what the existing companies have implemented and what they haven't, and to use new technologies and digital tools in order to develop a new company that can be stablished in the market.

1.6. Methodology

This study pretends to determine if there is a space in the music production market to set up a company and which products to develop. To achieve it, we will develop a marketing plan and an economic study. The study will be divided into the following sections:

- Investigation phase
- Analysis phase
- Strategic phase
- Operative phase
- Control phase
- Financial plan

2. KEY CONCEPTS

2.1. Music Production

Music production is the process of creating music projects. In this process, music is devised, captured, manipulated, and preserved so that anyone can enjoy it. Every song goes through it, no matter how minimalist of maximalist it ends up being. It's also the point at which high levels of technique and creativity merge, so to be a music producer requires multidisciplinary abilities.

The different stages of music production are:

- Composing consists in structuring the song and writing the lyrics, the song parts are defined, and the idea of the song is created. For example, a composer uses their guitar or piano to create an arrangement of chords and writing the lyrics.
- Beatmaking is the part where the song is developed. Starting from the initial composition, several instruments are added following the chord arrangement and creating melodies, along with the drums, and automatizations, following the structure previously stablished in the composition.
- Recording is, as the name indicates, the process of registering the voice of the singer. Normally, every verse is recorded several times and then the best take of each phrase is selected and putted on a final take, this technique is called Vocal Comping.
- Mixing is the process of editing every individual sound of the song in order to make everything sit in the mix and have its own space instead of competing with other instruments.
- Mastering, the final part of the creation of a song, is the process of adding the final touches, by slightly editing the whole song, and achieving the standard volumes of the industry in order to obtain a ready to distribute product.

To end this explanation, I would like to define music production how I once read somewhere: *"music production is the act of making an air molecule vibrate in a way that when that same molecule impacts a human body makes him feel something"*.

2.2. D.A.W.

A Digital Audio Workstation, also known as D.A.W., is a software designed for recording, producing, and editing digital audio. This kind of software provides the interface and functionality to modify the audio files to accomplish the desired results and controls all related hardware components.

The first attempts to create a D.A.W. were in the early 70s, but technology limited the development because of the short storage capacity and the processing speeds of the time. Then, in 1978, Soundstream created what is considered the first D.A.W. to be released, called Digital Editing System, which had an oscilloscope to show the waveforms. Through the 80s many consumer-based computers started to be able to handle digital audio editing, and the D.A.W. software began to develop on professional level until ProTools was released in 1991 and many major recording studios changed from analog to digital editing.

2.3. Plug-In's

Audio plug-ins are software components that permits the user to implement a specific feature on a D.A.W. You can either have plug-ins that come with the software itself, called native plugins or stock plug-ins, or you can find third-party plug-ins that you can

add to the program. Audio plug-ins classify in three types: audio generators, audio transformers, and audio analyzers.

These types of plug-ins, when are ran through Windows, use a software interface called VST, which stands for Virtual Studio Technology, that was created by Steinberg in 1996. The audio generators are called VSTi, with the "i" referring to instruments, and the audio transformers and analyzers are called VSTfx, with the "fx" referring to effects. In 1999, VST2.0 came out, which allowed plug-ins to receive M.I.D.I. data. The equivalent of VST in iOS, is called AAU, which stands for Apple Audio Units, developed by Apple.

2.4. M.I.D.I. Controller

A Digital Audio Workstation controller, it's a piece of M.I.D.I. hardware dedicated to control a D.A.W. software instead of using the mouse and keyboard via buttons, pads, faders, and knobs. Its goal is to improve the workflow of the user.

M.I.D.I. stands for musical instrument digital interface, which is a standard code language created in 1983 that allows communication between software and hardware.

Let's see the different types of elements that controllers offer:

- Buttons: As we all know, a button is a switch that controls the state of function.
- Pads: A pad, also known as touchpad, is a surface featuring a tactile sensor. Its similar to a button but instead of descending and change the state of a switch, it stays on its position.
- Faders: a fader, also known as linear potentiometer, is a type of position sensor, that measures displacement on a single axis. We can find motorized and non-motorized faders.
- Knobs: a knob, also known as rotary potentiometer, is a type of position sensor, that measures displacement on an angle-based reference. We can find motorized and non-motorized knobs. We can also classify them in 0-100 knobs, which can vary a magnitude between two defined values, and infinite knobs, which are used to switch between elements of a list.
- Displays: A display is a visual component used to show information to the user.

There are more types of M.I.D.I hardware, like a M.I.D.I. Keyboard, which is essentially a keyboard that instead of having its own sounds and speakers, it connects to the laptop or PC and is able to run the audio generator plug-ins that are on the D.A.W.

3. COMPANY PRESENTATION

3.1. Octavia

The company that will be developed in this project is Octavia. The name comes from the concept of an octave, which is the interval between a certain pitch and its double, for example, between the notes A4 (440 Hz) and A5 (880 Hz) there's an octave. It's also a hidden reference to my favorite fictional character, Octavia

Figure 1: *Octavia Logo*

Blake, also known as *Skairipa*, *Osleya*, and *Blodreina*, from *The 100*.

The two biggest lacks I see in the industry are that, first, the hardware-software relationship and control is notably improvable, and second, there is no unification between all the resources, materials, and knowledge in the music community, and nobody is monetizing them at the level that could be done.

Octavia will develop three products:

- SoundBox
- Space
- Workbench

3.2. Octavia SoundBox

I started this project with the idea to develop the concept of a different type of D.A.W., which I called Octavia SoundBox.

Figure 2: *Octavia SoundBox Logo*

Looking at the existing software's we can see they all give the user the ability to fully treat their audios and create a song from zero to end, but they all do it in their own way, which sometimes results in making themselves more leaded to a certain part of the process, for example, ProTools is focused on mixing and mastering, while Maschine is focused on production.s

My idea is to take into account the different ways to work and implement them all making the software adaptative to the user's will instead of being the other way around, as it is right now. This gives them the opportunity to create their own way of working, so they find themselves more comfortable with the program, which also makes it easier to people who are already familiarized with a certain D.A.W. to change to this one.

3.3. Octavia Space

Octavia World is a virtual store, community, and cloud storage.

Figure 3: *Octavia Space Logo*

This is going further than selling plugins, there's a long list of elements that people use when producing and mixing such as templates, presets, drumkits, loops, sounds, etc. All of them exist for free and paid and in order to find them you have to search a lot. There are some loop websites, some blogs with links to free plug-ins, forums with drumkits, everything is on the internet, but nothing is organized, and it becomes tedious to constantly search. The idea is that when you open Octavia World from your D.A.W. you can directly purchase, in case it's paid, download, and install a plug-in that's offered on the store, you can import any beat, loop, sound, or drumkit directly from the store to your projects. Also, you can generate your own and upload them to the store, the process is easier for the sellers and the buyers, and everything will be organized and centralized in a single space.

Octavia World is also a community and social network, you can ask, share, debate, and learn. You can watch and upload tutorials, create courses, save them, and keep track of what you have already watch. You can collaborate with other artists, talk, and create friendships.

Another important thing about Octavia World is that it includes a personal cloud storage where the user can save their work and everything they download from the store, that's an interesting feature because it allows changing the working system and not having to be worried about keeping the archives in an external drive or having to use a cloud outside the program.

3.4. Octavia Workbench

The piece of hardware that I designed to control Octavia SoundBox is called Octavia Workbench.

Figure 4: *Octavia Workbench Logo*

While some D.A.W. controllers are focused to work with a concrete software, none of them are motive based on extremely ease their workflow. We can acknowledge that if we consider the fact that they almost work with the same level of functionality with other programs. My idea of a concrete software hardware based is a piece of gear that is so adapted to it that doesn't even make sense to be used with other ones.

4. INVESTIGATION PHASE

4.1. Naming test survey

The following table shows the information of the naming test that we have made to decide the name of the company and the different products that we will offer.

DATA SHEET	
Used technique	Google Forms Survey
Objective	To test the acceptance of the names of the different products that the company will be developing.
Source of information	Friends of mine with interests in music.
Defined universe	7,75 million (Catalonia) [1]
Real universe	500.000 (between 18-25 years) [1]
Defined sample	63
Real sample	45
% Real/Defined sample	71.43%
Trust level	80%
Maximum expected error	15%
Sampling process	Not probabilistic for convenience
Date	15/02/2022

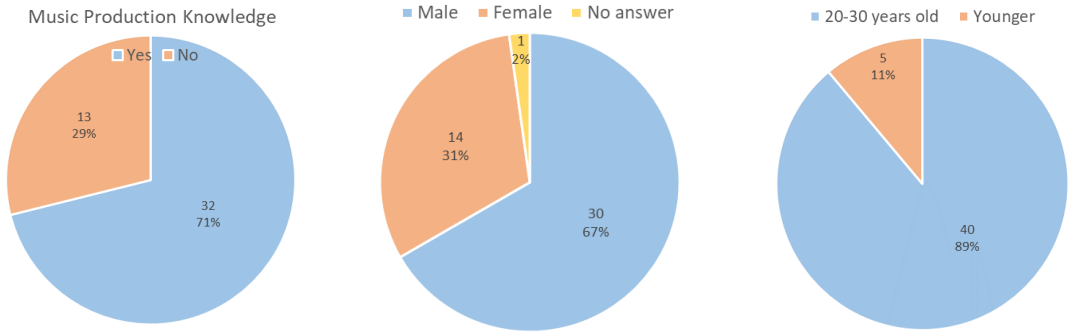
Table 1: *Naming Test Data Sheet*

The names of the company were tested by a Google Forms survey on which participants were asked about a series of names and how did they value them considering certain the following criteria:

Criteria number	Criteria	Ponderation [%]	Company/ product name	
1	Attractive	30	Punctuation	Total
2	Original	25		
3	Understandability	20		
4	Representative	15		
5	Simplicity	10		

Table 2: *Naming Test Criteria Ponderation*

In order to have highly contrasted results from the survey we should have gathered 100 responses to the Google Form. Anyhow, since this study has an academic purpose, we achieved 45 participants with the following characteristics:

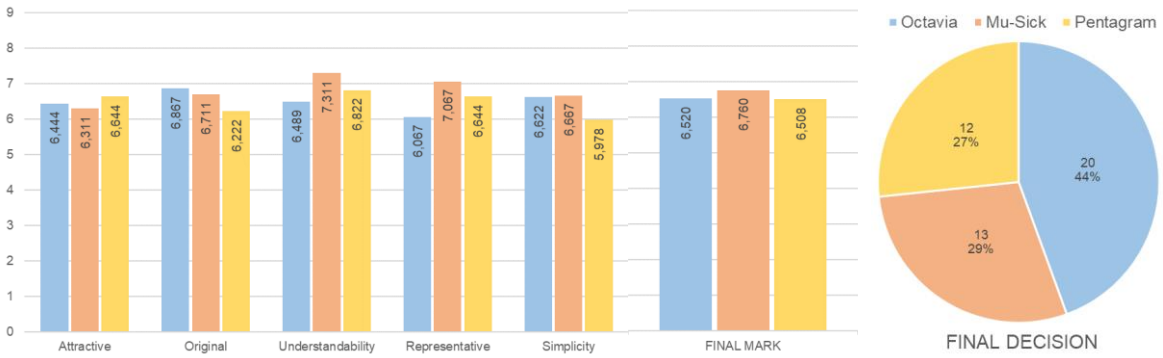


Graphic 1: *Naming Test Participants Charecteristics*

4.1.1. Company:

Criteria number	Octavia		Mu-Sick		Pentagram	
1	6,444	1,933	6,311	1,893	6,644	1,993
2	6,867	1,717	6,711	1,678	6,222	1,556
3	6,489	1,298	7,311	1,462	6,822	1,364
4	6,067	0,910	7,067	1,060	6,644	0,997
5	6,622	0,662	6,667	0,667	5,978	0,598
Total	6,520		6,760		6,508	

Table 3: *Company Naming Test Results*



Graphic 2: *Company Naming Test Results*

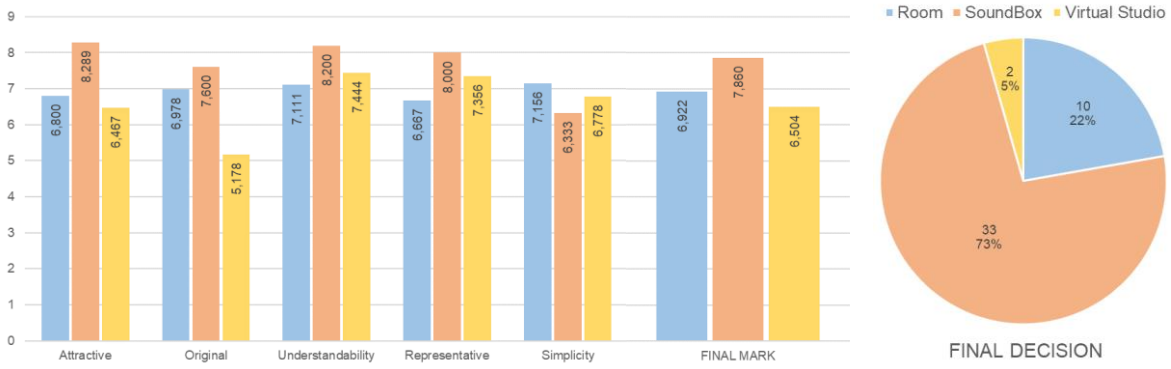
As we can see, even though Mu-Sick has the highest mark, 44% of the participants preferred Octavia as the company's name, being it the most original one.

Also, in his interview, both Victor and Ricardo though that the three names made sense but choose Octavia because it was the one who focused the most on the project.

4.1.2. D.A.W.:

Criteria number	Room		SoundBox		Virtual Studio	
1	6,800	2,040	8,289	2,487	6,467	1,940
2	6,978	1,744	7,600	1,900	5,178	1,294
3	7,111	1,422	8,200	1,640	7,444	1,489
4	6,667	1,000	8,000	1,200	7,356	1,103
5	7,156	0,715	6,333	0,633	6,778	0,678
Total	6,922		7,860		6,504	

Table 4: *D.A.W. Naming Test Results*



Graphic 3: *D.A.W. Naming Test Results*

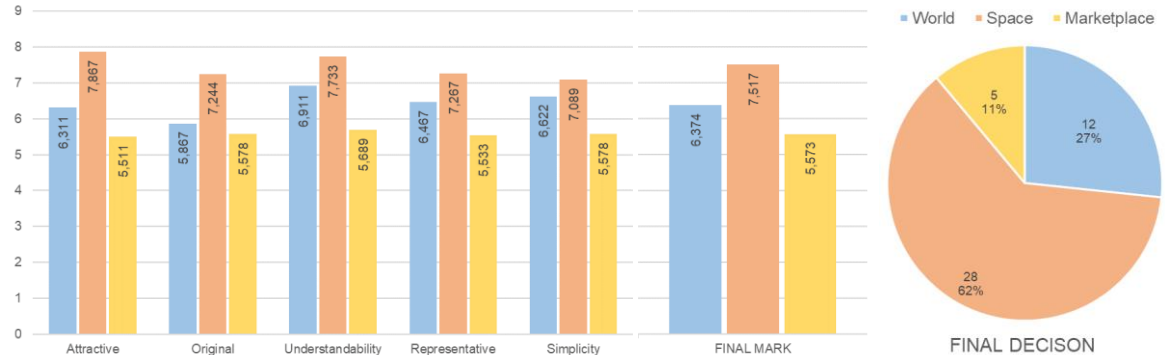
The questions about the D.A.W.'s name shows a clear winner, SoundBox is the preferred option by 73% of the participants, and they also consider it the best name in all categories, except in simplicity.

On the other hand, both Victor and Ricardo choose Room because for them made more sense for a production software, while he considered that the other two options reminded to a DJ focused software.

4.1.3. Virtual store and community:

Criteria number	World		Space		Marketplace	
1	6,311	1,893	7,867	2,360	5,511	1,653
2	5,867	1,467	7,244	1,811	5,578	1,394
3	6,991	1,382	7,733	1,547	5,689	1,138
4	6,467	0,970	7,267	1,090	5,533	0,830
5	6,622	0,662	7,089	0,709	5,578	0,558
Total	6,374		7,517		5,573	

Table 5: *Virtual Store & Community Naming Test Results*



Graphic 4: *Virtual Store & Community Naming Test Results*

The virtual store and community poll also shows a clear preference, Space was voted by 62% of the participants and it's also the most valued name in all criteria.

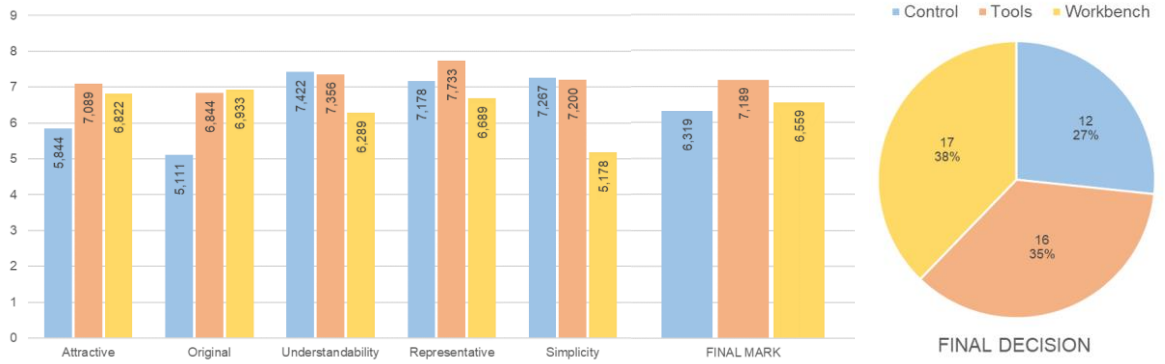
Personally, I started with the preference of going with World, but seeing that Space has passed the test with such a difference, I'm going to change my initial idea and accept the participants choice.

Victor thought as I did, we both that that looked better the word World rather than Space, but still, the general opinion shows a big difference to impose ours, also, Ricardo preferred Space because he though that the concept involved more things that World.

4.1.4. M.I.D.I. Controller:

Criteria number	Control		Tools		Workbench	
1	5,844	1,753	7,089	2,127	6,822	2,047
2	5,111	1,278	6,844	1,711	6,933	1,733
3	7,422	1,484	7,356	1,471	6,289	1,258
4	7,178	1,077	7,733	1,160	6,689	1,003
5	7,267	0,727	7,200	0,720	5,178	0,518
Total	6,319		7,189		6,559	

Table 6: *M.I.D.I. Controller Naming Test Results*



Graphic 5: *M.I.D.I. Controller Naming Test Results*

The Controller results are very tight, while there's a slight advantage on Workbench as preferred option with the 38% of the votes, the criteria evaluation shows a better opinion for Tools. Finally, I decided to go with Workbench because the Avid D.A.W. is called ProTools and I prefer it not to have such a similar name because even though it not the same type of product, it is a very famous and stablished one.

Victor also chose Workbench, because the other two options were very generic names that could refer to a lot of basic tools, while Workbench was more focused to the product. On the other hand, Ricardo liked more the Tools option, just because he liked how it sounded.

Conclusion				
PRODUCT	Company	D.A.W.	Virtual Store	Controller
RESULT	**Octavia**	**SoundBox**	**Space**	**Workbench**

Table 7: *Naming Test Results*

4.2. Interviews

4.2.1. Interviews information

In the annexes we can take a look at the full interviews by reading their transcription.

QUALITATIVE INVESTIGATION	
Method	Interview
Investigation questions	**Q1**: What are the biggest lacks in the music production companies and their product? **Q2**: Is the idea of Octavia a distinguished and problem-solving purpose? **Q3**: How can Octavia enter a market where many companies are very settled?
Objectives	**O1**: Find the most important problems in the existing companies to solve or avoid them. **O2**: Confirm that Octavia offers interesting services. **O3**: Get to know the target and how can we get his/her attention.
Hypothesis	**H1**: Existing companies could offer more efficient services and better products. **H2**: The services and products offered by Octavia will be valued by the target. **H3**: There is space in the music production market for new companies to be stablished.
Expected results	**R1**: Users think that some services from the existing companies are improvable. **R2**: Users find Octavia's features useful. **R3**: The users demand of certain problems to be solved show a space in the market to develop a company.

Table 8: *Qualitative Investigation Presentation*

Interview 1: Data Sheet	
Used technique	Semistructured interview
Date	Thursday, 03/03/2022
Objectives	O1: Find the most important problems in the existing companies to solve or avoid them. O2: Confirm that Octavia offers interesting services. O3: Get to know the target and how can we get his/her attention.
Place	Gabriel Baró's home studio. (The LarriRoom)
Duration	1 hour and 47 minutes.
Participants	Victor Gómez Aguilar (a.k.a. Kiev, AlemanBeatz)

Type of participants	Beatmaker, songwriter, rapper, guitar, bass, keyborard, and drums player.
Moderator name	Gabriel Baró Larriba

Table 9: *Interview 1 Data Sheet*

Figure 5: *Interview 1 Snapshoot*

Victor, also known as Kiev and AlemanBeatz, is a 24 years old guy with a Marketing and Publicity degree.

He's been producing music for the last 10 years, focusing his work on beatmaking, and writes and sings his own songs. Everything he knows comes from watching YouTube tutorials.

About the D.A.W.s, he mainly uses FL Studio, and has knowledge in Maschine, Ableton Live, Garage Band, and Logic. About the plug-ins, he first uses native plug-ins to bring the ideas to life, and afterwards, he changes to third-party ones like Valhalla, Arturia, and Soundtoys, to apply the desired effects with more precision. About the hardware, he first had an Akai MPK Mini, and then bought a Maskine mk2 and an Arturia MIDI keyboard.

Interview 2: Data Sheet	
Used technique	Semistructured interview
Date	Friday, 11/03/2022
Objective	**O1**: Find the most important problems in the existing companies to solve or avoid them. **O2**: Confirm that Octavia offers interesting services. **O3**: Get to know the target and how can we get his/her attention.
Place	Gabriel Baró's home studio. (The LarriRoom)
Duration	1 hour and 25 minutes.
Participants	Ricardo de Lima Gracia (a.k.a. D.Lime)
Type of participants	Mixing and mastering engineer, songwriter, singer, rapper, guitar and keyboard player.
Moderator name	Gabriel Baró Larriba

Table 10: *Interview 2 Data Sheet*

Figure 6: *Interview 1 Snapshoot*

Ricardo, also known as D.Lime, is a 23 years old student of engineering in audiovisuals systems..

He's been producing music for the last 6 years, focusing his work on mixing and mastering, and writes and sings his own songs. As happens with Victor, everything he knows comes from watching YouTube tutorials.

About the D.A.W.s, he mainly uses Logic, and has knowledge in ProTools, Ableton Live, FL

Studio, and Adobe Audition. About the plug-ins, he started using Logic native plug-ins, and then, he started to use Waves, UAD, Valhalla, FabFilter, Ozone, and Slate Digital. About the hardware, he has a Novation Launchkey MIDI keyboard, an Apollo interface, and a AKG microphone.

Featured answers summary:

Do the digital music creators make money?

V: Yes, nowadays, especially if you're into the trending music like you and I are, from selling beats to mixing other's songs, we are lucky to live in a city like Barcelona and there's a lot of movement here, you easily can have your list of clients. Also, if you make your own songs, you receive streaming revenue from YouTube, Spotify, --- The conclusion is that you can make money, there are a thousand ways. In the past, to make music as and artist, so that they bet on you, you needed a label to come and pay your CD. Now you can do it yourself on your home, and upload it without intermediaries, and keeping the 100% of your royalties.

R: Yes, the music industry is all about contacts, your quality, and your attitude. For example, as you know, I started recording and mixing songs for 10€, and since I started to have more knowledge, I can charge more for them. So yes, if you make moves, you can get money from music.

What do you think is the most important when doing music in terms of software and hardware?

V: Having a great PC or laptop. With effort, if you have FL Studio and give yourself a month, you have decent things. The essential is having a running PC, not one that when you put five plug-ins goes to s**t. In terms of D.A.W., having one that lets you work comfortably, that doesn't crash, and still, having "command + S tattooed"

R: I'm going to contradict myself, but I value the hardware a lot to get good results in terms of quality, but the truth is that with great plug-ins and knowledge of them you can achieve them. Nowadays music it's not based on a singer having a great voice, it's more about the whole picture of creating a song, so having great software and knowing how to use it is the key.

What do you think about the D.A.W.s that you have used?

V: The queen is FL Studio, but Maschine is a very good D.A.W., it is a software made for its hardware, and very focused on sampling, but it's only made for production, not for recording and editing, so you would need another D.A.W. for that.

R: My favorite is Logic Pro and then ProTools, I could put FL Studio with them, but I think it's more focused on beatmaking, in fact I think is better than the other two for it, but still I consider that if I use Logic, learning how to beatmake on it would be more comfortable and I would take more advantage of the D.A.W. At the end of the day, you can do everything with all of them.

One thing that I value a lot is the interface, I prefer Logic over ProTools because of how it looks, I even like more FL than ProTools, because I don't find ProTools visually attractive.

Have you paid the licenses?

V: I have the licenses to Maschine because it comes with the hardware and GarageBand because it comes with the MacBook, but I have not directly purchased one, because of the ease to download a cracked version. If I couldn't, then I would pay, just like I can't go to a

store and steal a guitar. G: We both have cracked digital plug-ins of guitars. V: Exactly, the guitar example is a great one.

R: None of them. G: Would you ever? R: Only if I'm on a level of making a lot of money from them, just in case I have legal problems due to my visibility. I can live with the fact that the program won't update because I have all I need, and I also can live with the program crashing from time to time, I know how to reinstall it.

Do you see any lacks in the D.A.W.s?

V: Well, there's a lot of things on the D.A.W.s, even if you know a lot you still have a lot to learn, some things that make take you 30 minutes to do, there's a guy that makes it in 5 minutes. You arrive to the same place, but time is gold, and he does it faster.

R: I know quite things about D.A.W.s but there's still a lot to learn, so maybe if I think that something is missing, there's a way to do it that I don't know. ---

Do you understand the rest of the D.A.W.s with the knowledge you have with the ones that you used?

V: Since I use other D.A.W.s, there's a certain ease, even if I only did use one, you have a lot of knowledge that is applicable to other software.

R: When you been using one for a while, the rest are quite intuitive, but still, you have to adapt to the commands and its workflow. It's not about difficulty but you need to get used to it.

Opinion of the SoundBox product:

V: I think it's interesting, the fact that doesn't have plug-ins, makes it very minimalist and simple, it's like a canvas and you can add your tools to it, and the user is not limited by the laziness to always choose the same native plug-ins and need to go there and found the one that fits them. The parallel project thing it's the most differential feature, there's no D.A.W. that allows you to do that.

R: The option to change methods it's great. The fact that you don't develop the native plug-ins it's a big change for you because you don't have to develop a lot in terms of coding, and you could make associations with other companies that develop plug-ins, which would be interested because of the visibility. Also, normally native plug-ins are worse than the paid ones. I have to say that for a new user, having no plug-ins and no knowledge it's a problem, but for experimented users like me it would bother. The PPCS is a great feature to have.

Opinion of the Space product:

V: I like that one, I feel like other D.A.W.s left you aside, you need to go through YouTube lo learn new things, there's nothing from the same platform that helps with that. That's something that is missing in this type of products. --- It's a big change, and the ease is incredible. If I started to work with a D

.A.W. like that, it would be crazy. --- Also, it would be interesting if the uploaders had the opportunity to get money for their work, if they upload a paid loop, they will get the money, but what happens with free loops? A feature to get a percentage of the royalties that a song with the loop makes would be very interesting. --- imagine a kid that just started and see their work being used by someone and getting money from it. He would stay in your community, he will talk good about it, and his circle of friend will enter to. --- It's really completed, and for every one of the things there's a type of music producer that is interested in it. Maybe just add a mixing and mastering server, just as the beat selling offer, a space to sell the edition of the songs. That's a little crazier, but in the future, you could add management and distribution services, creating an artist agency, and booking space, even merchandising.

R: I like the idea a lot, but you could have problems with the quality of the things uploaded, for example, if someone sells a preset for a plug-in, how do the users know that it's good. G: That's important, maybe if there's an audio example of the preset activated and disactivated it would help to know how good it is. R: Yes, but then how do the users know that the audio actually has this preset and not 10 more that helps make the audio better? G: Right, so the audio and the preset would need to be uploaded separately, and the program should be the one to apply it to make sure it is the only change happening. Also, we could implement a rating and comments section so the user could give their opinion on the preset. R: That would be great, this way the users would have the reinsurance that the audio example has no tricks. About the tutorials, it would be nice to have a control of what do people say on them so only good advice would be given. G: Well, we could set two sections, one for non-review tutorials or for not verified people, and another with curated videos, this way anyone can still do them, but users could still choose to only see professional content. R: Yes, it would be nice to have both access for everyone to create content and having a control on the resources that are uploaded to maximize the quality. --- It's nice because this way you can use Space as a way to generate contacts, for example, to sell your services or find the services for your songs. --- G: Do you see anything missing on the list of things that Space has? R: I think it's very completed.

What do hardware bring you?

V: Well, physical objects by themselves have value, there's an emotional part that digital tools doesn't have. Hardware isn't necessary to make music but it brings you comfort. G: Since, you have the Maschine, you already have a controller for the D.A.W., but only when you work with its own software. What happens with FL Studio? Because you use it with only the mouse and the keyboard. V: Yes, there's a big difference, even in simple things. In the Maschine you have the Play button, and it's so much comfortable to use it there rather than going to the keyboard and pressing the space bar or moving the mouse and clicking on the virtual button.

R: I thought about buying one, but I'm not lazy when moving around with the mouse and keyboard. I think they are worth it though; I just haven't got enough money to dedicate to them. But it eases the workflow and are also cool to have, when you see those faders moving automatically looks great.

Opinion of the Workbench product:

V: One of the things that I miss the most on the Maschine hardware is a part where you can control the mixer of the software, because it is still a part of the whole process, and your controller has it. G: Yes, but my hardware doesn't have the pads module to sample and play drums. V: But that's just pads, you can add any other controller from the market that has pads and map them. Also, not many users in FL Studio use pads to sample or make drums.

R: Being a controller fully dedicated to a single D.A.W. makes it especially good because it really takes the compatibility and use to a whole other level. The bad thing is that the sales are limited to that concrete D.A.W. users. I like how you structured it. --- I think that people usually prefer to buy MIDI keyboards, maybe that's why there are so many of them in the market, but if you have the possibility to have a controller especially dedicated for the D.A.W. that you are using and eases your life, a lot, you end up buying it.

Do you trust new music production companies?

V: Yes, because there are not many, especially when talking about D.A.W.s. Also, the users don't get married with the companies that they use, music is in constant evolution, so both users and companies have to adapt. If tomorrow a D.A.W. that beats FL is released, will you stay in FL when the other guys are making crazy stuff with the new one? And the same goes with hardware. Furbish or die.

R: Yes, as long as I see good results of their products, I need prove that what they offer is good.

How do you usually discover new music production products?

V: I remember that when I was 16 years old, I used to receive the physical monthly newsletter with all the news, and I spent like an hour looking at it. But nowadays, almost every piece of information that we receive is through YouTube and Instagram.

R: Forums, YouTube videos, online and sometimes physical stores.

What does influence you when buying a product?

V: Yes, I remember that. The people that surround you and their recommendations have a lot of influence on what you end up using. And other important thing that influences me, and that applies with everything I buy, for example now I'm thinking about buying a new laptop, and I watch a hundred YouTube videos of laptop reviews, and then I assess what is more appropriate for me.

R: The ratings and comments of the stores, YouTube videos that compare similar ones, the recommendations of people I know, even about what famous people have, I almost bought the same microphone that you have because I saw Machine Gun Kelly using it, who is one of my favorite artists, but at the end of the day is about taste, so you have to think about what you need and prefer.

In terms of hardware, how much do you prefer to buy it on a physical store instead of online?

V: I like to buy it physically because of the costumer experience since it is something that you don't buy every day. Online buying it's a lot colder that going to the store. As you know, when we go to Alfasoni, "*nos hacemos polvo*", inside it we are like kids on the Tibidabo. I work next to Glories and sometimes at lunchtime I go there just to see things. But obviously, if you know they don't sell it at Alfasoni, you got no more options to buy it from Amazon or Thomann.

R: I don't mind, I like physical stores because you can see and touch, not only what I'm going to buy, but also the rest of the products, but if I can't it's okey for me to buy it online.

How much does it influence you that a hardware gives you access to software?

V: It influences you especially when you are starting, then you already have what you want in terms of software, but still sometimes it comes with something that is interesting even if you have years of experience.

R: Not much, most of the software that comes with hardware is not interesting, normally only trial versions, but if a hardware came with a Logic license, I would go crazy. So, it really depends on what does it include.

4.2.2. Interviews analysis

As we see in some answers, the point of view of the music production products changes due to different tasks that both participants develop on the process of a song creation, since Victor focuses on beatmaking and Ricardo focuses on mixing and mastering, even though both have knowledge in all the music production parts and consider them through the interviews. This will help us see the differences between both type of producers and will also help us to find a way to approach both profiles with a single product.

The first objective of this interview was to find the lacks and problems that music production companies have. An important conclusion in this field is that the existing D.A.W.s do their job and the users doesn't feel like are using a software that isn't working as it should. Even

so, further in the interviews we can see how both participants are highly interested in the added features that our products propose, so instead of solving functionality problems, we are going to increase its level.

The most problematic result of the investigation is the ease of hacking the program license, combined with the difficulty that the law has in order to find these illegal activities, which results in a high percentage of the users not paying the licenses. This calls for a focus in creating a will on the clients to pay for them instead of cracking the software, and we hope that the incorporation of on-line features will encourage them to. The positive interpretation of this problem is that since most of the users of the rest of the D.A.W. haven't paid for them, the decision to change to ours is easier to take because they are not economically invested on the other ones.

A good result is the consideration from both participants that the understanding and knowledge of a D.A.W. is highly applicable to the rest, which means that this particular topic won't be an issue for the existing users to change to ours. But still, we need to consider the emotional appreciation, the trust in the company, and the habit of using them for years. We can see how although all products are considered good enough to do the job, each producer has its favorite, and sees it as the best one.

After presenting Octavia SoundBox, both participants agreed that the three distinctions were very interesting. Having the ability to choose between different ways of working with the D.A.W. creates a program that works as good for beatmaking as for mixing and mastering, helping the company reach all kinds of producers, especially those who do both jobs, because it is like getting the best of every D.A.W., and who choses what's best in every D.A.W. is the same user.

The fact that Octavia SoundBox has no plug-ins showed mixed opinions on the participants. On one hand, they saw it as an opportunity to personalize the D.A.W., but at the same time they considered that it can be a problem, especially if the users in a novice, and doesn't have a certain level of knowledge. I obviously considered that by myself before, so that issue will be solved with Octavia Space. In fact, before introducing it, Ricardo proposed to solve it by creating an association with some plug-in developers to include them on the D.A.W., which is a similar but smaller purpose of what I pretend to do with Space.

It is important to say that both participants considered that the number of plug-in developers is huge, and their quality is very high. Also, the fact that they have the same problem as D.A.W.s do with the hacking of their licenses, reinforces the idea of not creating them and do the Octavia Space. In fact, Victor even said that he doesn't believe that a new company that starts to make plug-ins would make money from them.

The Parallel Project Creation System was highly valued. Both participants saw it as something new that would help to connect with other artists and work together in an easier way. This is very important for us since it is the first on-line feature, so a cracked license wouldn't allow a user to use it.

Octavia Space was seen as the best product. Both participants consider that it puts everything inside the D.A.W., giving it a special distinction and changing its concept. Even so, both Victor and Ricardo showed some concerns.

Victor asked about the income from selling loops, saying that he would like to have the ability to give them for free but receive a percentage of the money that a song created with them generates, the problem with that is that this is something that is controller by music distributors and streaming platforms, which opens the possibility to create a distributor inside Octavia Space. He also proposed to sell mixing and mastering services, which is a similar idea as selling beats, but for some reason I forgot to consider the first one. This will be implemented.

Ricardo asked about how the resources would be treated to only have good quality ones, for example with tutorials, in order to not have someone saying something that's wrong, which made me though about having a certification for those users who showed a high level of knowledge. He also asked about how we can make sure that a plug-in preset is worth it, which lead to a very interesting debate that concluded with the need of an audio example that must be ran though the plug-in by the system instead of the uploader in order to avoid swindles.

Talking about the hardware, both participants consider it a secondary feature to have, since it's not strictly necessary to accomplish the results that one wants to obtain, but producers always like to have them if they can, because it eases the workflow and it also looks great.

After presenting Octavia Workbench, both users consider that the fact that the hardware is dedicated specifically to a certain D.A.W. makes it a lot more valuable, because it will adapt better to it even though it may not work with other D.A.W.s. Victor highlighted the fact that having a part dedicated to control the plug-ins is great, and he misses it when using his Maschine.

When asking about new music production companies, both participants said that they trust them, as long as the see their products being functionable, because the process of making music is in constantly evolving, and so should the companies do, so if a new one offers a better product, that is all that matters.

Both participants said that internet is the way they discover new products, mainly though Instagram and YouTube and digital stores, but physical stores do still exist, and the three of us have gone to Alfasoni, the biggest music store is Barcelona, to see them.

The main influence when deciding what to buy, is YouTube reviews and the people they know, but also the comments and ratings on digital stores, and when they famous artists using it, being that last thing specially influencing for newbies.

Both participants preferred to buy hardware products in physical stores, because they can see them before the purchase, but in case they can't, there's no problem in acquire them online.

The fact that the hardware comes with free access to software is usually something that doesn't influence the buyer, maybe when talking about a new producer, but those free licenses are normally secondary things. In case the free access was for something more interesting, it would influence the buyer.

Recommendations:

To resume the investigation phase, we made the following table where we can see the recommendations about the different criteria basing on the noted evidence, which will guide the future development of the product and the decisions me make on the different stages of this marketing plan:ç

Criteria	Recommendation	Evidence
Hacking problems	Implement on-line products to generate bigger difference between paid licenses and cracked ones.	Both producers have paid zero of the software licenses they use and have obtained the 100% of the programs without consequences.
D.A.W. production process focus	D.A.W. must be able to grant the necessary tools and workflow so	Both participants show negative opinions of the

	both beatmaking and mixing can be properly carried out.	D.A.W.s that are focused on a single production process, even taking into account the fact that they only develop one of the processes.
Other D.A.W. understanding	SoundBox can have its own way of working as long as it isn't very different from the rest of D.A.W.s.	Both participants consider that the knowledge obtained from working with a D.A.W. can be highly applicable to the rest.
SoundBox features approval	The presented SoundBox features can be developed. Part of the opinion of not having native plug-ins was negative but will be compensated with Octavia Space.	Both participants showed interest and approved the SoundBox features that were presented to them.
Space features approval	Space must be developed to complete the service offered by SoundBox and the treatment of the resources needs to be meticulous and should distinguish between professional and non-professional.	Both participants showed interest and approved the Space features that were presented to them. Moreover, some concern about the treatment of certain resources was stated.
Workbench features approval	Workbench can be developed even though it is a secondary product, because it adds more professionalism and workflow to Octavia's products when considered all together.	Both participants said that being a controller dedicated to a particular D.A.W. made it special and distinctive for all the features it includes.
Promotion channels	Use social networks and YouTube advertisements as the main channel. Also, send licenses and hardware pieces to music influencers and reviews.	Both participants considered that these are the main ways to discover new products.
Hardware distribution channels	Own website, digital stores, and renowned physical stores.	Even though physical stores are preferred, internet is still considered the main channel to acquire the products, and very accepted by producers.
Software access from hardware	Giving some kind of software benefits when acquiring the hardware can be highly valuable if it is useful.	Both participants have the experience of getting secondary software when acquiring hardware, but if it were a distinguished access, it would be seen as something interesting.

Table 11: *Investigation Phase Recommendations*

5. ANALYTIC PHASE

5.1. External analysis

5.1.1. Microenvironment

5.1.1.1. Market

The amount of information regarding the rest of the music industry, specially labels and artists, is extremely high compared with the information related with the music production companies. Moreover, the concept of music production, can be referring to both the creation of music and to the payment of its creation, as happens with movies and TV. These two facts combined, generated a difficulty when finding information regarding the music production market.

The D.A.W. market is projected to be worth 16,454 billion dollars in 2026, expanding at a compound annual growth rate of 8,8% from 2018 being north America the forefront of the demand. [2]

In 2021, The AVID company D.A.W., ProTools, has a total revenue of 101 million dollars, an increase of 12,4% from the previous year, and 28 of those million came from D.A.W. subscriptions. This meant a net cash of 16,5 million dollars. [3]

It's very difficult to quantify the size of the market, but the official FL Studio registered users, which means users that paid for the license, are more than 300.000., and it may be quite a few that purchased the license and didn't bother to create the account. This information is gathered from the official forum, which is accessible with an account that doesn't need any license and has more than 2 million members. As we will see in the competence analysis, this is the most used D.A.W., what lets us guess that the total amount of D.A.W. users that paid for the license, are over the million, and considering the ratio of registered users and forum members we can say that there are about 6,5 million users of D.A.W.s. [4]

5.1.1.2. Competence

In order to understand the current situation of the market and the existing companies, we are going to take a look at the principal music production developers and how are they organized.

5.1.1.2.1. D.A.W. developers

Let's take a look into the most used D.A.W.s:

Company	D.A.W. name	Subscription type	Price Basic	Price Advanced	Price Everything
Ableton	Ableton Live[5]	lifetime	79	439	599
Image Line	FL Studio[6]	lifetime	89	189	489
Avid	Pro Tools[7]	monthly		30/month	75/month
Native Instruments	Maschine[8]	lifetime	Included for free when purchasing hardware products		
Apple	Logic Pro[9]	lifetime			199
Apple	GarageBand[10]	lifetime	free		
Steinberg	Cubase[11]	lifetime	99	331	581
PreSonus	Studio One[12]	lifetime	free	99	399
Cockos	Reaper 6[13]	lifetime	60		225
Reason	Studio Reason 12[14]	lifetime			499
Bitwig	Bitwig Studio[15]	lifetime	79		299
Acustica	Mixcraft 9[16]	lifetime	75		149
BandLab	Cakewalk[17]	lifetime	free		

Table 12: *D.A.W. Competence Prices*

We'll put our focus on the most popular ones:

- Ableton is a German company founded in 1999. Their D.A.W., Ableton Live, was released in 2001, and it's distinguished because of how well it works in live sessions[18].

Figure 7: *Ableton Logo*

- Image Line is a Belgian company 1994. Their D.A.W., FL Studio, was released in 1998, and it's probably the most used in the world. It's the most versatile D.A.W. in terms of how well the user can do the different processes that music production requires[19].

Figure 8: *Image Line Logo*

- Apple, the famous American company founded in 1976, launched their own D.A.W. for Mac users in 1993 called Logic Pro. It's distinguished by the good CPU consumption performance, and a good way of mixing and mastering audios[20].

Figure 9: *Apple Logo*

- Avid is an American company founded in 1987. Their D.A.W., Pro Tools, was released in 1989, which is the mixing and mastering standard for the music industry[21].

Figure 10: *Avid Logo*

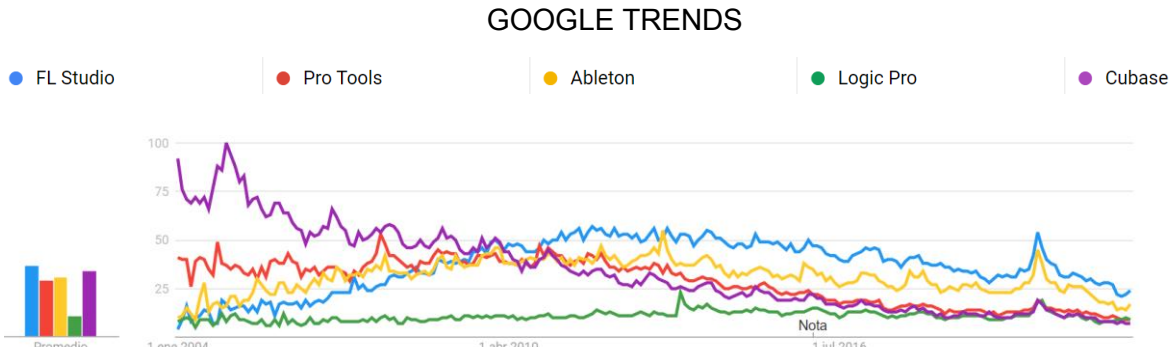
- Steinberg is a German company founded in 1984. Their D.A.W., Cubase, was released the same year of their foundation, and used to be the most used D.A.W. until the 2010 decade[22].

Figure 11: *Steinberg Logo*

SOCIAL NETWORKS

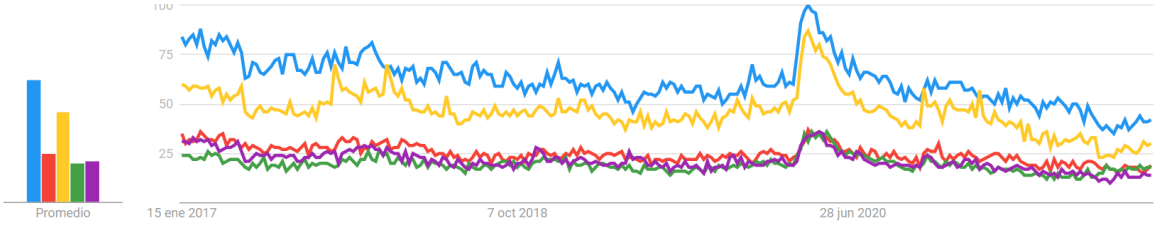
(data in thousand units)	Instagram	Facebook	Twitter	Reddit	TOTAL
FL Studio	315	867	52	264	1498
Pro Tools	330	204	105	30	669
Ableton	554	731	308	251	1544
Steinberg	92	251	63	13	419
Logic Pro	No official accounts			62	-

Table 13: *D.A.W. Competence Social Network Numbers*

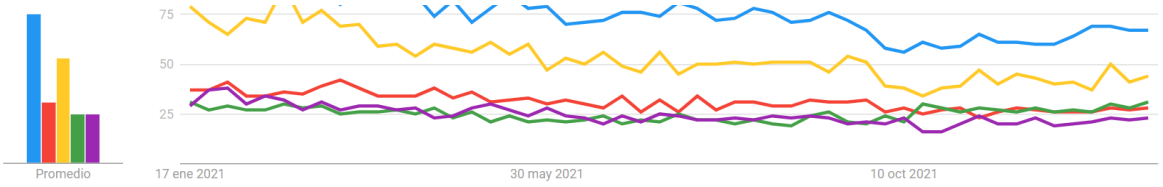


Graphic 6: *D.A.W. Competence Google Search 2004 - Today*

Graphic 7: *D.A.W. Competence Google Search 2017 - Today*



Graphic 8: *D.A.W. Competence Google Search 2021 - Today*



As we can see, Cubase, followed by Pro Tools, used to lead the D.A.W. search in Google back in the first decade of the century. However, FL Studio and Ableton were on the rise until April 2010, when tendencies changed and both companies became the leading ones. Ever since, FL Studio stayed on the first position, followed by Ableton, and Pro Tools and Cubase went down in popularity, arriving to the level of Logic Pro.

As we can clearly see, there is a peak in all D.A.W. searches in March 2020, which matches with the lockdown due to the Covid pandemic, but after it, numbers went down again to the previously established levels.

In resume, basing in the social network numbers and the google search tendencies, we can affirm that the most popular D.A.W. is FL Studio, closely followed by Ableton Live. One of the most distinguished points of my research is the number of Reddit members on each D.A.W. topic, because only active users of the software will really be on them.

5.1.1.2.2. Plug-In developers

There are hundreds of audio plug-in developers and each one has a high number of products so it's difficult to expose them here but I'm going to talk about the most famous ones:

AUDIO GENERATORS

- Spectrasonics is one of the most used companies in music production, their flagship product is Omnisphere, a powerful synthesizer for 399€, they also developed Trillian, a bass collection for 249€, Keyscape, a keyboard collection for 349€, and Stylus RMX, a groove-based virtual instrument for 299€[23].

Figure 12: *Spectrasionics Logo*

- Native Instruments is a company that cover everything there is in the music creation process, they develop software and hardware, and their most famous plug-in is Kontakt, the industry standard sampler that allows third parties to create their own libraries, the nearest plug-in to have infinite content[24].

Figure 13: *Native Instruments Logo*

- Output is another famous company that develops virtual instruments. Their flagship product is Arcade, an excellent plug-in with thousands of loops and different ways to manipulate them easily for a 10€ monthly subscription. They also offer some good quality Kontakt libraries[25].

Figure 14: *Output Logo*

- reFX is a German company that developed one of the most famous and used synthesizers plug-ins called Nexus. It was released in 2008 and now it's available on its 4th version for 249€, which includes almost 4000 presets. reFX also developed 162 expansion libraries for Nexus priced between 30€ and 60€. The full bundle of the plug-in and all expansions costs 4500€, with 26.000 presets included[26].

Figure 15: *reFX Logo*

- Xfer is an American company that developed another extremely used plug-in called Serum. Its level of sound designing gets really deep and lets the user be very precise on the adjustments. It costs 189€, and there are around 50 expasions priced between 20€ and 50€[27].

Figure 16: *Xfer Logo*

AUDIO TRANSFORMERS AND ANALYZERS

- Universal Audio is undisputedly the best company on making audio transformation plug-ins. They collaborate with real classic analog hardware brands and emulate them like no other does. In order to use their products, you need to buy one of their audio interfaces or digital signal processors (DSPs) which go from 700 to 3000€. Each plug-in costs around 150-300€[28].

Figure 17: *Universal Audio Logo*

- Waves have the most famous and used plug-ins. They have a ton of them, some are real analog gear emulations and other are more creative and innovative. Their prices go from 29 to 50€[29].

Figure 18: *Waves Logo*

- Fabfilter is also one of the most common choices. They have 14 very curated plug-ins at prices around 150€. The total bundle costs 859€[30].

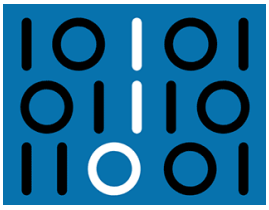


Figure 19: *Fabfilter Logo*

- Slate Digital is another highly recognized company with more than 60 plug-ins for a yearly subscription of 149€[31].

Figure 20: *Slate Digital Logo*

- Solid State Logic is a long-time standing music company that created the digital version of their famous analog hardware. They offer a 15€/month subscription, or you can buy individual plug-ins for around 150€[32].

Figure 21: *Solid State Logic Logo*

- iZotope is an American music company that has 46 high quality intelligent plug-ins that are tying to emulate the analog hardware that historically has been used to mix, instead, they have modern and innovative features. Single plug-ins price goes between 200 and 500€, or you can have them all with a 20€/month subscription[33].

Figure 22: *iZotope Logo*

- Antares Audio Technologies is an American music company that develops vocal modifying plug-ins. Their flagship product is Autotune, an automatic pitch corrector that they developed, and has been copied by almost every other company since them, it costs 399€ and it is probably the most used plug-ins in the history[34].

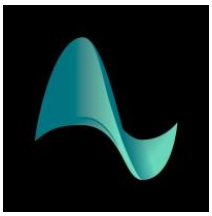


Figure 23: *Antares Audio Technologies Logo*

- Plugin Alliance is an American music company that partners up with known companies to develop the digital version of their effects, their prices vary from free to 300€[35].

Figure 24: *Plugin Alliance Logo*

- Soundtoys is an American music company that developed 21 analog style plug-ins. Each one costs around 100€, and the bundle that includes them costs 500€[36].

Figure 25: *Soundtoys Logo*

Once you get to know these and more companies including the ones that offer good quality products for free, it's easy to jump to the conclusion that this part of the digital music creation industry is highly saturated, there are a lot a competitive products in both terms of performance and price.

This generates a concern about how a new company can make plug-ins that are able to compete with the existing ones and stablish itself in the plug-in market. This calls into question whether Octavia should develop plug-ins, and in case of a negative answer, how the absence of plug-ins will be covered.

5.1.1.2.3. Virtual stores and resource gatherers

As I stated before, there's a long list of resources that music producers through the process of doing songs. We can find them on the internet but the only company that has tried to collect and sort some of them in a single place is Splice. We will talk about it later, but first, let's talk about the different resources and where we can find them.

- Plug-Ins: every plug-in developer offers their products in their own website, so the common way to buy them is to go on each one and see what they offer. We can also find some of the most famous on Thomann.com, the biggest music physical products distributor in the world. Also, a distinguished website is Pluginboutique.com, a virtual plugin store that offers a good quantity of plug-ins.
- Loops and sounds: there is a variety of websites that offers loops and sounds both paid, like Loopcloud.com, and for free, like Looperman,com and Sounds.com. Both are collaborative, which means that all the audios that are being offered are uploaded by users.
- Tutorials: all music producers have seen a lot of them, and obviously, the indisputable number one website is Youtube.com.
- Forums: there are a lot of forums on the internet, but the most distinguished one, especially in music production, is Reddit.com, where producers from around the world share and learn about this topic.
- Cloud: there are some companies that allows users to have a copy of their digital archives on the cloud, the most used ones by music producers are WeTransfer and DropBox.
- Beat stores: we can find some websites that allow beatmakers to sell their tracks, the most famous one is Beatstars.com.
- The rest of the resources: some other elements are not offered in any famous website with a considerable quantity of them, like Plug-In presets, D.A.W. templates, mixer states, drumkits, and MIDI files. The normal way is to search on google and find small websites and blog posts where you can download them.

The main competence to Octavia Space is, without any doubt, Splice.

Figure 26: *Splice Logo*

Splice is a website where users can find some Plug-In's, some drumkits, a huge number of loops and sounds, some tutorials made by professionals, and they have their own blog, community, and cloud storage service. Now we are going to see how it's structured:

First, it's important to acknowledge that to use Splice you need to pay one of the three plans that they offer:

- Splice+: accessed by paying 9,99$/month, it includes access to their library and the PC and mobile apps. It also gives you 100 sound credits each month.
- Creator: accessed by paying 19,99$/month, it includes the Splice+ features, 2 plug-ins, and access to the learning content. Instead of 100 sound credits, you have 200.
- Creator+: accessed by paying 29,99$/month, it includes the Creator features and instead of 200 sound credits, you have 500.

Sound credits (SC) are used to download resources, for example, a sound costs 1 SC and a MIDI file costs 3 SC.

The plug-in store offers about 600 plug-ins from well-known companies, being some of them paid and some other free, which is not a small number but is still a small percentage of the total of plug-ins that have been developed.

The tutorials offered are made by professionals, so the collection is a good reference for learning, but there are hundreds of ways to do music and it lacks on some things. The same happens with the blog, it's not a collaborative space so all content is curated, but the topics are limited.

The community is a space where users can upload their works and share them with the rest, even though it's an interesting feature, it doesn't really generate opportunities to become a known artist.

The last feature of Splice is the cloud storage. This is best implemented one because it connects directly with your D.A.W., and automatically saves every project you make on it. You can also organize your works in folders, and add collaborators on them, which means that they can access and modify those projects[37].

Since the similarity between Splice and Octavia Space is so notable, in section 7.1.2. there's a table comparing both products to show the differences in detail.

5.1.1.2.4. M.I.D.I. Controller developers

Here's a list of almost all the controllers that are available on the market:

THOMANN CONTROLLERS[38]	0-100 KNOBS	INFINITE KNOBS	DISPLAYS	FADERS	BUTTONS	PADS	PRICE [€]
KORK NANOKONTROL	8	-	-	8	35	-	**55**
AKAI MIDIMIX	24	-	-	8	20	-	**88**
AKAI FIRE*	4	1	1	-	84	-	**125**
KORG NANOKONTROL STUDIO	8	1	-	8	45	-	**135**
ICON PLATFORM B+*	-	-	-	-	50	-	**149**
NOVATION LAUNCH CONTROL XL MK2	24	-	-	8	26	-	**155**
BEHRINGHER X-TOUCH ONE	1	1	2	1	34	-	**159**
STUDIOLOGIC SL MIXFACE	8	1	1	9	23	-	**174**
NATIVE INSTRUMENTS MASCHINE MIKRO MK3*	-	1	1	-	39	16	**211**
ICON PLATFORM NANO AIR	5	1	1	1	39	-	**222**
AKAI APC 40 MK2*	18	-	-	10	111	-	**298**
ICON PLATFORM M+*	8	1	-	9	48	-	**299**

BEHRINGER X-TOUCH COMPACT	16	-	-	9	41	-	**338**
DNA MUSICLABS HOTKWY MATRIX*	-	-	-	-	144	-	**349**
SOFTUBE CONSOLE 1 MK2*	26	-	-	-	40	-	**366**
ASPARION D400T*	8	1	-	-	21	-	**389**
BEHRINGHER X-TOUCH	8	1	8	8	74	-	**395**
STEINBERG CC121 CONTROLLER*	14	1	-	1	30	-	**399**
ZOOM R24	9	1	1	9	51	-	**425**
SOFTUBE CONSOLE 1 FADER*	-	1	-	10	51	-	**485**
ASPARTION D400F*	-	-	-	8	24	-	**499**
ICON QCON PRO G2	8	1	2	9	82	-	**499**
FADERFOX MX12*	24	1	1	12	26	-	**499**
FADERFOX PC12*	72	1	1	-	14	-	**499**
PRESONUS FADERPORT 8*	1	1	8	8	63	-	**517**
NATIVE INSTRUMENTS MASCHINE MK3*	8	1	2	-	59	16	**569**
ABLETON PUSH	11	-	1	-	121	-	**598**
SSL UC1*	28	2	3	-	23	-	**698**
JL COOPER FADER MASTER PRO	-	-	7	8	12	-	**866**
SSL UF8*	8	1	8	8	73	-	**975**
MACKIE CONTROL UNIVERSAL PRO	8	1	2	9	91	-	**1190**
WAVES FIT*	17	-	17	17	67	1	**1199**
AVID S1*	8	-	8	8	70	-	**1329**
OCTAVIA WORKBENCH	**8**	**10**	**10**	**1**	**46**	**1**	**299**

Table 14: *M.I.D.I. Controller Competence Information*

*Some controllers are specifically dedicated to a certain DAW:

- **Protools**: DNA MUSICLABS HOTKEY MATRIX, AVID S1
- **Maschine**: BOTH N.I. CONTROLLERS (full software versions included)
- **Ableton Live**: AKAI APC 40 MK2 (software lite version included)
- **Cubase**: STEINBERG CC121 CONTROLLER
- **Studio One**: PRESONUS FADERPORT 8
- **Emotion LV1**: WAVES FIT
- **FL Studio**: AKAI FIRE (software discount)

*Some controllers are designed to work better together:

- **ICON PLATFORM M & B**
- **SOFTUBE CONSOLE 1 & FADER**
- **ASPARION D400T & D400F**
- **FADERFOX MX12 & PC12**
- **SSL UC1 &UF8**

Some controllers have a specific distinguished purpose:

- **Plugin focused**: SOFTUBE CONSOLE 1 MK2, SSL UC1
- **Channel Rack Window focused**: AKAI FIRE

Let's take a look at the most interesting ones for my analysis:

- Fire is a hardware controller developed by Akai dedicated to FL Studio, specifically, it's focused on the Channel Rack window. Its price is 125€, but there's a software and hardware pack for 298€ that includes 189€ FL Studio version[39].

Figure 27:

Akai Fire Controller

Figure 28: *Akai Logo*

- X-Touch One, X-Touch Compact, and X-Touch, are a series of controllers developed by Behringer that offer the typical fader station with some more features. You can easily acknowledge that the original idea was to create a controller based on the Mackie Control Universal Pro (1190€) but at a more affordable price. They price is 159€, 338€ and 395€ respectively[40].

Figure 29:

X-Touch Controller

Figure 30: *Behringer Logo*

- Platform M, Platform X, Platform B, and Platform Nano are a series of hardware controllers developed by Icon that can be connected between them creating a larger unit with more control over the D.A.W., permitting a more personalized hardware to cover the needs of the user. Their price is 299€, 279€, 149€, and 222€ repectively[41].

Figure 31:

Platform M Controller

Figure 32: *Icon Logo*

- Maschine Mikro MK3, the smaller version of Maschine MK3 (569€), is a Native Instruments controller dedicated to their own D.A.W. Even though it's really adapted to their workflow, the D.A.W. is too focused on producing rather than mixing, so normally users tend to go for another option. It costs 211€[42].

Figure 33: *Maschine Mikro MK3 Controller*

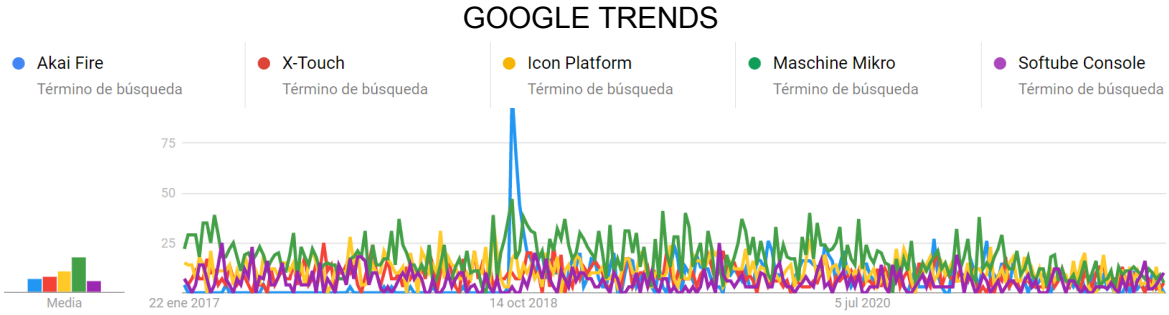
Figure 34: *Native Instrumentd Logo*

- Console, developed by Softube, is the one of the only two Plug-In editing dedicated piece of hardware, the other one is UC1, by SSL (695€). It comes with some Plug-In's and it's prepared to be able to control the most famous ones. Its price is 366€[43].

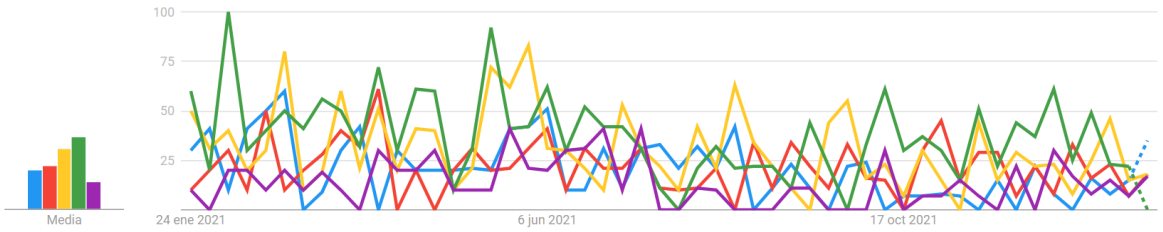
Figure 35:

Console Controller

Figure 36: *Softube Logo*



Graphic 9: *M.I.D.I. Controller Competence Google Search 2017 - Today*



Graphic 10: *M.I.D.I. Controller Competence Google Search 2021 - Today*

As we can see, even though Maschine Mikro is the most searched controller, there is no clear distinction in terms of popularity, especially during this last year. Anyhow, the Maschine Mikro dominance shows that a controller that is specifically designed for a certain D.A.W. it's preferable than a controller that is compatible with all the D.A.W.s, even though only Native Instruments D.A.W. users might be interested in buying it.

We can clearly see a big peak on Akai Fire statistics in the 23-29th of September week, because it was released on the 18th of September, but it rapidly went down to the standard tendencies. I think this proves two things: first, it's a confirmation that FL Studio has the biggest community and their interest of having a controller highly dedicated to the D.A.W. you're using is huge, and second, Akai Fire was not well designed, otherwise it would keep a certain level of popularity over the rest of controllers.

As opposed to the D.A.W. google search tendencies, there is no peak in during the 2020's lockdown even though new people got into the music production world, which demonstrates that getting a controller is not something users do when they start, instead, they usually spend some time making music without it first.

5.1.1.3. Client Segmentation

Our product is addressed to a global target because music production is developed around the world. We obviously must focus on the developed countries specially since it requires electricity, a decent PC, and some equipment like headphones or studio monitors. Because of that same reason, our target is an economically stable person. The age range is between 15 and 45 years old, focusing mainly between 20 and 30, because it's a range of age where people are economically independent and have the free time to spend on music production. About the gender, it's important to acknowledge the fact that around 90% of D.A.W. users are male.

In terms of psychology, our target is either highly invested in music, making it his professional career, which is a small part of the costumers due to the difficulty that that developing yourself as an artist has, or simply spends part of his free time to make music as a hobby.

As for his skills and behavior, our target is also an internet and technology experienced, who spends a time in social network, and is used to run software and hardware.

5.1.2. Macroenvironment: PESTEL analysis

In order to have a global vision of the situation that surround us, we are going to make a PESTEL analysis, this will allow us to see how the external things affect our company in order to set proper strategies and make correct decisions.

	Politics	Economy	Social	Technology	Ecology	Legislative
Positive			X	X		
Negative		X				X
Neutral	X				X	

Table 15: *PESTEL Influence*

Politics: Spain has a parliamentary monarchy which currently has a coalition government. The most distinguished affair in the last years has been the independentist movement by part of the Catalan population and the emergence and upswing of the far-right politic party called Vox.

Regarding the music industry, beyond affinities and misunderstandings between artists and political representatives, and some politization of certain music movements like the boom of feminist female artists there is no major relation between politics and music.

Economy: The most important economic factor to consider is the global pandemic due to the SARS-CoV-2. Since February 2020, the Spanish and global economy has suffered a big negative impact. Considering that our products is a secondary necessity, this can highly affect our sales.

On the other hand, but not as positive as negative the previous consideration is, the lockdown has generated a bigger interest in technology and online products, which we already have seen in the D.A.W. Google Trends shown in the competence analysis.

In addition, the current invasion of Ukraine by the Russian army has affected the European economy in a very negative way, which adds more pressure in the population in order to not buy things that are first necessities, along with shipment problems between different countries.

Social: Music is everywhere, anytime. It's one of the most ancient practices that the human has been involved with, and we are not talking only about the songs that we listen to, it's also in movies, advertisements, and a large list of things that we are redeemed with. In fact, every person makes music, even if it is only by singing in the shower, following a rhythm with objects, or just whistling a melody.

The society that we live in has evolved to be extremely connected by internet, which allowed to have several cases of independent and not resourced artists to become famous. This huge level of connection has caused to the society to feel the need of acceptance, have popularity, and distinction from the rest of the people. This, combined with the technological advances that will be stated next, have resulted in a large growth of the number of music producers, specially since the emergence of the "do it yourself" movement.

Technology: As happened with the rest of the aspects in the world, ever since PCs, internet and all kinds of digital and non-digital technologies appeared, the way that music is created changed radically. Back in the 80s, music was recorded in expensive studios filled with analog gears like Abbey Road Studios, the one that The Beatles used to record their music, which can have equipment valued in hundreds of thousands of euros. Also, reproduction and distribution of music was physical and entailed spending a lot of money. Now, thanks to these technological advances, anyone can make a song with an average laptop, a 50€ audio interface, a 100€ microphone, and 200€ in software.

In recent years, with all the growth that has been in both number of users and number of services and products, the amount of accessible resources has increased exponentially, and the ways of working and accomplishing musical objectives multiplied, allowing users the make music as they see fit.

Ecology: Spain, as the rest of the world, is in an unsustainable situation regarding the environment. The biggest impact on people is health problem provoked by various reasons, but affecting companies, the biggest impact is stock shortages, luckily for us, we only have one physical product which manufacturing numbers won't be extremely high.

Legislative: The most distinguished topic in terms of legal environment, is the software piracy problem. Even though countries have laws to protect the companies against illegal distribution and usage of cracked versions of their software, the difficultness of pursue, locate, and incriminate this type of unlawful conduct, combined with the ease of finding and using a hacked version of a program, generates a big problem for companies whose products are digital due to the revenue decrease.

5.2. Internal analysis

5.2.1. Mission, vision, and values

With the intention to keep our focus on our main objectives, we need to define our MVV. These values will determine the company's decisions and its behavior.

MISSION: Create a new kind of music production company that gives the user a more adapted, comfortable, and smart way of working. Globalize all music resources and elements in a single space.

VISION: Become a leading music software and hardware developer. Influence in the way the rest of companies work and the type of features they implement, creating a change in the global methods of digital music production.

VALUES: Octavia is based on the concept of commodity. Every decision that we have taken has as motive the improvement of the user's workflow. We believe that only when an artist is working comfortably, he can create art at its fullest potential, which is our main objective: help the world have the best possible music.

5.2.2. Canvas model

<table>
<tr>
<td rowspan="2">Key partners
Hardware components providers.

Internal virtual store product providers.

Transportation companies.

Sponsors.</td>
<td>Key activities
Software development and maintenance.
Hardware development.

Marketing and communication.</td>
<td rowspan="2">Value propositions
Smart and adapted software & hardware design.

Ease and commodity in music production related resources gathering.</td>
<td>Costumer relationships
On-line and telephone customer service.

Social Network interaction</td>
<td rowspan="2">Customer segments
Music producers and mixing engineers from around the world who want to improve their workflow and working system.</td>
</tr>
<tr>
<td>Key resources
SW & HW development team and equipment.
Hardware assembly team and equipment.

Hardware components.</td>
<td>Channels
On-line own and third party's stores for the software & hardware.
Physical music related stores for the hardware.</td>
</tr>
<tr>
<td colspan="3">Cost structure
Employee salaries.
Furniture and equipment costs and maintenance.
Hardware components.
On-line store and internal virtual store servers and security.
Transportation costs.
On-line advertising.</td>
<td colspan="2">Revenue streams
Software license selling.
Hardware product selling.
Virtual store ad system.
Virtual store selling percentage.</td>
</tr>
</table>

Table 16: *Canvas Model*

5.2.3. Porter Value Chain

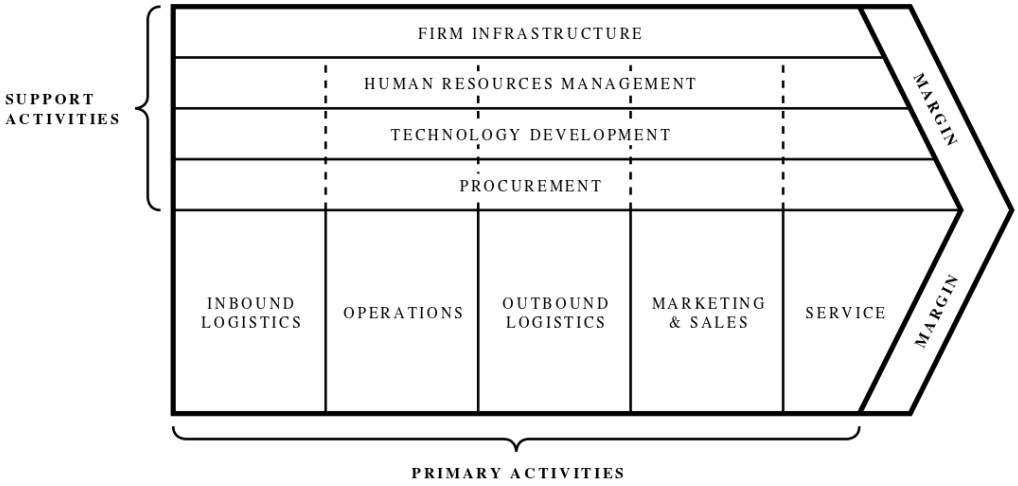


Figure 37: *Porter Value Chain Structure*

Primary Activities

Inbound Logistics: In terms of software, the place where our facilities are located has not a special impact, but since we are also developing hardware, we must optimize the cost of the component's reception. For now, we only create one single piece of hardware, so the internal storage and distribution of inputs in quite simple.

Operations: About the hardware, we need to specify a process that will be developed in a department in which the inputs convert to outputs, which consists in an assembly module, quality testing module, and packaging module. For the software, we need a and maintenance department where we make sure everything goes the right way, we keep the servers running, and Octavia World uploaded. For all our products we need a development department where the products are being designed and prototypes are created.

Outbound logistics: Since we only develop one physical product which will be sold either from our virtual store or from an external music store, either physical or virtual, the distribution system will be carried out by an external transportation company. The internal storage is simple since this single product doesn't even have a variation in color, nor size.

Marketing & Sales: This is always a primal activity to archive good results, but in our specific kind of company, having a distinction from our competence and being able to make the users see it, it's a must since the software and hardware available in the market are really stablished despite their shortcomings.

Service: Especially when talking about the software, it's very important to constantly gather information on how well it's performing and what does that users want to be improved or implemented, to be able to work on constant updates that really make a difference from the previous versions. It's also important for the hardware, but only for future versions of it. We also need to give a good customer support service to help the clients in any technologic matter, which is often common thing, especially with newcomers.

Support Activities

Firm Structure: We need an accounting department to carry out finances, a general managing and administrative department to make decide and organize all the actions that

we do and make sure everything in the company is going as it should be, a legal department to meet the law requirements and to fight piracy.

Human Resources Management: It's important for the good of that company that every employee understands and applies the motives of its creation. We need to find people that is passionate about music and give their best to improve the experience of doing it. We also need to create a respectful, egalitarian, and joyful working space, where the employees can develop their professional careers and have the opportunity to contribute to the final results.

Technology Development: This is where will be decided if the company grows and stays in business or must close its doors. Since the most important part of our company in terms of distinction and revenue income potential is Octavia World, we must have the ability to have a perfect information managing and processing, while minimizing the information technology costs, by implementing the newest technological advances and the best techniques.

Procurement: As for the software, it is very important to have good servers and devices to obtain the best possible results and be able to offer the best services. We also need to have the correct resources for the hardware designing, components choosing and treatment, and assembly process.

Highlighting the most important activities, we must ensure that:

- The marketing & sales department is showing the world our distinctive characteristics.
- The user's feedback is received and treated to improve our services.
- The technology department provides a high-level information treatment.
- We procure the necessary resources for our employees to develop their work efficiently.

5.3. S.W.O.T. analysis

Internal Analysis

Strengths:

a) Our products, specially combined, have a prominent distinction in terms of uniqueness and differentiation. Our goal from the start was to improve the commodity of the user and present him a better experience, and Octavia's products ideas were born from analyzing what could be better implemented on the rest of companies.
b) Octavia Space helps in the hacking fight since it only works with an active license of the software because the Space usage requires internet connection and an Octavia account linked to your profile, that checks with the Octavia's database to see if the license is good, so if a user runs SoundBox with cracked version, they won't be able to use it. The same happens with selling SoundBox & Workbench bundle, since it has a price discount for purchasing both products at the same time, which will impulse paying for a legal license for those users that doesn't have one when purchasing the Workbench.
c) Only having one piece of hardware reduces the factory space needed and certain costs and eases the logistics. Workbench is the only product with physical components, and this makes the inputs and outputs easily controllable and optimizable in terms of transportation.
d) The decision to not implement native plug-ins reduces the software developing efforts. Good plug-ins are hard to develop and require a big amount of time and very

qualified personal in terms of software, music, and physics knowledge, which means expensive salaries.

e) Being Octavia Space a collaborative place, lets us to only worry about its maintenance and database managing, because its content will grow by itself as users and other companies are the ones that put their resources on it.

Weaknesses:

a) The big distinction of the product compels us to ensure that the clients understand the advantages of what we offer. We are obliged to strive in making sure that our big differentiation must be acknowledge and appreciated by the target, otherwise, it would be like it is not there in the first place.
b) Combination of software and hardware makes our company more complex: online services compel us to keep a 24/7 attention in keeping the servers working and a good maintenance and hardware developing force us to have a manufacturing, storage, and transportation service.
c) The dependence on the promotion and its investment is very high since we need to approach a global target from zero. For Octavia to be successful, we need to reach the full collective of our target, which is highly distributed through the world, so the channels chosen and the ways to approach them must be suitable.
d) The starting point of Octavia Space it is critical because it makes no sense if there is nothing uploaded. Before the release, and during the first stage, we need to accomplish a good number of resources in Space in order to make it worth it.
e) Users use the D.A.W. for a certain time before deciding to purchase a controller. Normally, when someone get into music production, a controller for the D.A.W. is not the first thing they buy, and the same happens when changing from one D.A.W. to another. People tend to improve their skills and knowledge first, and also try to make sure they choose the correct decision on the chosen software before deciding to buy the hardware, which makes it difficult to sell the Workbench the first year.

External Analysis

Opportunities:

a) The music production industry lacks let us develop products that are not a copy of an existing stablished one and have distinction. Even though existing companies are really competitive, they been offering the same kind of products since many years, which gives us the opportunity to develop new kind of products that are more adapted to the user's needs of today.
b) The market and number of music producers is growing. In the last few years a lot of upcoming young artists found their way into the mainstream and demonstrated that nowadays everyone can make music, which encouraged a lot of people to get into the music industry, even if it is only as a hobby.
c) Global market allows us to sell anywhere in the world. A big advantage of selling software is that there is no transportation of the product. Payment and downloading is directly carried out through Octavia's website which allows us to sell the product to anyone whether it is someone who is next to our offices, or on the other side of the world.
d) Music producers are tech-heads, so they are always interested in new products that go into the market. Producing music is almost a lifestyle and when someone gets into it, ends up relating to people that does too because there is hundreds of topics to talk abous, being one of them, new products and services, which ultimately generates in them the willingness to have more software and gear.

Threats:

a) A lot of companies are very stablished and respected due to their perseverance and good performance through time. The most famous music production companies have millions of users, thousands of tutorials, and hundreds of influential artists using them, which makes it difficult for us to settle in the market.
b) Global competence. Especially when developing software, when a product is released it doesn't matter if it is from the opposite side of the world, anyone can access it which makes us have a constant appearance of competence from all fronts.
c) The target is highly invested in their current choices of products and changing companies is not common. Once artists are used to work with a certain product, it's not common to be considering changing it, specially with software, since it doesn't stop working like hardware does.
d) Software cracking. Probably the main problems that software companies have is piracy. They release a product for 200€ and once it comes out people can have it by searching on internet a cracked version. In music production, this is constantly happening since most users are not working on a company but by themselves, in fact, it's easy to find websites that are dedicated to upload craked versions of the music production softwares.
e) Even though the market is growing, the percentage of global population that is interested in this kind of product is low compared with other kind of products that are suitable for everyone, or almost everyone, which reduces the potential of the number of sales.

In resume, here we have a table with S.W.O.T. concept:

	POSITIVE	NEGATIVE
INTERNAL	**Strengths** Unique products differentiated from the competence. Octavia Space and Workbench existence reduces cracked versions usage. Having only one physical component reduces the space, resources, and logistics efforts needed. Not implementing native plug-ins reduces a lot of software development effort. Being Octavia Space a communitarian place, makes it grow by itself.	**Weaknesses** We need to make sure users acknowledge the distinctive features of our products. Developing both software and hardware increases the complexity of the company. The dependance in the promotion results is very high. The starting point of Octavia Space is critical for its functionality. Users use the D.A.W. for a certain time before deciding to purchase a controller, which makes it difficult to sell the Workbench the first year.

EXTERNAL	**Opportunities** Existing music production companies have lacks in their products and services. Music production market and number of users is growing. Global digital market allows us to sell anywhere in the world. Our target is a tech-head, which means that is interested in knowing new products that go into the market.	**Threats** Existing companies are very stablished and respected. Global digital market lets any small new company be our competition. Music producers don't change the software they use easily. The percentage of the total population that is into music production is low. Software cracked licenses is the problem of software developers.

Table 17: *S.W.O.T. Resume*

5.4. C.A.M.E. analysis

The C.A.M.E. analysis consists in complementing the S.W.O.T. analysis with a conclusion to each point stated before. Each strategy corresponds to the same letter of the same section from the S.W.O.T.

Maintain the strengths (offensive strategies):

a) Use our distinctions as main feature to show to the target to draw their attention. Our distinctions have to be our flagship in our promotion.
b) Keep developing features that have online connection requirements in order to give more distinction between paid and cracked licenses so the will from users of purchasing the license keeps improving.
c) Take advantage of the simplicity that this situation brings us and focus our efforts on developing our only piece of hardware as a well-done product that does not need to have secondary products.
d) Take advantage of the simplicity that this situation brings us and focus our efforts on developing our software and servers in a way that not having plug-ins is replaced properly.
e) Put our efforts in the development of a stable online platform and its maintenance to let it grow by the uploading of the users. Our job with Octavia needs to focus on having a great place to upload content so it will grow faster.

Correct the weaknesses (defensive strategies):

a) From our website and YouTube channel, we need to share videos with the new functions that we offer and how to use them. The fact that our features are new to the world is easily solvable if we explain them properly.
b) Create and maintain a clear and coordinated method of communication between different departments. A good and stablished way of team working will generate proper results.

c) Create striking promotion campaigns and make a notable investment on them.
d) Implement action that incentive the upload of content from both companies and users, so the community can grow and stay active.
e) Offer software and hardware bundles.

Explore the opportunities (retargeting strategies):

a) Keep developing features that cover the lacks that other companies show.
b) Make our tutorial videos in a way that is easy to understand for newbies to draw their attention and exploit the advantages of Octavia Space.
c) Use global including placement websites. Let the user choose the language of the program and tutorials.
d) Use the curiosity of our target by showing the distinctions of our product.

Adapt to adjust the threats (survival strategies):

a) Dedicate the necessary time to develop our products properly so the day that they hit the market there is not any kind of issue so the users can see as a competitive company to the existing stablished ones.
b) Keep our ideas as secrets to avoid the possibility that another company develops a similar product to our before we finish it.
c) Believe in our vision and prepare ourselves to resist a slower growth during the first years. Create promotional campaigns that stand out and tutorials that show the distinctions that we offer.
d) Keep developing on-line resources that only work with paid licenses, which will increase the willingness to purchase our product instead of using a cracked version of it.
e) Sharpen our aim when showing our advertisements so we don't spend money on promoting ourselves to people that is not interested in the kind of products that we develop.

5.5. Stakeholders

A stakeholder is an individual or group that in interested or takes part in an activity of an organization, which can be either internal or external to the organization. These can be affected either positively or negatively.

Internal stakeholders:

- Employees are the largest and most important stakeholders due to their time investment on the company. They implement the operations that are carried out by the organization.
  For their services, employees receive a monetary income and other type of benefits, such as healthcare.

- Managers have a big impact in the decision of which strategies will be pursued and how. They also have the responsibility to guide and supervise the employees in order to achieve the goals by following the chosen strategies.
  Managers are a distinguished type of employees, and for their services, they receive a salary that can be variable according to their tasks results.

- Owners are liable for the results of the company and the changes it generates. They also hold the main responsibility on the decisions made on strategies, and the rest of the stakeholders.

External stakeholders:

- Suppliers are either people or companies that give their services or products in exchange for a monetary compensation. Even though they don't have a direct interest in the results of the company or their projects, a good outcome would mean the continuity of that exchange.

- Society can be influenced by a company because of the jobs it creates, and the taxes it pays. Also, if we are able to make a change in the music production industry, it would ultimately affect the whole society by having more and better music.

- Creditors are entities that give their money for a in exchange for a retribution, which can be either a fixed interest, or a percentage of the benefits. Sometimes, they have the authority to affect and even impose decisions. They have a huge interest in the company results because the retribution is related to its success.

- Customers, who are music production users, can be highly affected if this company ends up implementing distinctive features that changes the way music is done by improving their workflow and giving them more options to choose in order to be more comfortable making songs.

6. STRATEGIC PHASE

6.1. Goals

I'll be defining Octavia's goals following the S.M.A.R.T. method:

- **S**pecific: goals must be well defined, clear, and unambiguous.
- **M**easurable: goals must be accompanied with specific criteria that quantifies their accomplishment.
- **A**chievable: goals must be attainable.
- **R**ealistic: goals must be within reach, and relevant to the company's purpose.
- **T**imely: goals must have a clearly defined timeline.

Now, let's take a look at the different goals we set for the first two years of our company following the S.M.A.R.T. strategy mentioned above.

SELL 9.000 OCTAVIA SOUNDBOX LICENSES THE FIRST YEAR

- **S**: selling of the software licenses.
- **M**: at least 9.000 units of Octavia SoundBox sold.
- **A**: considering the number of users, I consider accomplishing that number an attainable goal.
- **R**: the purpose is to get into the market.
- **T**: to be obtained in a year.

SELL 13.000 OCTAVIA SOUNDBOX LICENSES THE SECOND YEAR

- **S**: selling of the software licenses.
- **M**: at least 13.000 units of Octavia SoundBox sold (selling 3 more times than first year).
- **A**: giving a year from the release, and considering the visibility and confidence obtained through that time, I consider that number an attainable goal.
- **R**: the purpose is to expand into the market.
- **T**: to be obtained in two years.

SELL 500 OCTAVIA WORKBENCH UNITS THE FIRST YEAR

- **S**: selling of the hardware units.
- **M**: at least 500 units of Octavia Workbench sold (5,56% of the software users).
- **A**: taking into account that only Octavia SoundBox users are going to consider buying the Octavia Workbench, this is an achievable goal.
- **R**: the purpose is to get into the market.
- **T**: to be obtained in a year.

SELL 1.000 OCTAVIA WORKBENCH UNITS THE SECOND YEAR

- **S**: selling of the hardware units.
- **M**: at least 1.000 units of Octavia Workbench sold (6,82% of the software users, selling 2 more times than the first year).
- **A**: giving a year from the release, and considering the visibility and confidence obtained through that time, I consider that number an attainable goal.
- **R**: the purpose is to expand into the market.
- **T**: to be obtained in two years.

OBTAIN 5.000 PAID AND FREE RESOURCES ON OCTAVIA WORLD GENERATED BY COMPANIES AND PROFESSIONALS BEFORE RELEASE

- **S**: obtain a starting number of music resources in Octavia World.
- **M**: at least 5.000 units of resources uploaded.
- **A**: if we present the Octavia World idea to the music resources developers in a convincing way and considering the number of services that are offered worldwide, I consider that number an attainable goal.
- **R**: the purpose is to release Octavia World with a base of resources provided by the most distinguished companies to create a willingness on the clients to use it and to be part of it.
- **T**: to be obtained in the developing period.

OBTAIN 90.000 PAID AND FREE RESOURCES ON OCTAVIA WORLD GENERATED BY THE USERS THE FIRST YEAR

- **S**: achieve a stable community of creators and developer of music resources in Octavia World.
- **M**: at least 90.000 units of resources uploaded. 10 resources/user)
- **A**: if we take into account the number of users that produce music resources and create an easy way for them to share it, this is an obtainable number.
- **R**: the purpose is to create a community where every creator can make their contribution.
- **T**: to be obtained in a year.

6.2. Strategies

6.2.1. Growing opportunities: Ansoff matrix

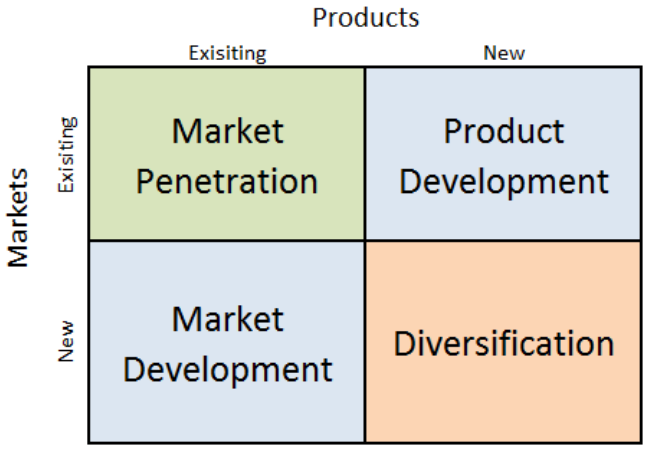


Figure 38: *Ansoff Matrix Structure*

Market Penetration consists in selling existing products in existing makets, so the aim is to increase the market share. This strategy has the lowest risk level. The most common techniques to carry out it are:

- Decreasing the prices or discounting the products.
- Increasing promotion and distribution efforts.
- Studying the competition and its customers.

Product Development consists in creating new products to sell in the existing market. It involves extended research and development on the product. This strategy is employed when the knowledge about the existing market is high, and the company is able to provide solutions to meet the needs of it. Since people must accept the new purpose, it has a medium risk level. The most common techniques to carry out this strategy are:

- Designing innovation.
- Performance innovation.
- Creating a completely new product.

Market Development consists in finding a new market in which to sell existing products. It is an appropriate strategy when the customers of a non-existing market are approachable and profitable. Since the new market people aren't used to the products and the company must generate the will to buy in them, this strategy has a medium risk level. The most common techniques to carry it out are:

- Enter a foreign market.
- Enter a domestic market.
- Approach a new type of customer.

Diversification consists in entering a new market with a new product. This is high risk level strategy because it requires market and product development but offers the greatest potential for increased revenues. To carry out this strategy we can implement a combination of all the techniques seen before.

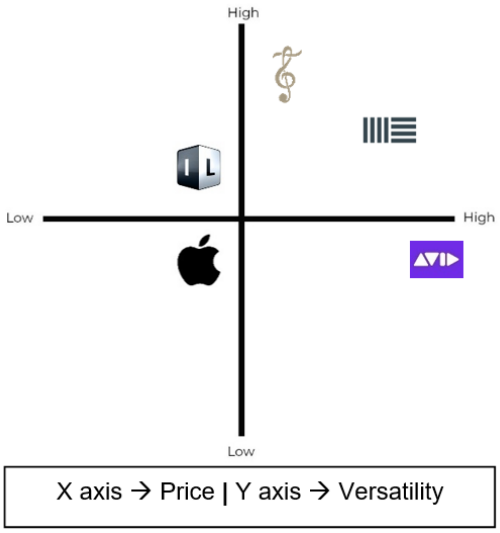
I chose to implement the Product Development strategy because going for a new market it's a very difficult task since music production is already being developed around the world and is covering all age range, so in order to sell in a new market we would have to find clients that aren't into music production and somehow turn them into it, which is not a viable plan. Besides, going for the Market Penetration strategy in a successful way is a complex task knowing that there are a lot of reputable companies that have been offering their products for a long time. Then, our efforts will be focused in creating distinctive

characteristics in the way our products work and optimizing their performance adding new features when we consider it's worth implementing them.

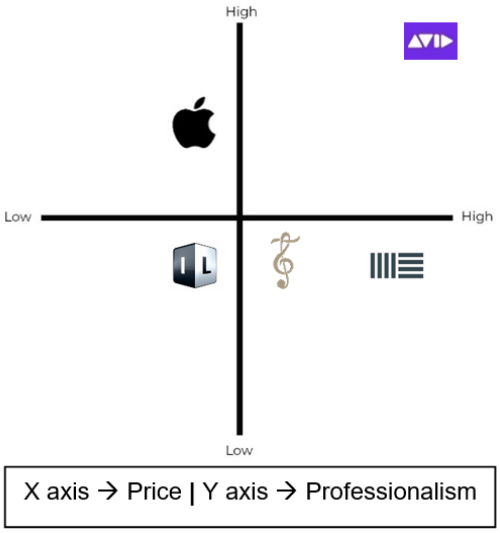
6.2.2. Positioning opportunities: maps

For both software and hardware, we are going to see the relation between two distinguished appreciation factors with the price of the products, in which we will show the main companies:

Software (Octavia SoundBox & Space combined V.S. Apple Logic Pro V.S. Image Line FL Studio V.S. Ableton Live V.S. Avid ProTools)

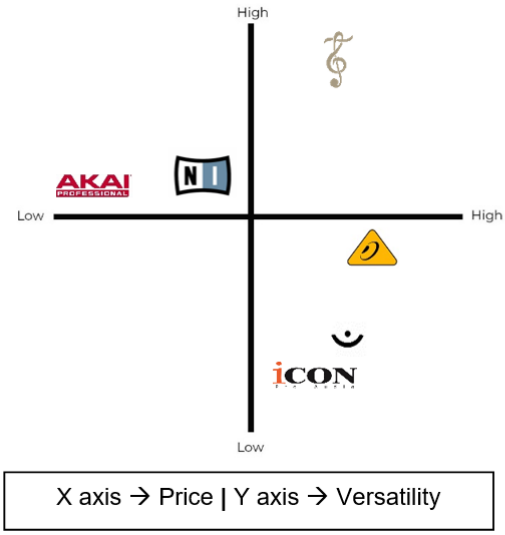


Graphic 11: *Software Positioning Map 1*

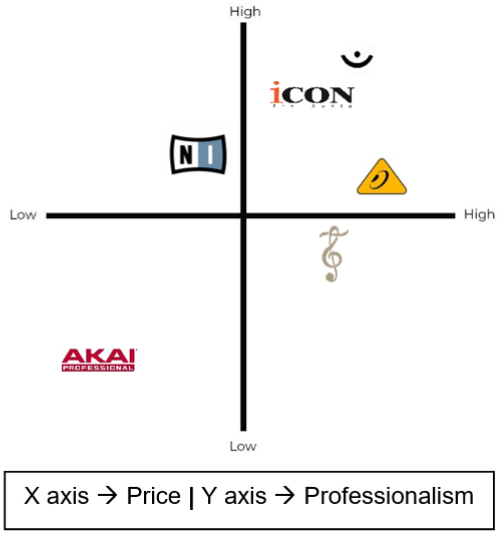


Graphic 12: *Software Positioning Map 2*

Hardware (Octavia Workbench V.S. Akai Fire V.S. Maschine Mikro V.S. Behringer X-Touch V.S. Icon Platform V.S. Softube Console)



Graphic 13: *Hardware Positioning Map 1*



Graphic 14: *Hardware Positioning Map 2*

6.2.3. Differentiation: Porter

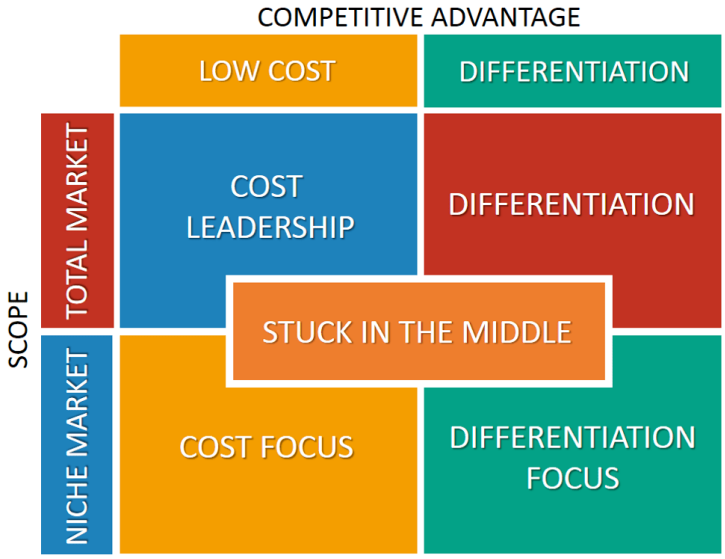


Figure 39: *Porter's Differentiation Structure*

Cost leadership consist in getting a competitive advantage by being able to offer your product at the lowest. This goal can be obtained by reducing costs in all the stages of the production of the product, from the material obtaining to the final transport to the selling points.

Differentiation, on the other hand, consists in generating an innovative product that enables you to be sold at higher prices due to the distinction given. This goal can be obtained by adding new features, functions, on even b generating brand image valued by the costumers.

Focus strategies are used when the product is addressed to a specific niche market, and the focus can either be on cost reduction or on the pursuit of a strategic differentiation. This goal can be achieved by knowing and understanding the needs of the clients in this specific market, and still adding extra value to this niche market.

Since our company develops more than one product, we need to evaluate which is the most adequate strategy for each one:

- Octavia SoundBox and Octavia Space will follow the differentiation strategy because, combined, they present a new and unique way of working with a D.A.W. and using music resources in it. Obtaining the lowest cost in market with some fully stablished, developed, and respected D.A.W.s, would be very difficult and we could be seen as a cheap choice, while squeezing the distinction of our purpose will let us set a higher price and still be seen as a choice in the same level of utility as the rest of the competence.

  In order to execute this strategy, we will put our efforts in two main fields. First, we must ensure that the users feel a significant change in their workflow by making sure the relationship between the access to music resources and their use on a project it's optimized. The second goal is to generate a comfortable situation by facilitating the generation and uploading of music resources where users feel encouraged to become content creators.

- Octavia Workbench is a product that only makes sense to buy if the client is using Octavia SoundBox, so the adequate strategy for it to follow is differentiation focus because even though is the only piece of hardware that is design to have the highest control over the software, the rest of the controllers are still able to be used with SoundBox.

  Then, in order to execute this strategy, our efforts have to be putted in creating distinguished functions on our product for controlling SoundBox and ensuring that the clients understand and accept them, so the users will find in Octavia Workbench a differentiation in the workflow upgrade that it apports them.

7. OPERATIVE PHASE

7.1. Product

Considering the existing software and hardware, I decided to not get into certain products, at least not for starters, because some of them are highly developed and offered in a good quality/price ratio from a lot of other companies in all price ranges, such as plug-ins and midi keyboards.

7.1.1. Octavia SoundBox

Although it would be nice to center my work on this concrete aspect of the D.A.W., I don't consider it the most irrelevant one in terms of innovation in the music production concept, and it makes more difficult to be able to define well the hardware that I will talk about later since I wouldn't have the software fully developed to implement on, so I decided to work under the premise that Octavia Workbench is FL Studio, applying a single change: there are no native plug-ins.

This is an important change, not a single D.A.W. has no own plug-ins, and being honest, a D.A.W. without plug-ins its almost useless.

There are three reasons to justify the taking out of the native plug-ins. The first one is that nobody that can permit themselves to buy higher quality plug-ins developed by third parties use the plug-ins that come with the D.A.W. It's not that the stock plug-ins are bad, some are actually decent, but there are a lot of paid plug-ins that are way better. The second reason is that there are thousands of free plug-ins and a certain percentage of them are at the same level of quality as the native ones.

Before I talk about the third reason, I'm going to justify if by showing an example: let's say that I need an optic compressor, you have the native one, and there's maybe 20 paid of which 15 are better than the native, there's also 100 for free of which 15 are on the same level as the native, so why do the companies bother in having their own? They just want to give you the commodity to have one by hand which is good, but I don't think that nowadays that's the most interesting way. So, the third reason why I'm removing the stock plug-ins is that instead of giving native plug-ins, I consider having an internal virtual store a more efficient way of giving to the user plug-ins in a comfortable way.

Another function I want to implement on Octacia SoundBox is called the Parallel Project Creation System, which consists in giving the users the opportunity to work simultaneously on a project by sharing the same screen and passing the controls of the program when desired. It also comes with lives camera and audio connection to ease the communication between the two artists and a control to establish the relation of the project volume level

and the communication volume level. It's important to know that for this function to work proper both users must be working on headphones.

Since I am going to consider FL Studio as Octavia SoundBox, I'm going to show how it is structured.

FL Studio is a D.A.W. developed by Image-Line, a Belgium company, that was first released the 18th of December in 1998 and ever since has been uploading. The 15th of December 2021, FL Studio 20.9.0 version was released. The original name was FruityLoops but they changed it in 2003 after Kellogg's threatened with a law suit.

Here we can see all the windows that FL Studio 20 has, these are:

- Tool Bar
- Browser
- Channel Rack
- Piano Roll
- Playlist
- Mixer

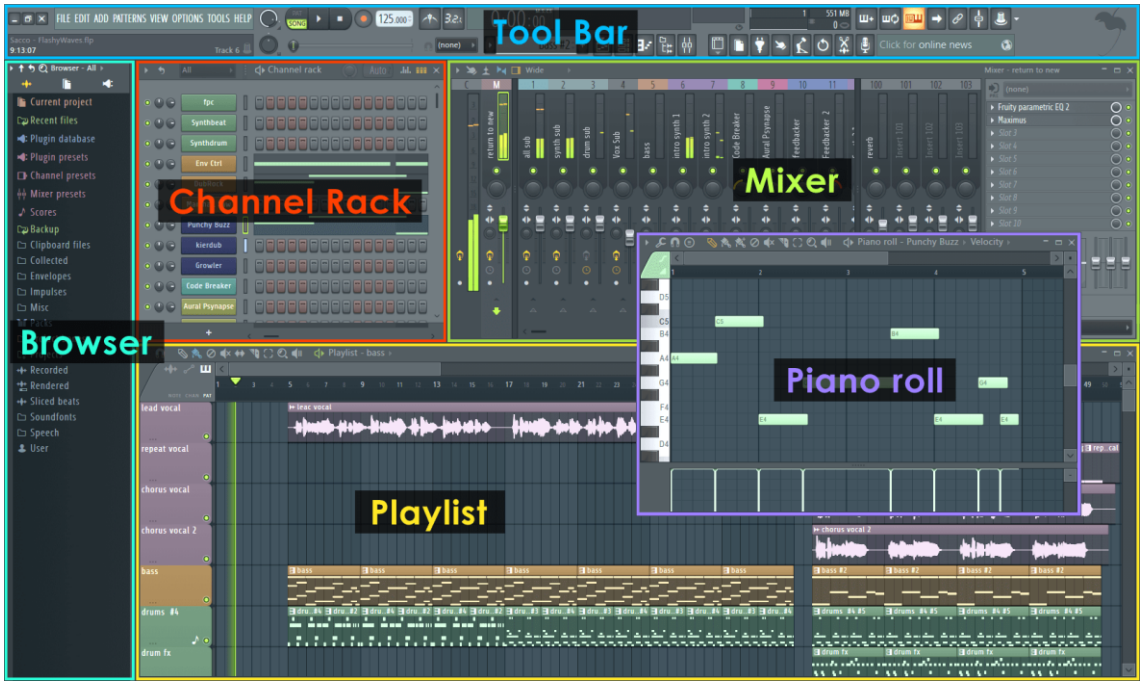


Figure 40: *All FL Studio Windows*

Now we are going to make a walkthrough through all of them. To understand how this software is structured, it's important to distinguish and understand the relationship between 4 elements, we are going to see the difference with an example:

- Sound Font: this concept refers to the set of plug-ins, audios, sounds, and automatizations that are used in a project. Let's say that we have a piano, a guitar, and a voice.
- Pattern: this concept refers to the different loops that are used in a project, for example, if we the piano may be doing two chord progressions, one for the verses, and another for the hook. We create a pattern with the first chord progression and another one with the second. Let's say that the guitar its only appearing in the hook, then we create a single pattern with its melody.
- Track: This concept refers to the different lines of content that our song has. Since we are not using the piano pattern at the same time, we can use a single track for both of them, and two more for the guitar and the voice. Tracks are part of the playlist.
- Channel: This concept refers to the different inputs and outputs of the project. We'll be using one for each different type of element, and here is where they will be mixed. Channels are part of the mixer window.

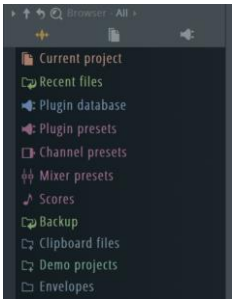
Let's get into the different windows that FL Studio have:

TOOL BAR

Figure 41: *FL Studio Tool Bar Window*

The tool bar is the main window in FL Studio, from here we access the options panel, we can open the rest of the windows, we adjust the tempo, and play and pause buttons are placed here. We also have some important information like the time, the CPU usage, and visuals for live waveform and volume level. We can also choose which pattern is selected.

BROWSER



The Browser is basically a folder. Here we find any element that we can use from our computer, every element that's created in the current project, and all the plugins that we have installed. We also have a record of our actions so we can go back and forth in what we did.

Figure 42: *FL Studio Browser Window*

CHANNEL RACK

Figure 43: *FL Studio Channel Rack Window*

The Channel Rack is a window where we have all our sound fonts. If we take a look into the snapshot, we can see some numbers next to the sound fonts, these are the channel tracking directions, which mean that we'll be setting which sound font goes to which channel from here. The Channel Rack also shows the current selected pattern from the tool bar. Anything that we do in the Channel Rack will affect only this pattern. If we click on a sound font the audio generating plug-in will open if it's the case, or the audio / automatization options will be opened.

PIANO ROLL

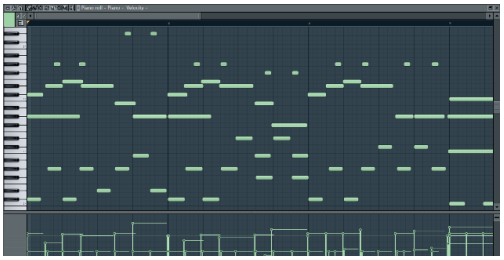


Figure 44: *FL Studio Piano Roll Window*

In the piano roll we edit what the selected sound font is doing in the selected pattern. Not only we are telling which notes are going to be played and when, but we are also setting some values like the velocity, the panning, and the release. These are edited in the inferior part of the window. The piano roll has some interesting tools like a randomizer to make the instruments sound more natural, an arpeggiator, and a riff generator. As we can see, it looks like a sideways piano, so the Y axis refers to the pitch, and the X axis refers to the time.

PLAYLIST

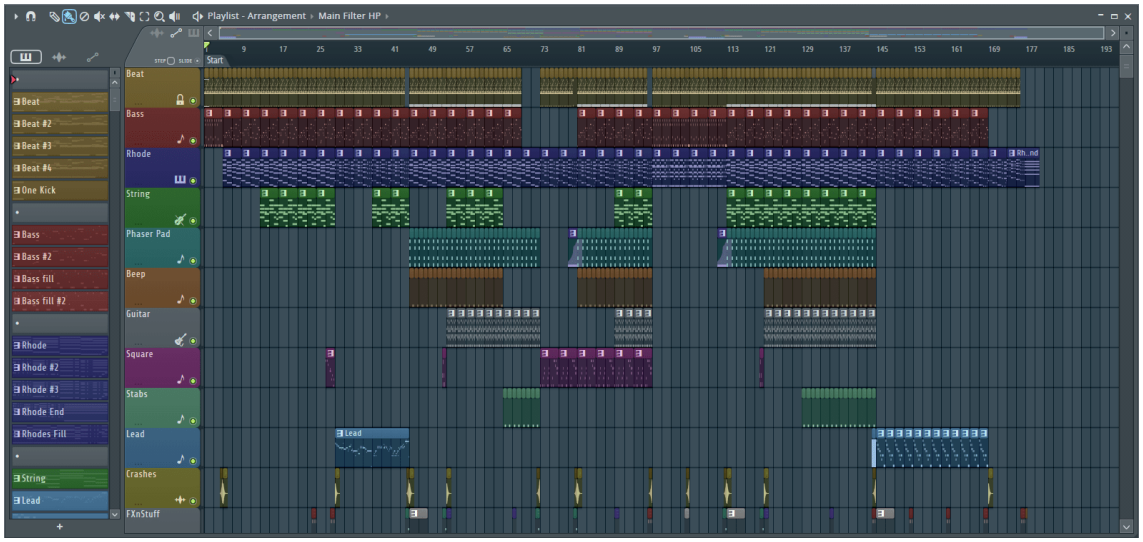


Figure 45: *FL Studio Playlist Window*

The playlist is where things are ultimately putted. The X axis refers to time, and in the Y axis we found the different track that are in the project. In each track we can see the different patterns being placed where they're going to be heard. At the left side of the window, we can see a list of the patterns that the project has so we can easily drag them to the playlist.

MIXER

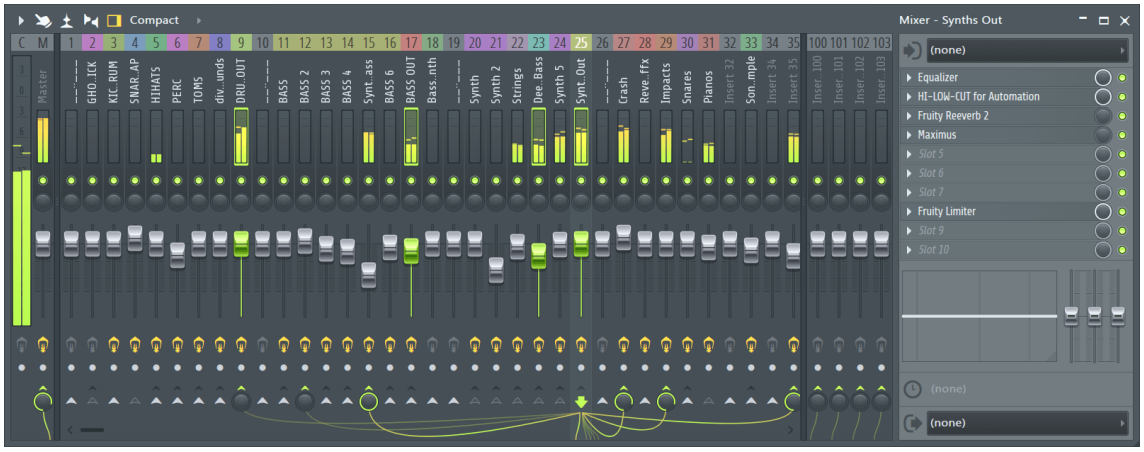


Figure 46: *FL Studio Mixer Window*

In the Mixer we find the channels. Each sound from the channel rack goes to its chosen channel and here we can edit it. Apart from basic parameters like volume and panning, we can add audio transforming and audio analyzing plug-ins to our sounds on the right-side part of the window. We can also send the signal of a channel to another one as shown in the green threads in the inferior. On the left side part of the window, we can see the master channel, where everything will ultimately be going[44].

7.1.2. Octavia Space

This feature helps the company in the biggest fight that every software developer has, cracked software versions. People will still be able to crack the D.A.W. but since the

Octavia World is an on-line feature, they won't have access to it because users would need a registered license to connect to the server. It won't stop the illegal use of the program but generates an added value to the purchased version of the program, apart from the fact that the commodity that the purchased version offers in terms of obtaining the program, uploading its version, and the client service features. In resume, Octavia Space is every web you ever found or heard of related to music, all in one.

Even though Splice is the most developed music resources space, I think that some big changes can be made to create one that offers more benefits and a more comfortable structure for the user.

Now, we are going to talk about how Octavia Space is structured. This is the classification and distribution of the different resources that Space offers:

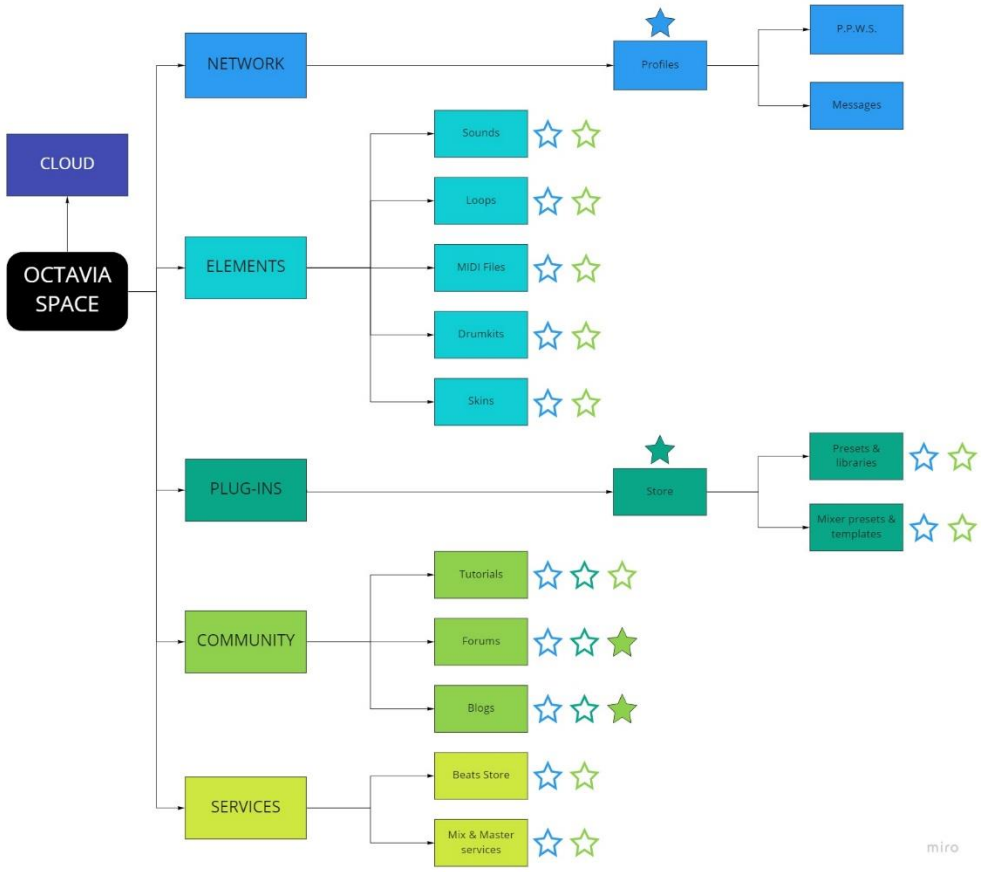


Figure 47: *Octavia Space Diagram*

Under each section, we can see the different categories in which the different elements uploaded by companies and users will be placed. In order to make Octavia Space as optimum as possible, the correlation between different resources is key, in fact, having all this kind of elements in one single space brings us the opportunity to achieve a level of connection between the resources never seen before.

The way the elements are connected is represented in the diagram by the stars. The body painted stars represent access points to the contour painted ones, but, obviously, these are two-way streets. We can explain that with an example:

Let's say that I'm searching for a loop in the loops category, and I see some interesting ones that are uploaded by another user. From there, I can access to this person's profile and there, I'll find not only the rest of loops that he uploaded, but every other element, participation to the community, plug-in preset, or service that he offers. Since Space is

also a network, I could send him a message letting him know that I'm going to use one of his loops and maybe, we will end up working on a song together using the Parallel Project Working System.

Another interesting access point is the plug-ins store. In Octavia Space, when you enter a plug-in's page, you can see the different presets and libraries that are uploaded, the tutorials where this plug-in appears, and any forum and blog entries that are dedicated to it.

Since Octavia World shows a clear competence to Splice, we think it is interesting to see a comparation of what they offer and how, letting us see clearly their differences:

Feature	Octavia Space	Splice
Plug-ins Store	Open access to any company or plug-in developer to upload their plug-ins.	Around 600 selected plug-ins from top companies. Rent-to-own system that allows the users to pay for some of the plug-ins with a monthly payment.
Plug-in presets and libraries	Open access to any user and company to upload their plug-in presets and libraries.	A small selection of presets for a small number of plug-ins developed by professionals. No libraries available.
Loops, sounds, MIDI files and drumkits	Open access to any user and company to upload their loops, sounds, MIDI files, and drumkits.	Huge collection of loops, sounds, MIDI files, and drumkits that can be submitted by any artist and Splice revise its quality.
Tutorials	Open access to any user and company to upload their tutorials.	Small number of quality videos developed by professionals.
Forums	Full forum features like posts, questions, topic discussions, music sharing, etc…	Track sharing space with challenges to participate.
Blog	Open access to any user and company to make their blog.	Splice official blog.
Cloud Storage	Online sync of the user's work and good folder classification. Collaboration feauture where folders can be shared with other users and the projects located in them can be accessed and modified.	Online sync of the user's work and good folder classification. No collaboration feature.
Parallel Project Working System	Feature that allows two users to work on the same project by giving them a videocall feature and screen sharing system, with a volume level control on the videocall and the D.A.W.	Not implemented.
Beats Store	Open access to any user or company to upload their beats and sell them.	Not implemented.

Mixing & Mastering services	Open access to any user or company to offer their services and sell them.	Not implemented.
Templates and Mixer Presets	Open access to any user or company to upload their templates and mixer presets.	Not implemented.
Skins	Open access to any user or company to upload their skins.	Not implemented.

Table 18: *Octavia Space – Splice Features Comparison*

Subscription Plans	Octavia Space	Splice
Free	Most features of Octavia Space are free once the user has an Octavia SoundBox license with unlimited usage of them.	Only Cloud storage is free. Free two weeks trial for any subscription plan.
Paid	Parallel project working system and Cloud storage are paid services accessible only with the Space+ monthly subscription.	3 subscription plans earlier stated that set a limit on the music resources usage.

Table 19: *Octavia Space – Splice Subscription Plans Comparison*

Organization	Octavia Space	Splice
Resource classification	Meticulous classification system in order to organize the high number of products, following an App Store style system. Related resources union system, for example: From a plug-in page, you can access the presets, libraries, tutorials, and blog entries that are made for or about it.	Standard classification, good filter system for the loops, sounds, MIDI files, and drumkits.
Resource access	Intern D.A.W. feature, high commodity level in terms of accessing, uploading, and downloading music resources.	Splice desktop app makes the relation between the D.A.W. and the music resources usage easier than having to go through internet and PC folders.
User profile	User profiles are public, and every uploaded resource, tutorial, blog, etc. are displayed on them. Octavia Sound is a network where users can message and link up.	Standard not public user profile.

Table 20: *Octavia Space – Splice Organization Comparison*

Octavia Space is a source of income. The Cloud storage and the Parallel Project Working System are paid features. Everything else is accessible for free for every user that paid

the license, but to access these two the user must have a paid subscription, which will be called Octavia Space+.

Also, since Octavia Space is a store, the different companies can pay in order to appear on the top, like any other virtual store. Another thing that virtual stores do is retain a percentage of the sales that the companies do on them, in our case, we choose to start with a 1% retainment, to ease our work of convincing the companies to enter our portal.

This is something that has a incredible potential, in case we get to the situation where there are hundreds of thousands of people using our platform, where we could ask for a higher percentage of retainment, and the advertisements would have a very high revenue.

7.1.3. Octavia Workbench

Starting from the premise that Octavia SoundBox is FL Studio, I started to analyze how a producer uses it, which are the acts that repeats the most and which are the most uncomfortable processes to do with a mouse and a keyboard, so I ended up creating a series of elements that cover those tasks in a more efficient and easier way, basing my decisions in my years of this software's use, and taking into account what the rest of the controllers have and don't.

A distinguished decision I made was to remove the typical system of 8/16 fader to control the mixer and substitute them with a single fader and a knob to choose the track controlled by that fader. That's not the first time a controller is done this way, in fact, a great example is the Behringher X-Touch & X-Touch One, two controllers with the 8 to 1 fader as the only difference, followed by a 150 euros of price drop.

It's also important to talk about the motorized 0-100 knobs. There is no music destined gear that use them, but they do exist, and really help the user get the job done easier and in a more comfortable way. It's the same functionality difference that a motorized fader gives, but somehow only in faders are commonly implemented.

Let's see an example: we can use a knob to adjust the panning of a signal, which, let's say, it's centered. If that knob it's not motorized, when we change the selected signal to one that's panned to the left, the knob will stay on the center of its range. Now, those knobs are design to not affect the signal unless you touch them, but once you do it the panning level will be centered so if you want to do a minor adjust you need to know the position it was settle before and go there from the center value to make the adjustment. With motorized knobs, when you change the selected signal, the knob turns into the position that signal have, and you work from there.

This last two concepts I pointed out compensate each other economically, while using only one fader lower the price, the usage of motorized knobs increase it since they have a higher price.

It was also important to keep the measures in a certain rang, too small makes it difficult to work with, and to big may result in not fitting into certain desks and diminish its portability.

When designing Octavia Workbench, I focused on developing its utility and the workflow improvement of FL Studio, which, as I stated before, in this work will be treated as Octavia SoundBox. I also wanted to obtain visual version of it, without getting into the internal electronic circuit part of it.

The different parts of the 3D model are:

- Main Frame
- Button
- Arrow Button
- Fader
- 0-100 Knob
- Infinite Knob
- Word Display
- Volume Display
- Touchpad

Let's take a look in each one of them:

Main Frame:

This 3D part is the body of the hardware. It defines the spaces for the different components that will be placed. It's also important to consider a proper thickness to harbor the internal elements.

In the industry, we can find two principal materials for pieces like this one: plastics and metals. Plastic offers a lighter and cheaper result, but the final product is less robust and looks less beautiful that using a metal like aluminum. I propose to use a combination of both, using aluminum in the top layer of the hardware and plastic for the rest of the body, giving it a better look and feeling, and keeping the costs of materials in a low level.

I want to stand out the fact that I gave a certain inclination to it by increasing the thickness so its more comfortable to work with, and to make sure the different connection can be placed on the back front without spacing problems.

Buttons:

As we can see, there are two types of buttons, one is used for functions that act as arrows, and the other is used for the rest of them, which gives a clearer visual understanding of the general view.

Commonly, the material used for buttons in the rest of the D.A.W.s is plastic. Even so, there are two main types of plastic buttons, one is the translucent plastic which allows it to be fully lighted, and the second one is the opaque one, which usually have a lighting pilot next to him in case it's needed to show an active function. I decided to use the translucent ones since most of the buttons are used for active functions, they also look cooler, and have a nicer feel in the finger.

The buttons I designed have no words on them, but the idea is to print the names that appear on the Cheatsheet that will be shown later.

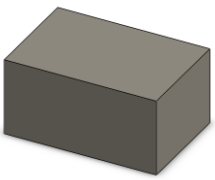


Figure 48: *Button 1 Design*

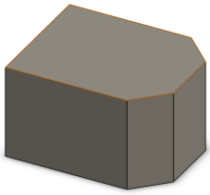


Figure 49: *Button 2 Design*

Fader:

As I said before, I decided to not implement the typical structure of 8 faders and use one instead. This allows to choose a top-quality fader.

There is a big range on the quality of the faders in the different D.A.W. controllers on the market. Not only because of the materials used, but also because there are motorized and not motorized. To have better results, I'm going to choose a motorized metal fader.

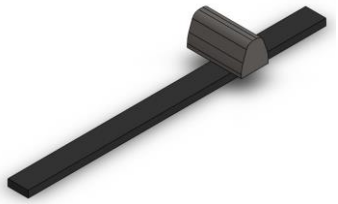


Figure 50: *Fader Design*

There are a lot of different ways to approach the touching part of the fader. The designing I made is for visual purposes and in order to select the definitive one I should physically try different designs to find the proper one.

Knobs:

There are two types of knobs, the infinite ones are used for selection functions where the selectable list is variable through the time, they have discrete selection, which means that between one position and the next one there's a little "click" and can be rotated infinitely. On the other hand, we have the 0-100 knobs, which are used for adjusting a certain magnitude between a minimum and a maximum value, and have a continuous selection, which means that the user can choose the exact value inside the range.

In the industry, we can find plastic and metallic knobs, and sometimes they have some kind of lighting system to indicate their position.

Even though they are not implemented in D.A.W. controllers, as I said before, the 0-100 knob will be motorized to ease the user's workflow. I'm going to choose plastic knobs because I consider them as good as the metallic ones.

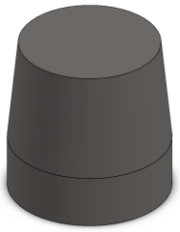
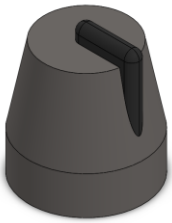


Figure 51: *Infinite Knob Design*

Figure 52: *0-100 Knob Design*



Displays:

Displays are really helpful for giving information to the user on what are they modifying with the controller without having to look at the screen. We find two types of displays in this piece of hardware, the words display, which show the selected pattern, track, channel, etc. and the level display, which shows the volume level of the selected channel.

There are many types of displays, such as LCD and LED, and some have more resolution and colors than the others, followed by a big difference on the price.

For the words display, I'm going to choose an LCD, which is a simpler one that can perfectly show words, and for the level display, I'm going to be using LED, which allows to show a more precise level in different colors.

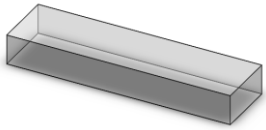
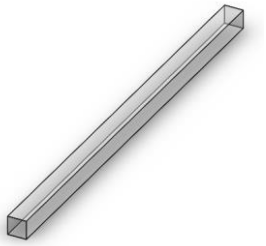


Figure 53: *Words Display Design*

Figure 54: *Level Display Design*



Touchpad:

A touchpad is used for a function that needs time activation precision thanks to its sensitivity, for example, playing drums. In this case, only one touchpad will be implemented and will be used to set the BPM of the project.

The material used is always plastic, normally translucent so it can give a lighting response to the touch. They are normally sensitive to the velocity, which means that can detect how hard or soft you press them. For my purpose, the quantity of pressure is not

important, so a non-velocity sensitive touchpad will work well. Since it has the same measures as a button, there is no distinction from it in my design.

For a deeper detail of the hardware parts, we added the bluepints of the different pieces on the annexes.

Figure 55: *Hardware Design*

BUTTONS, KNOBS, DISPLAYS AND FADERS DESCRIPTION

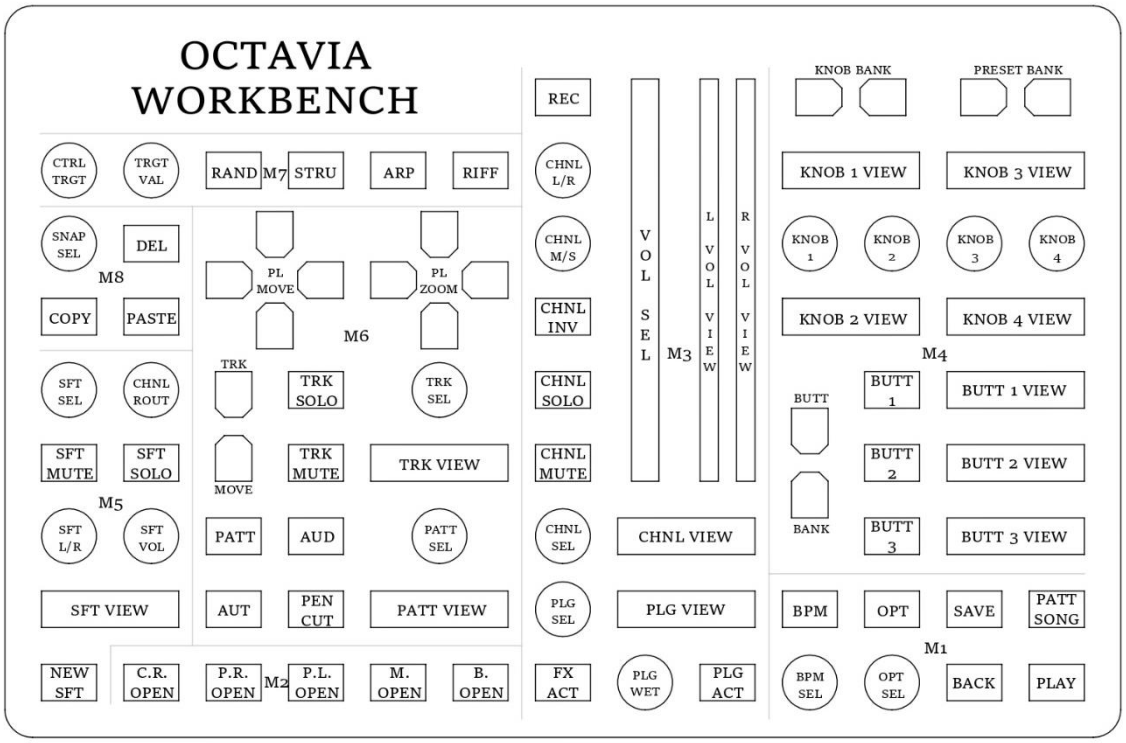


Figure 56: *Hardware Cheatsheet*

Module 1: Main tools

1. **PLAY** (lighted button): play/stop song/pattern
2. **PATT/SONG** (double lighted button): change between selected pattern and song
3. **SAVE** (instant lighted button): save project
4. **OPT** (lighted button): enter selected sound font/track/channel options
5. **OPT SEL** (infinite knob with button): move between the options/browser + enter the selected option
6. **OPT BACK** (instant lighted button): go back to options
7. **BPM TAP** (instant lighted pad): set project bpm by tapping the button
8. **BPM SEL** (infinite knob): set project bpm by knob

Module 2: Windows

9. **C.R. OPEN** (lighted button): open Channel Rack window
10. **P.R. OPEN** (lighted button): open Piano Roll window
11. **P.L. OPEN** (lighted button): open Playlist window
12. **M. OPEN** (lighted button): open Mixer window
13. **B. OPEN** (lighted button): open Browser window

Module 3: Mixer

14. **PLG ACT** (lighted button): activate/deactivate selected plugin
15. **PLG WET** (motorized 0-100 knob): adjust dry/wet status of the selected plugin
16. **FX ACT** (lighted button): activate/deactivate FX on the selected channel
17. **PLG VIEW** (words display): display with selected plugin shown
18. **PLG SEL** (infinite knob with button): change selected plugin + open chosen plugin
19. **CHNL VIEW** (words display): display with selected channel shown
20. **CHNL SEL** (infinite knob): change selected channel
21. **L & R VOL VIEW** (level display): display with live volume level of the selected channel
22. **VOL SEL** (motorized fader): change the volume of the selected channel
23. **CHNL MUTE** (lighted button): mute/unmute the selected channel
24. **CHNL SOLO** (lighted button): solo/un-solo the selected channel
25. **CHNL INV** (lighted button): invert/un-invert the selected channel
26. **CHNL M/S** (motorized 0-100 knob): adjust mono/stereo separation on the selected channel
27. **CHNL L/R** (motorized 0-100 knob): adjust left/right panning on the selected channel
28. **CHNL REC** (lighted button): arm/unarm the selected channel to record routed signal

Module 4: Plug-In

29. **BUTT BANK** (2 instant lighted arrow buttons): change between button banks
30. **BUTT 1,2 & 3** (3 lighted buttons): enable/unable button 1/2/3
31. **BUTT 1, 2 & 3 VIEW** (3 words displays): display with button 1/2/3 name
32. **KNOB BANK** (2 instant lighted arrow buttons): change between knob banks
33. **KNOB 1, 2, 3 & 4** (4 motorized 0-100 knobs): adjust knob 1/2/3/4 level
34. **KNOB 1, 2, 3 & 4 VIEW** (4 words displays): display with knob 1/2/3/4 name
35. **PRESET BANK** (2 instant lighted arrow buttons): change between plugin presets

Module 5: Channel Rack

36. **NEW SFT** (instant lighted button): create a new sound font on the Channel Rack
37. **SFT VIEW** (words display): display with chosen sound font name
38. **SFT L/R** (motorized 0-100 knob): adjust left/right panning on the selected sound font
39. **SFT VOL** (motorized 0-100 knob): adjust selected sound font volume
40. **SFT MUTE** (lighted button): mute/unmute the selected sound font
41. **SFT SOLO** (lighted button): solo/un-solo the selected sound font
42. **SFT SEL** (infinite knob with button): change selected sound font + open selected sound font
43. **CHNL ROUT** (infinite knob): route the selected sound font to a certain channel.

Module 6: Playlist

44. **PATT/AUT/AUD** (3 lighted buttons): choose between pattern, automatization, and audio in the picker panel
45. **PATT SEL** (infinite knob): change selected pattern
46. **PATT VIEW** (words display): display with selected pattern shown
47. **PEN/CUT** (double lighted button): change between pencil and cutter in the playlist toolbar
48. **TRK SEL** (infinite knob): change selected track
49. **TRK VIEW** (words display): display with selected track name shown
50. **TRK MOVE** (2 instant lighted arrow buttons): move the track up/down in the playlist
51. **TRK MUTE** (lighted button): mute/unmute selected track
52. **TRK SOLO** (lighted button): solo/un-solo selected track
53. **PL MOVE** (4 instant lighted arrow buttons): move up/down/left/right the playlist view
54. **PL ZOOM** (4 instant lighted arrow buttons): move up/down/left/right the playlist zoom

Module 7: Piano Roll

55. **CTRL TRGT** (infinite knob): choose between target in piano roll
56. **TRGL VAL** (motorized 0-100 knob): adjust target value
57. **RAND** (lighted button): open randomizer
58. **STRU** (lighted button): open strumizer
59. **ARPG** (lighted button): open arpeggiator
60. **RIFF** (lighted button): open riff generator

Module 8: Hybrid module Playlist-Piano Roll

61. **SNAP SEL** (infinite knob): change the snap value on the piano roll/playlist
62. **COPY** (instant lighted button): copy selection
63. **PASTE** (instant lighted button): paste selection
64. **DEL** (instant lighted button): delete selection

7.2. Price

SOFTWARE					
PRICE FIXING		**FL STUDIO**		**PRO TOOLS***	
Criteria	**Ponderation**	**Perceived Value**	**Points**	**Perceived Value**	**Points**
Professionalism	40%	7,00	2,80	10,00	4,00
Easy to use	10%	9,50	0,95	6,00	0,60
Appearance	5%	8,00	0,40	6,50	0,33
		Price	**Total points**	**Price**	**Total points**
		489 €	7,98	450 €	8,08
COST PER UOA		**61,32**		**55,73**	

PRICE FIXING		**ABLETON LIVE**		**CUBASE**	
Criteria	**Ponderation**	**Perceived Value**	**Points**	**Perceived Value**	**Points**
Versatility	45%	8,00	3,60	6,50	2,93
Professionalism	40%	7,00	2,80	7,50	3,00
Easy to use	10%	7,50	0,75	7,00	0,70
Appearance	5%	7,50	0,38	5,50	0,28
		Price	**Total points**	**Price**	**Total points**
		599 €	7,53	581 €	6,90
COST PER UOA		**79,60**		**84,20**	

PRICE FIXING		**LOGIC PRO**		**OCTAVIA SOUNDBOX & SPACE**	
Criteria	**Ponderation**	**Perceived Value**	**Points**	**Perceived Value**	**Points**
Versatility	45%	7,00	3,15	9,00	4,05
Professionalism	40%	8,50	3,40	7,00	2,80
Easy to use	10%	6,50	0,65	8,50	0,85
Appearance	5%	10,00	0,50	8,50	0,43
		Price	**Total points**	**Price**	**Total points**
		199 €	7,70	99 €	8,13
COST PER UOA		**25,84**		**12,18**	

AVG COST PER UOA	61,34	**THEO. COST PER UOA**	**65,28**
AVG PUNCTUATION	7,64		
RATIO THEORICAL-REAL COST PER UOA		**19%**	

*Pro Tools price is for half a year UOA = Unit Of Appreciation

Table 21: *Software Price Fixing*

There's a reason that lets us have a 19% relation of cost per unit of appreciation. Our company won't be developing its own plug-ins. As stated before, these suppose a big investment in highly qualified audio software engineers and a lot of time. Also, we are aiming for a low-price strategy, that combined with the implantation of online features that will only be accessible with a paid license, makes us hope for a higher ratio of users that actually pay our product. This leaves us with a cost per unit of appreciation of 12,18, which is a half of the second in the ranking, Logic Pro (Apple).

Note that the other company's strategy is to accept that they will only receive income from a small percentage of users, which highly increase their prices.

HARDWARE

PRICE FIXING		BEHRINGER X- TOUCH		ICON PLATFORM M	
Criteria	Ponderation	Perceived Value	Points	Perceived Value	Points
Versatility	50%	8,50	4,25	7,50	3,75
Quality	35%	7,50	2,63	9,50	3,33
Easy to use	10%	7,00	0,70	9,00	0,90
Appearance	5%	8,00	0,40	9,50	0,48
		Price	Total points	Price	Total points
		395 €	7,98	299 €	8,45
COST PER UOA		49,53		35,38	

PRICE FIXING		MASCHINE MIKRO MK3		SOFTUBE CONSOLE	
Criteria	Ponderation	Perceived Value	Points	Perceived Value	Points
Versatility	50%	8,50	4,25	7,50	3,75
Quality	35%	8,00	2,80	9,00	3,15
Easy to use	10%	7,50	0,75	8,00	0,80
Appearance	5%	9,00	0,45	9,50	0,48
		Price	Total points	Price	Total points
		211 €	8,25	366 €	8,18
COST PER UOA		25,58		44,77	

PRICE FIXING		AKAI FIRE		OCTAVIA WORKBENCH	
Criteria	Ponderation	Perceived Value	Points	Perceived Value	Points
Versatility	50%	7,50	3,75	10,00	5,00
Quality	35%	6,00	2,10	7,50	2,63
Easy to use	10%	8,00	0,80	8,50	0,85
Appearance	5%	6,00	0,30	8,50	0,43
		Price	Total points	Price	Total points
		189 €	6,95	299 €	8,90
COST PER UOA		27,19		33,60	

AVG COST PER UOA	36,49	THEO. COST PER UOA	40,80
AVG PUNCTUATION	7,96		
RATIO THEORICAL-REAL COST PER UOA		82%	

Table 22: *Hardware Price Fixing*

As we can see, our product has not the lowest cost per unit of appreciation, but is still 7 points under the average, a 82% ratio. Being realistic, we couldn't set a low price as we did with the D.A.W. because we won't have a big manufacturing facility to produce in mass that reduces our costs per unit, but our features and distinctions gives us the higher punctuation, which compensate our prices.

7.3. Placement

The placement will be divided in two types: physical and on-line stores. Obviously, physical placement will only include the sale of the hardware, while on-line placement will be selling both software and hardware.

Online stores

The on-line stores that Octavia will be working with initially are Thomann, Madrid Hi-FI, and Alfasoni. They are the biggest distributors in the world, Spain, and Catalonia, respectively, and are located in Burgebrach (Germany)[45], Madrid (Spain)[46], and Poble Nou, Barcelona (Spain)[47]. All of these are music products specialized stores, but since Amazon is the biggest selling portal in the world[48], we chose to also use it.

Figure 57: *Thomann Logo*

Figure 58: *Madrid Hi-Fi Logo*

Figure 59: *Alfasoni Logo*

Figure 59: *Alfasoni Logo*

Figure 60: *Amazon Logo*

We choose these companies in order to minimize the complexity of the placement logistics while aiming for the maximum visibility trying to reach everywhere. Since we are a starting company, we still want to have our focus on the local market, in order to stablish a national foundation to expand from.

We are also going to sell the software from our own website, which will be shown in the next point. We choose not to sell the hardware from it because of the transport complexity that it will have. This way, we only need to send it to four distributors which will allow us to simplify our structure and still be able to reach anyone from anywhere in the world, following the Aikido strategy.

Physical stores

The physical placement will be in line with the on-line one, since we are only going to sell the hardware from the physical stores that both Thomann and Alfasoni have. That way we don't need to add more distribution channels and our products will be able to be purchased physically, but only in Barcelona and Burgebrach,

In the future, the plan is to also sell the hardware from our website by developing our own distribution system, which will remove the percentage of the revenue that other distributors get from every purchase made from their stores.

7.4. Promotion

Promotional objective

Since our company is launching, the objective of the promotion will be to open to the world and announce our products.

Promotional message

To draw the attention of our target, we will include three concepts in our message:

- Make music faster and easier: our main goal from the beginning was to create music production products that eases the process of bringing the ideas to life, by generating a better workflow. Since our products have been design after this objective, we want to make sure the target understands it and sees the ease that our company offers.
- Make better music: Not only we hope that our products due to their differentiation from the rest will actually generate better results, but it's also the main attraction for our target. Producers enjoy the process of creating music but love to obtain great results.
- Achieve success: Every musician dreams with one thing. Become famous. This is the most powerful concept that we can use. If a producer believes that our products can make a difference in their attempt to achieve success, he buys the product.

These three concepts combined can results in one common concept: Make music in a smarter way. Therefore, our slogan is the following one:

"Welcome to the smartest music production. Are you ready for your future?"

Promotional channels

All our promotion will be done online since our target is constantly connected to the internet. As shown below, the promotion channels will be social networks, YouTube, Google, and the selling websites.

PROMOTION	3rd year	4th year	5th year
Instagram	10.000 €	12.500 €	15.000 €
Twitter	1.000 €	1.250 €	1.500 €
Facebook	1.500 €	1.875 €	2.250 €
YouTube	10.000 €	12.500 €	15.000 €
Own website	4.000 €	5.000 €	6.000 €
Thomann	5.000 €	6.250 €	7.500 €
Madrid HiFi	2.000 €	2.500 €	3.000 €
Alfasoni	1.500 €	1.875 €	2.250 €
Amazon	5.000 €	6.250 €	7.500 €
TOTAL	**40.000 €**	**50.000 €**	**60.000 €**

Table 23:

Promotion Budget Distribution

Octavia official website

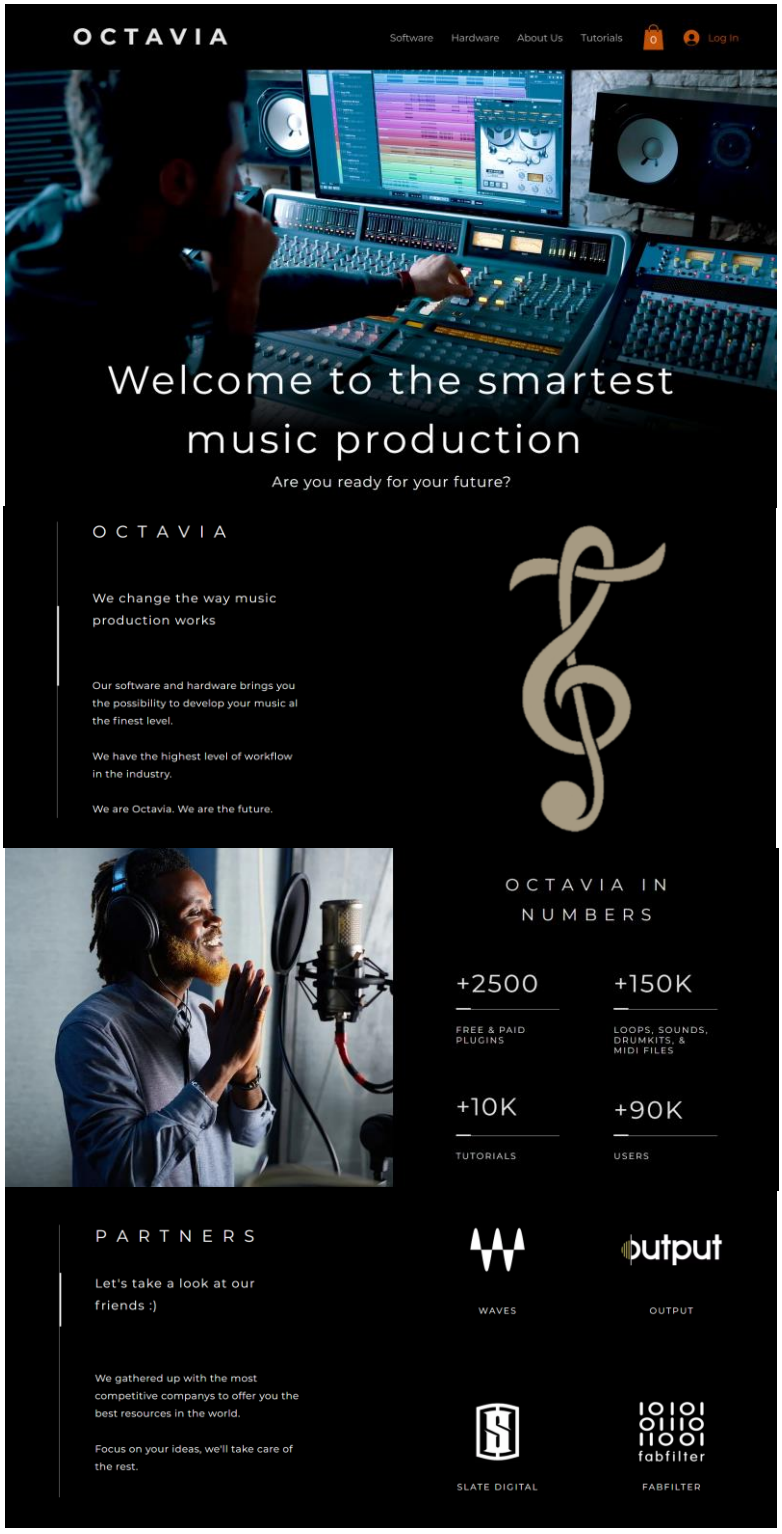


Figure 61: *Octavia Website*

We highly recommend visiting the website, which can be found in the webography, for a detailed view of it[49].

Octavia Instagram account[50]

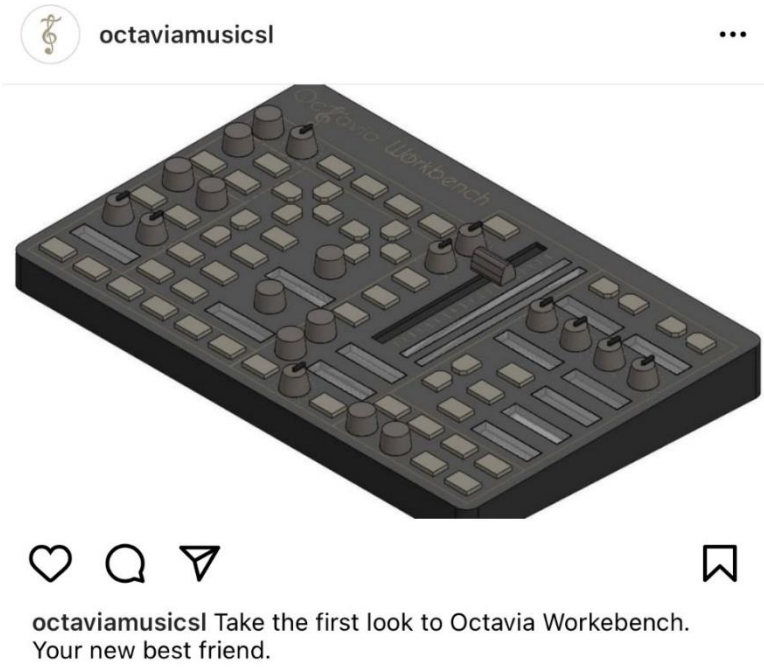


Figure 62: *Octavia Instagram Account*

Octavia Twitter account[51]

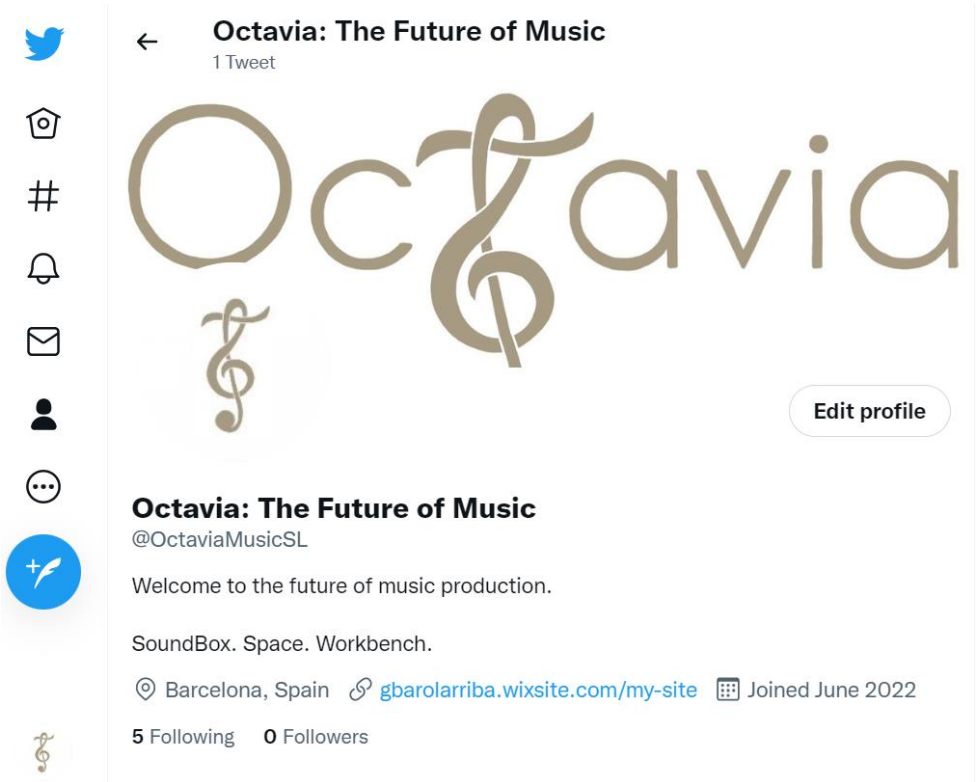


Figure 63: *Octavia Twitter Account*

Octavia Facebook page[52]

Figure 64: *Octavia Facebook Page*

Octavia YouTube channel[53]

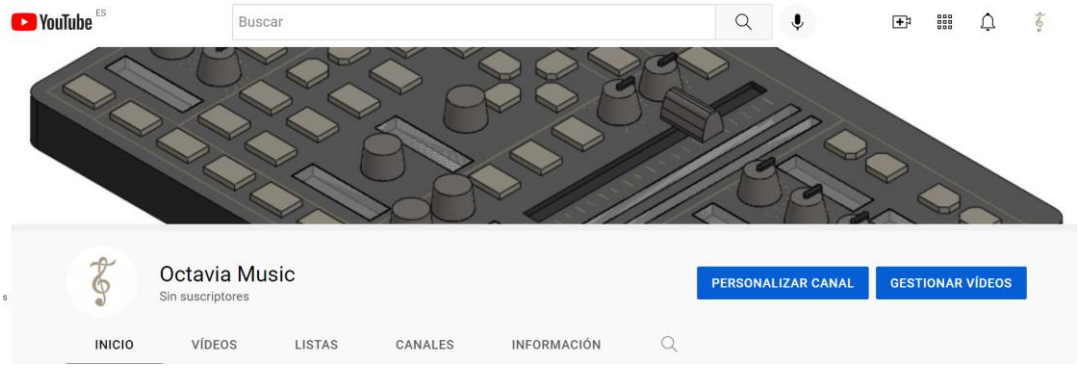


Figure 65: *Octavia YouTube Channel*

The snapshoots shown above are from the different official Octavia accounts, from which we will communicate and stablish a relationship with our users. While Instagram, Facebook, and Twitter will be used to create a community and with which we can interact in order to solve our followers doubts and show them our products and updates, the Octavia website will have a more commercial purpose, giving our costumers all the detailed information about our products and the options to buy them. The YouTube channel will be used to show in videos our products and how to use them, along with promotional videos to capture our target attention.

8. CONTROL PHASE

8.1. Key Performance Indicators

KPI 1. Instagram = (Instagram followers post-inversion – Instagram followers pre-inversion) / Instagram inversion.

KPI 2. Twitter = (Twitter followers post-inversion – Twitter followers pre-inversion) / Twitter inversion.

KPI 3. Facebook = (Facebook followers post-inversion – Facebook followers pre-inversion) / Facebook inversion.

In order to measure the interest of the users, and the repercussion of the social networks inversion we created this KPIs, that shows the ratio between the followers gain every social network that we are in (Instagram, Facebook, and Twitter) and the inversion that we made on it. This allows us to measure how our communication with the users through social networks is working, and which of them are more active and effective to capture new users, to adjust our actions in the future in the most efficient way.

KPI 4. YouTube = (YouTube subscribers post-inversion – YouTube subscribers pre-inversion) / YouTube inversion.

Just like the first three cases, we want to measure the repercussion and acceptance of the promotional videos and tutorial we upload to the platform, in order to decide how to improve our action in the future to show in better ways the functionalities of our products.

KPI 5. Octavia Website = (Octavia website sales post-inversion – Octavia Website sales pre-inversion) / Octavia Website inversion.

KPI 6. Thomann website = (Thomann website sales post-inversion – Thomann website sales pre-inversion) / Thomann website inversion.

KPI 7. Madrid Hi-Fi website = (Madrid Hi-Fi website sales post-inversion – Madrid Hi-Fi website sales pre-inversion) / Madrid Hi-Fi website inversion.

KPI 8. Alfasoni website = (Alfasoni website sales post-inversion – Alfasoni website sales pre-inversion) / Alfasoni website inversion.

KPI 9. Amazon website = (Amazon website sales post-inversion – Amazon website sales pre-inversion) / Amazon website inversion.

These KPIs will measure how our sales are doing in the different stores, which is very important for us. That way, we can make decision in the future on which we want to invest more, spending our resources in a more efficient way.

KPI 10. HW-SW = Hardware units sold / Software licenses sold

We decided to measure the ratio between the hardware units sold and the software licenses sold to see what percentage of users have both things. This KPI will allow us to take actions like promote one product more than the other based on the results we get though the time.

KPI 11. S+-SW = Space+ active subscriptions / Software licenses sold

Just list the last case, we decided to measure the ratio between the Space paid subscription and the software licenses sold to see what percentage of users have both things. This KPI will allow us to take actions like promote one product more than the other based on the results we get though the time.

8.2. Contingency plans

The following table shows the different situations our company can face during the development and first years of market launch, with its associated risks and the plans to follow in order to overcome them.

CONTINGENCY	RISK	PLAN
Software development problems	Not obtaining the desired results of the software functions	Hire extra software developers and create two groups to focus on different ways of solving the problems
Hardware development problems	Not obtaining the desired results of the hardware functions	Hire extra software developers and create two groups to focus on different ways of solving the problems
Low Octavia SoundBox software licenses sales	Not obtaining enough money from the main source of income. Even maintaining the percentage of hardware and subscription sales, having less revenue from them since we have less users.	Remake the promotional strategy of the software product with a previous investigation on how to better caption the attention of our target, with a renewed message and a more optimal proportion of use of the different channels, with a higher in investment on them.
Low Octavia Workbench hardware units sales	Not obtaining enough money from this source of income. Having paid a higher number of physical resources than the needed ones.	Remake the promotional strategy of the hardware product with a previous investigation on how to better caption the attention of our target, with a renewed message and a more optimal proportion of use of the different channels, with a higher in investment on them.
Low paid Octavia Space subscription sales	Not obtaining enough money from this source of income.	Remake the promotional strategy of the Octavia Space subscription with a previous investigation on how to better caption the attention of our target, with a renewed message and a more optimal proportion of use of the different channels, with a higher in investment on them.
Lack of Octavia Space resources	Not having an active and resourceful community which would lead us to having a less interesting software.	Promote and reward the uploading of resources from the users. Reconsider the way we communicate and present our online portal to the professional companies.
Being unable to assume the	Not obtaining the amount of money that	Hire more operators and expand our manufacturing zone with better machinery.

hardware units demand	we could achieve form the hardware sales.	
Saturation of the online servers	Having a bad online experience from our customers with online features, which means bad reputation for our company.	Pay for bigger servers and, if necessary, hire more software engineers to control its status.

Table 24: *Contingency Plans*

9. FINANCIAL PLAN

We will divide the development of our company in two phases. Through the first one, both software and hardware will be designed and developed, and the products will hit the market on the second phase. As we will show in this point of the study, there will be considerable differences between the two phases.

PHASE 1		
CONCEPT	**PRICE**	**APPLY**
Office material	30.000 €	1st year
Office material	10.000 €	2nd year
Servers	10.000 €	Every Year

First, we are going to talk about the **first phase**:

PHASE 1			
POSITION	**SALARY**	**EMPLOYEES**	**SUBTOTAL**
Software Engineer	30.000 €	5	150.000 €
Software Engineer Manager	38.000 €	1	38.000 €
Hardware Engineer	27.000 €	3	81.000 €
Hardware Engineer Manager	35.000 €	1	35.000 €
C.O.O.	40.000 €	1	40.000 €
C.E.O.	46.000 €	1	46.000 €
TOTAL		**12**	**390.000 €**

Table 26: *Phase 1 Salaries*

As we can see, during the first phase we'll only need to pay for office materials, it's maintenance during the second year, and servers, because the development will be done online using a teleworking system. Since the developing of the products require more employees than its maintenance, we'll need more software and hardware engineers, along with the C.E.O. and the C.O.O. who will make sure everything is going in the right direction and prepare the execution of the following phase.

PHASE 2		
CONCEPT	**PRICE**	**APPLY**
Office material	10.000 €	Every year
Facotry material	7.000 €	From 4th year
Promotion	60.000 €	3rd year
Promotion	50.000 €	4th yar
Promotion	40.000 €	5th year
Factory & Offices Rent	110.400 €	Every year
Office material	100.000 €	3rd year
Facotry material	70.000 €	3rd year
Servers	100.000 €	Every year

Table 27: *Phase 2 Costs*

PHASE 2			
POSITION	**SALARY**	**EMPLOYEES**	**SUBTOTAL**
Software Engineer	30.000 €	3	90.000 €
Software Engineer Manager	38.000 €	1	38.000 €
Hardware Engineer	27.000 €	2	54.000 €
Hardware Engineer Manager	35.000 €	1	35.000 €
Logistics	22.000 €	1	22.000 €
Marketing	20.000 €	2	40.000 €
Marketing Manager	27.000 €	1	27.000 €
Operators	15.000 €	3	45.000 €
Production Manager	24.000 €	1	24.000 €
Cleaning service	13.000 €	2	26.000 €
C.F.O.	40.000 €	1	40.000 €
C.O.O.	40.000 €	1	40.000 €
C.E.O.	46.000 €	1	46.000 €
TOTAL		**20**	**527.000 €**

Table 28: *Phase 2 Salaries*

Now, we'll take a look at the **second phase**:

This is a more complex phase. Now, we need a manufacturing plant, which will also have an inside office for better communication between departments.

This plant has a monthly rent cost of 9200€. The plant is located in Fluvià Street 135, in Provençals de Poblenou. It has 800 square meters spread out in 4 floors with a lift truck between the low level and the first level. In the floor 0 the assembly of the hardware will be carried out. Floor one will be the warehouse, and the 3rd and 4th level will be the offices[54].

Figure 66: *Headquarters Offices*

Figure 67: *Headquarters Manufacturing Plant*

This will generate another and higher investment on office material, along with the factory material on the 3rd year, with its consequent maintenance during the following years. Since the product will already hit the market, the server costs will highly increase to cover the online usage of all the users. On this phase, we'll also have the promotion costs.

About the employees, on one hand, we see that the number of software and hardware engineers needed is reduced, since they will only be doing maintenance and updates. On the other hand, now we'll need marketing, logistics, cleaning, and production coverage, along with a C.F.O. to help with the numbers of the company.

As seen before, the **products** that we develop will have the following costs and prices, with the final incomes after applying taxes:

In the next table, we can also see the estimation of the advertisement and sales percentage income from the Octavia Space Store.

PRODUCTS		
CONCEPT	**COST/PRICE**	**AFTER TAXES**
Hardware Components Cost	150 €	- €
Hardware Price	299 €	236,21 €
Software Price	99 €	78,21 €
Premium Subscription	29 €	22,91 €

Table 29: *Product Prices*

To finish, here we can see the **results** of the finances after the first five years of our company exercise:

FINANCIAL BALANCE	PHASE 1		PHASE 2			SUBTOTAL	TOTAL
	Year 1	Year 2	Year 3	Year 4	Year 5		
Salaries	- 390.000 €	- 390.000 €	- 527.000 €	- 527.000 €	- 527.000 €	- 2.361.000 €	
Costs	- 40.000 €	- 20.000 €	- 430.400 €	- 277.400 €	- 267.400 €	- 1.035.200 €	
Hardware Production Volume			500	1000	1500	3000	
Hardware Unit Cost			- 150 €	- 150 €	- 150 €		
Hardware Production Cost			- 75.000 €	- 150.000 €	- 225.000 €	- 450.000 €	- 3.846.200 €
Hardware Sales Volume			500	1000	1500	**3000**	
Hardware Unit Revenue			236,21 €	236,21 €	236,21 €		
Hardware Revenue			118.105 €	236.210 €	354.315 €	708.630 €	
Software Sales Volume			9000	13000	16000	**38000**	
Software Unit Revenue			78,21 €	78,21 €	78,21 €		
Software Revenue			703.890 €	1.016.730 €	1.251.360 €	2.971.980 €	
Subscription Sales Volume			1000	3500	8000	**12500**	
Subscrption Unit Revenue			22,91 €	22,91 €	22,91 €		
Subscription Revenue			22.910 €	80.185 €	183.280 €	286.375 €	
Store Advertisements			20.000 €	53.000 €	100.000 €	173.000 €	
Store Sales Percentage			9.000 €	23.000 €	42.000 €	74.000 €	4.213.985 €
Period t	1	2	3	4	5		
Economic Flux	- 430.000 €	- 410.000 €	- 158.495 €	454.725 €	911.555 €		
(1+k)^t	1,070	1,145	1,225	1,311	1,403		
Flux/(1+k)^t	**- 401.869 €**	**- 358.110 €**	**- 129.379 €**	**346.908 €**	**649.926 €**		
NET PRESENT VALUE					**107.475,47 €**		
INTERNAL RATE OF RETURN					**11%**		
INCOME RATIOS	Hardware units / SW licenses		6%	7%	8%		
	Subscriptions / SW licenses		11%	16%	21%		
	Store Ads / SW licenses		2,22 €	2,41 €	2,63 €		
	Store Sales % / SW licenses		1,00 €	1,05 €	1,11 €		
WEIGHTED AVG CONTRIBUTION MARGIN					**70,35 €**		
BREAK EVEN POINT					**48272,43**		

Table 30: *Financial Blance*

As we can see in the subtotal's column, we will spend 2,361 million in salaries, 1,035 million in fixed costs, and 0,45 million in variable costs, which adds up to a total of 3,846 million to spend.

On the other hand, we will have received 0,708 million from selling hardware units, 2,972 million from selling software licenses, 0,283 million from subscriptions, 0,173 million from store advertisements, and 0,074 million from store sales percentage, which adds up to a total of 4,214 million of income.

In terms of economic flux, we won't have positive numbers until the fourth year, but we end up having over half a million of positive results per year after the fifth year, which projects us to a very profitable future. The NPV at the end of the fifth year is 0,107 million, which gives us an internal rate of return of an 11%.

As we stated on the market analysis, the number of D.A.W. users are around 6,5 million. Through the first 3 years from the launch of the company, we assumed selling 38.000 licenses, which is a conversion rate of a 0,58%, but if we only take into account the users that paid a license, 2 million, it means a conversion rate of 1,9%. Considering these percentages, we think that 38.000 licenses is a realistic number, which could come, for example, from a 0,5% of users that had a paid license that decide to buy ours, and a 4% of users that never paid one that decide to buy ours.

As we can see, the ratio between hardware units sold and software licenses starts with a 6%, and is increased one point per year, which we consider very realistic. Something similar happens with the ratio between subscriptions and software licenses, which starts at an 11%, and every year grows a 5%, achieving a 21% on the fifth year. The ratio between store advertisements revenue and software licenses starts at 2,2€, and grows 20 cents per year. The ratio between store sales percentage revenue and software licenses is a euro per person, increasing 5 cents every year. If we assume a 1% retention of every third-party seller sale, that means an average expense of 100€ per person, which is very assumable considering the plug-ins prices that we talked about in the competence analysis.

Since we have more than one product, we calculated the weighted average contribution margin, that gives the result of 70,35€. This leaves us with a break-even point of 48.273 units.

10. CONCLUSIONS

Investigation Phase Conclusions

Thanks to the investigation phase, we can now have a better understanding of how the music production users think and make their choices when choosing the products they use. The three main results we got from our interviews are the following ones:

The products we wanted to develop in our company are highly accepted and the interviewed people shown a lot of interest in the three ideas, pointing out that it needed to be well developed in order to be useful.

Another important result was that, contrary as it may seem, the users are willing to change form the products they are currently using to a new ones as long as there's a significant improvement in the way they work.

From how the users find and like to see new products, all the promotion we make has to be online, by creation advertisements and showing them on social networks, YouTube, and online music stores.

Analytic Phase Conclusions

After searching information about it, we found that the music production market is rapidly growing despite the current global situation of low stability and economic problems, and also, we found that there is a really slow rhythm of evolution in the music production products, which allow us to develop our products without having to hurry up and worry about the market changes and lets us present a distinguished products to hit market.

We also found that, even though the D.A.W.s can be improvable, plugins are extremely developed and there is a lot of companies with a lot of options, qualities, and prices, which let's us decide to not implement them and reaffirm our decision to go for the online community and store option.

About the hardware, we saw that there is not a single piece really dedicated to a D.A.W. that helps the workflow in all the different stages of the music creation process.

Analyzing our company, we found that the most critic departments in the obtainment of good results are the marketing department, due to the importance of standing out for a new company in a market with big stablished companies to compete with, and the technology department, due to the high end technologic needs and knowledge that we need to be able to bring our ideas to life specifically in the way we want to without experimenting problems.

We can end up analytic phase by concluding with our biggest strength, the distinction of our products from the existing ones, our biggest weakness, the dependance on our promotion results even if we have amazing products, our biggest opportunity, which is the lacks in the existing products due to the low evolution they experimented in the last decade, and our biggest threat, which is the high level of establishment the existing companies.

Strategic Phase Conclusions

We decided to follow the product development strategy as the most adequate growing strategy, the idea is to focus our efforts of development and promotion in creating and exposing distinctive features and characteristics in order to being able to compete with the existing products of the market.

We decided to implement two different differentiation strategies depending on the types of products. For the software, we chose to go for the differentiation one, due to the uniqueness of our products and the distinctions they have form the existing options. And for the hardware, we chose the differentiation focus, since the market is reduced to the users that already use our software.

Operative Phase Conclusions

After taking into account the different considerations obtained from the investigation and analytic phases, we successfully defined the three products that Octavia will develop showing in detail the distinctive features that will make this company successful. We have been able to define a D.A.W. that integrates the gathering and optimal management of resources in a way that allows us to skip the development of plugins, which is a extremely high reduction of software development efforts, which let us put a very competitive price, along with a community and virtual store that produces income. And we were able to design a hardware that integrates buttons and knobs to effectively improve the workflow of all the stages of music production, optimizing the disposition and usage of components in a way that lets us put a competitive price of the controller.

We decided to go for a simple placement strategy, using both local and global online distributors that allows us to cover a worldwide demand and also have a certain focus on growing a local and national base to grow from.

About the promotion, we decided to use the slogan "*Welcome to the smartest music production. Are you ready for your future?*" which gathers the ideas of obtaining better

music, done faster and easier, to end up achieving success when using our D.A.W. All promotion will be done online focusing on social ntworkd and the virtual stores we use to sell our products.

Control Phase Conclusions

We focused our Key Performance Indicators in controlling the success of our promotion in both soxial networks and virtual stores, which will allow us to spend our money more efficiently and vary our advertisements in the most accepted ways for our target. Also, we created Key Performance Indicators to see the relation of sales between the software and the hardware, to see how well we are retaining our customers.

We developed some contingency plans in case the development of our products face problems, as well with the sales once we hit the market, in order to be able to reverse those situations and redirect them to the planned paths.

Financial Plan Conclusions

We divided next five years in two phases, the first two years we will develop the products, and the three following years we will launch the company. In those five years we will spend 3,8 million euros and we will see an income of 4,2 million euros, with a final net present value of 107 thousand euros, which is an 11% of internal rate of return. This comes from a weighted average contribution margin of 70,35 euros, with a break even point of 48.272,43 units.

Final Conclusions

Summarizing, we can conclude that we found a potentially viable idea. The actual market situation gives us an opportunity to develop a company that stands out and presents a renew idea of the music production process. The most critical conceptions to take into account when bringing this company to real life are the promotion campaign and the software and hardware development, which would highly influence on the economic results that we get. We have to be clear that we need to follow a differentiation strategy that shows the workd our uniqueness, and we need to curate every detail and functionality of our products to compete with the reliable and established exiting companies.

To finish, we want to acknowledge that there is a variant of the company we have raised. Instead of creating Octavia SoundBox with Octavia Space integrated in it, we could only develop Octavia Space as a plugin, and make it available for all the existing D.A.W.s in the market. On one hand, this would reduce the difficulties that the launch of the products carry, because it would have a higher number of potential users, which would be more attractive to the companies and users that upload resources to it, and we have to keep in mind that the bigger the community is, the more interesting it is. This would also mean a higher income from it, due to the higher usage, and a obvious reduction of the software development efforts, since we wouldn't be creating the D.A.W. On the other hand, we have clearly seen in the finances, that the biggest font of income comes from the software

licenses sales, so deciding to not develop the D.A.W., even though means a reduction of costs, also entails an important reduction of income.

In the variant, we also need to consider what happens with the hardware, since it would no longer be dedicated specifically to our D.A.W., and the most adequate decision is to create a series of controllers, each one dedicated to an existing D.A.W., which is a notable increase of the complexity of their development, but also a very interesting increase of the number of users that could be interested in those products, since it will be now adapted to every D.A.W. in the market. In this variant, in order to reduce the starting investment needed, we would choose to develop one controller at a time, so we can focus in implementing them efficiently.

In a future continuity of this project, a parallel study of the two variants could be an interesting work, which will allow us to properly decide which one is better to go for, considering the risks that both of them carry and the potential that they have in the future.

11. WEBGRAPHY

[1] Catalonia population by ages. Consulted the 21st of February. Available on:

https://www.idescat.cat/pub/?id=aec&n=253&lang=es

[2] D.A.W.s market worth. Consulted the 26th of February. Available on:

https://www.prnewswire.com/news-releases/digital-audio-workstations-daws-market-to-be-worth-us-164549-mn-by-2026-transparency-market-research-685651102.html

[3] Avid 2021 results. Consulted the 26th of February. Available on:

https://www.globenewswire.com/news-release/2021/11/09/2330904/29073/en/Avid-Technology-Announces-Third-Quarter-2021-Results.html

[4] FL Studio registered users. Consulted the 26th of February. Available on:

https://forum.image-line.com/viewtopic.php?t=53060#:~:text=At%20a%20guess%2C%20with%20300k,3%20million%20users%20in%20total.&text=A%20registered%20user%20is%20someone,it%20than%20those%20who%20do.

[5] Ableton Live official website. Consulted the 2nd of March. Available on:

https://www.ableton.com/en/live/

[6] Image Line FL Studio official website. Consulted the 2nd of March. Available on:

https://www.image-line.com/fl-studio/

[7] Avid Pro Tools official website. Consulted the 2nd of March. Available on:

https://www.avid.com/es/pro-tools

[8] Native Instruments Maschine official website. Consulted the 2nd of March. Available on:

https://www.native-instruments.com/es/products/maschine/production-systems/maschine/

[9] Apple Logic Pro official website. Consulted the 2nd of March. Available on:

https://www.apple.com/es/logic-pro/

[10] Apple GarageBand official website. Consulted the 2nd of March. Available on:

https://www.apple.com/es/mac/garageband/

[11] Steinberg Cubase official website. Consulted the 2nd of March. Available on:

https://www.steinberg.net/es/cubase/

[12] Presonus Studio One official website. Consulted the 2nd of March. Available on:

https://www.presonus.com/productos/es/Studio-One

[13] Reaper 6 official website. Consulted the 2nd of March. Available on:

https://www.reaper.fm/

[14] Reason 12 official website. Consulted the 2nd of March. Available on:

https://www.reasonstudios.com/shop/product/reason-12/

[15] Bitwig Studio official website. Consulted the 2nd of March. Available on:

https://www.bitwig.com/overview/

[16] Acoustica Mixcraft 9 official website. Consulted the 2nd of March. Available on:

https://acoustica.com/store/mixcraft-9-pro-studio

[17] BandLab Cakewalk official website. Consulted the 2nd of March. Available on:

https://www.bandlab.com/products/cakewalk

[18] Ableton official website. Consulted the 2nd of March. Available on:

https://www.ableton.com/

[19] Image Line official website. Consulted the 2nd of March. Available on:

https://www.image-line.com/

[20] Apple official website. Consulted the 2nd of March. Available on:

https://www.apple.com/

[21] Avid official website. Consulted the 2nd of March. Available on:

https://www.avid.com/

[22] Steinberg official website. Consulted the 2nd of March. Available on:

https://www.steinberg.net/

[23] Spectrasonics website. Consulted the 5th of March. Available on:

https://www.spectrasonics.net/

[24] Native Instruments website. Consulted the 5th of March. Available on:

https://www.native-instruments.com/

[25] Output website. Consulted the 5th of March. Available on:

https://output.com/

[26] reFX website. Consulted the 5th of March. Available on:

https://refx.com/

[27] Xfer website. Consulted the 5th of March. Available on:

https://xferrecords.com/

[28] Universal Audio website. Consulted the 5th of March. Available on:

https://www.uaudio.com/

[29] Waves website. Consulted the 5th of March. Available on:

https://www.waves.com/

[30] FabFilter website. Consulted the 5th of March. Available on:

https://www.fabfilter.com/

[31] SlateDigital website. Consulted the 5th of March. Available on:

https://slatedigital.com/

[32] Solid State Logic website. Consulted the 5th of March. Available on:

https://www.solidstatelogic.com/

[33] iZotope website. Consulted the 5th of March. Available on:

https://www.izotope.com/

[34] Antares website. Consulted the 5th of March. Available on:

https://www.antarestech.com/

[35] Plugin Alliance website. Consulted the 5th of March. Available on:

https://www.plugin-alliance.com/

[36] Soundtoys website. Consulted the 5th of March. Available on:

https://www.soundtoys.com/

[37] Splice website. Consulted the 14th of March. Available on:

https://splice.com/home

[38] Thomann Controllers. Consulted the 17th of March. Available on:

https://www.thomann.de/es/controladores_daw.html

[39] Akai Fire. Consulted the 20th of March. Available on:

https://www.akaipro.com/akai-fire

[40] X-Touch Behringer. Consulted the 20th of March. Available on:

https://www.behringer.com/product.html?modelCode=P0B1X

[41] Icon Platform M. Consulted the 20th of March. Available on:

https://iconproaudio.com/product/platform-m/

[42] Native Instruments Maschine Mikro Mk3. Consulted the 20th of March. Available on:

https://www.native-instruments.com/es/products/maschine/production-systems/maschine-mikro/

[43] Softube Console. Consulted the 20th of March. Available on:

https://www.softube.com/console1?gclid=Cj0KCQjw2MWVBhCQARIsAIjbwoO_voOMng4JKOwTVXCZVahX23327zWwyrY44VIXi1SgTVc4vWFDTP4aAi7VEALw_wcB

[44] FL Studio Manual. Consulted the 27th of March. Available on:

https://www.image-line.com/fl-studio-learning/fl-studio-online-manual/

[45] Thomann website. Consulted the 4th of April. Available on:

https://www.thomann.de/es/index.html

[46] Madrid HiFi website. Consulted the 4th of April. Available on:

https://www.madridhifi.com/

[47] Alfasoni website. Consulted the 4th of April. Available on:

https://alfasoni.com/

[48] Amazon website. Consulted the 4th of April. Available on:

https://www.amazon.es/

[49] Octavia offical website. Consulted the 21th of April. Available on:

https://gbarolarriba.wixsite.com/my-site

[50] Octavia official Instagram account. Consulted the 26th of April. Available on:

https://www.instagram.com/octaviamusicsl/

[51] Octavia official Twitter account. Consulted the 28th of April. Available on:

https://twitter.com/OctaviaMusicSL

[52] Octavia official Facebook page. Consulted the 4th of May. Available on:

https://www.facebook.com/Octavia-SL-102364362488702

[53] Octavia official YouTube channel. Consulted the 7th of May. Available on:

https://www.youtube.com/channel/UC7PpYUxSZdYjesIvO8LM1Pg

[54] Habitaclia Octavia Headquarters. Consulted the 18th of May. Available on:

https://www.habitaclia.com/alquiler-nave_industrial-fluvia_135_provenc_als_del_poblenou-barcelona-i28314004369979.htm?pag=3&ordenar=precio_mas_bajo&st=1&f=&geo=p&from=list&lo=55