

EnPRO 351

Final Report

May 11, 2009



Motion Track Studios

Capturing Your Music where You Create It!

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Abstract

Objective

I PRO 351 was organized to assess and validate the opportunity for mobile audio recording. Motion Track Studios began as an Introduction to Entrepreneurship class project and has expanded to become a legitimate business plan. The goal of the I PRO was to take the concept from paper into reality by developing and testing a working prototype and conducting primary market research.

Basic Organization and Tasks

The team was split into two sub groups, one focusing on the equipment and recording process, and the other on conducting market research and analysis. The teams were not bound by their designation as many members served as cross-functional members doing both marketing and recording activities.

Accomplishments

During the course of the I PRO we sent the team out to the Self-Employment in the Arts conference to network with musicians, whom we singled out as our target market. During the conference we surveyed every musician on what they thought of the recording process and gauged their reaction to the mobile concept. We also entered and won the \$1,000 business pitch competition, the prize money was invested into more recording equipment to improve the prototype. We also constructed acoustic walls and isolation materials to enhance the quality of our recording. As of April 20, we have all the acoustic materials assembled and tested the equipment on team members' music projects.

Critical Barriers and Obstacles

We seriously underestimated the time it would take to complete construction of the acoustic materials and have a functioning mobile unit. This forced us to push back some goals such as the self-trial, and associate trial for the IPRO. We financially worked the business out to be operating at a loss until year 5. Due to this we concluded that Motion Track Studios will be a lifestyle business, operated as recording engineers until a profit is seen.

Conclusion

Although we missed our milestones for paying customers, the team has a greater understanding of the recording process as well as our target market and business model. Although this is not an established business as of yet, it makes sense to keep it a business on paper before establishing the company as a legal entity. We feel we have gained adequate information on the recording process to take ourselves into the future as recording studio engineers and producers.

Next Steps

The IPRO began with a belief that this concept will be continued within the IPRO track, unfortunately this IPRO will not be continued into the summer and fall. However we have met with individual musicians and bands who are interested in the concept and are willing to work with us on refining the recording concept and business model. Future IPROs would be set up to continue testing the prototype and develop a sustainable business model for Motion Track Studios to carry on into the future.

Faculty and Advisors

James Braband, Dr. David Pistrui

Team Leader(s)

Ty Caughell (Business Administration, Entrepreneurship/ Marketing), Joel Cornelius (Computer Information Systems), Kirsten Esbensen (Psychology and Business Administration, International)

Team Secretary

Renee Arrowood (Business Administration, Finance)

Student Members

Cedric Collier (Civil Engineering, Structural), Sweta Gurnani (Business Administration, International), Craig Forneris (Architecture), Collin Perle (Mechanical Engineering), Paul March (Political Science/ Pre-Law), Evan Vice (Business Administration, Finance)

Background

Motion Track Studios began in 2006 as collaboration between Joel Cornelius and Ty Caughell. It began as a recording project for Ty's band *The Secondary* of which Joel served as the chief recording engineer. He showed us that a quality recording could be achieved from your living room just as long as you have the necessary equipment and expertise. To further refine the concept Joel and Ty introduced the concept of "mobile recording" as a class project for Bus 361 (intro to entrepreneurship). In that class Dr. David Pistrui gave them his support and suggested taking the concept further into an IPRO.

Defining the problem was simply done by putting yourself in Ty's shoes. Ty was a college sophomore at IIT when he formed *The Secondary*, a band composed of all IIT students at the

time, and constantly writing original songs. Determined to take his music to the next level and start promoting he knew he needed a recording, but Ty had never been through the recording experience before. So he weighed the options:

- The Recording Studio gives you the best quality recording in an acoustically perfect environment with a professional recording engineer and top quality equipment. This level of quality and service came at a steep price, near \$800 to \$1000 per song, that price is not affordable on the college student budget, so Ty looked elsewhere for recording.
- Ty managed to get a hold of some microphones and a mixer to see if he could try to record his band himself. His lack of experience resulted in many errors and a bad quality recording. Clearly there is a reason why there are professionals in this field. Constant computer crashes and equipment failures later, Ty realized that recording is not a cheap or easy process in general.

Salvation came when he met Joel Cornelius, an IIT freshman who played drums and had recording experience. He generously offered to record *The Secondary* citing the work to be a passion of his. He visited us in the Phi Kappa Sigma Fraternity, where we were practicing at the time, provided the necessary equipment and expertise and showed us how to achieve a quality recording in the basement of a fraternity, living room of an apartment, or whatever environment band's choose to use as practice space.

There was a value in that service; bands did not have to move their heavy equipment (instruments, amplifiers, etc) into a studio environment they were unfamiliar with. Being in the environment a band is used to allow for greater comfort and greater creative freedom, which in turn allows for capturing a better recording performance. Even with the technological advancements in recording technology there is no solution to fixing a poor performance in a

recording, but by providing the service in a more comfortable environment can help to prevent a poor recording.

Recent advances in technology have allowed musicians the ability to record their music and manipulate it without the expensive equipment. All you need is a good laptop and a “Digital Audio Workstation” (DAW) that is computer software that serves as the mixer and all of the features to properly manipulate the recorded audio. Before the DAW the studio would have a big mixing board and all the manipulation was done with external audio units. This was back in the days of analog music being recorded to tape. Many professionals will boast the quality of analog and tape is far superior to digital recording, but the practical uses of digital showed greater value to bands that weren’t seeking the high quality recording the professional studios could offer.

Objectives

The Motion Track Studio EnPRO set out to achieve three main goals:

1. *Market Validation*

Before the IPRO we had an idea and a good concept. Mobile recording solved a problem and had value in its service, but we lacked validation from the market. One of the first major tasks of

the EnPRO was to design a survey to distribute for musicians. We initially sent out these surveys at the Self Employment in the Arts conference in Naperville, IL. There we obtained about 30 surveys and spoke with many musicians who showed moderate to high interest in the service. We followed that up with distributing online surveys and talking to bands during live shows, and open mic events. While not all of the market accepted the idea, as some enjoy the studio experience, others understood the concept and it's necessity.

2. Construction of a Working Prototype

Our team was filled with recording musicians who all owned some recording equipment. One of our earliest tasks was to compile all this gear into a working prototype to be tested on our own musical projects as well as with some of our friends to study different recording environments. Once all the gear was compiled we found that our prototype was valued at over \$17,000. The prototype was constantly re-done and improved over the course of the semester and by IPRO day we had two functioning prototypes.

Along with compiling the recording equipment, the team also set out to construct materials that would manipulate the acoustics of a room as well as to isolate the different instruments to allow for a better quality mix. These included acoustic walls and barriers to block sounds from one instrument from "bleeding" into other microphones. A bleed example would be hearing the drums in the guitar microphone, and vice versa. Better isolation allows for higher quality during audio manipulation during mixing.

3. Development of a Business Model

We had initially looked into developing a business "plan" but had realized that there were already two years of building business plans, we needed a business model. How was Motion Track Studios going to make money? Would we need additional funding? What are the

operating costs of the business? How much are we going to charge for this service? You will hear later in the report about how Motion Track Studios was set up as a “lifestyle” business, instead of a traditional business unit. The lifestyle business allows for lower general and administrative expenses and works just like a freelance artist sells their expertise as a business itself.

Methodology

In order to achieve our three main goals, we divided the team into two sub-teams: the Equipment/Technical sub-team and the Marketing/Management sub-team. We chose to break the team into two sub-groups in order to focus on the strengths of each individual of the team. We felt that the respective teams would foster each individual’s strengths so that they could perform at their highest ability.

The main goals of the Equipment/Technical sub-team were to construct a working prototype for our service and test it with potential clients. The main goals of the Marketing/Management sub-team were to create a business plan and to validate the market through both primary and secondary market research. The details of the two sub-teams, and how they were split can be found below.

Team Structure & Assignments

- Ty Caughell: Creator and team leader of the EnPRO. Managed both Equipment and Market Research subgroups and provided guidance on where the group is headed.
- Joel Cornelius: Technical leader. Managed all recording and mixing/mastering processes.
- Kirsten Esbensen: Management team leader. Created an agenda for each team meeting and kept the group on track.
- Renee Arrowood: Financials. Created projected income statements, profit estimates, and return on investment.
- Cedric Collier: Technical advisory board. Assisted equipment group with recording and survey gathering.
- Sweta Gurnani: Management advisory board. Assisted market research group with creating surveys, elevator pitch, and SEA poster.
- Craig Forneris: Technical advisory board. Assisted in equipment setup, poster creation, and presentation creation.
- Collin Perle: Technical advisory board. Primary manager of construction of vocal booth, amp isolation, and drum isolation panels.
- Paul March: Management advisory board. Assisted in survey and poster creation.
- Evan Vice: Management advisory board. Assisted in survey, presentation, and elevator pitch creation.

Budget

Drum Iso Unit

1/4" Acrylic	105
Hinges	30
Nuts/Bolts	4
3/4" Plywood	10
Cost per Unit	149

Vocal Iso Unit

Fabric	15
3/4" Plywood	10
3/4" Pine Boards	6
3/16" Hardboard	5
Hinges	10
Knauf Rigid Fiberglass	30
Cost per Unit	76

Amp Iso Unit

Fabric	28
3/4" Pine Boards	25
3/16" Hardboard	22
Hinges	40
Knauf Rigid Fiberglass	30
Cost per Unit	145

Wall Iso Unit

Pvc	19
Sound Blankets	34
Cost per Unit	53

Quantity	Item	Price
1	Drum Iso Unit	149
2	Amp Iso Unit	290
1	Vocal Iso Unit	76
2	Wall Iso Unit	106
	Total	621

Detailed Equipment List

Over the course of this semester, Motion Track Studios received a total of \$1500 of additional funds. All of this money went directly towards equipment purchases to be included in our working prototype. Before any of this funding was obtained, our mobile recording rig prototype had a few issues that interfered with the efficiency and quality of the audio capturing process. In the first version of the prototype, we had to chain together an out-of-date ADAT digital tape machine with an old digi 002 interface in order to record 16 digital audio tracks simultaneously. As with any older technology, we had to deal with bulk, lower quality conversion, and lower conversion rates, which seriously affects the quality of digital recordings. Another big problem with this setup was that the digi 002 interface would only work with ProTools software, a DAW (digital audio workstation) that our chief engineer was unfamiliar with. This unfamiliarity led to inefficiencies during the recording process and also limited his audio manipulation capabilities. The final problem relating to the quality of our first prototype was the lack of quality preamps, compressor, and equalizer. Having at least one channel with a good preamp, compressor, and equalizer is extremely important in a recording rig, especially for recording vocals. Without any of these external devices, all audio manipulation had to be done digitally in the post-recording process. The problem with this is that digital effects sound much more fake than actual hardware effects, which further distanced our recordings from professional audio standards.

We were able to remedy all of these problems with the \$1500 we received. The first item purchased was a Presonus Studio Channel Tube, which included a vacuum tube preamp, compressor, and parametric equalizer. This device gives us a great deal of control over one channel of audio input, and has significantly improved the quality of our recordings. The next device was a tube preamp mainly geared towards guitars, which is crucial to have if we are mainly recording rock bands. These two devices solved our problem of not having a good preamp, compressor, or equalizer. The next device we purchased had the greatest impact on the sound of our recordings. The Universal Audio UA2-solo is a special pack of software audio plug-ins with included hardware. What this device did for our prototype was greatly enhance the quality of our digital audio plug-ins for post-production. It is because of this device, that we can offer quality advanced mixing services to our customers. The last device we purchased improved many aspects of our mobile rig. The Presonus Firestudio Tube replaced the aforementioned digi 002 and ADAT tape deck, which not only cut down the weight and space of our rig, but also improved the conversion and sampling rate of our recordings. The collection of all these devices allows our service to be more competitive with that of the traditional studios.

Current Prototype:

Microphones

Condensers

Quantity

1	AKG C-3000
1	AKG Perception 200
2	Audix F-15 (drums)

Dynamic

4	Shure SM57 (Multi Instrumental)
1	EV (for bass amp)
1	Audix d10 (Multi Instrumental)
1	Shure Beta 52 (Kick Drum)
1	Audix F12 (Kick Drum, Floor Tom, Bass Amp)
3	Audix F10 (Multi Instrumental)

Rackmount Equipment

1	Presonus Firestudio Tube Digital Interface
1	Digidesign Digi 002 Board Interface
1	Presonus Studio Channel Tube Preamp
1	Electro Harmonix 12AY7 Preamp
1	Presonus Firepod Digital Interface
1	Carver Power amp
1	800w Power amp
1	Equalizer + Vocal Effects
1	Nady compressor/limiter/gate
1	Alesis rackmount compressor

1 10 space rack

Speakers/Headphones

Presonus headphone preamp (4 channels)

Pair PSB playback speakers

Beyerdynamic Headphones

SCL3 Sound Isolating Earphones

Sennheiser Studio headphones

Cables/Accessories

6 Microphone Stands

5 Microphone Clamps

~10-12 XLR microphone cables

~4-5 1/4" Instrument cables

2 1/4" to RCA snakes

1/4" to banana plug adapter

Other

5 Acoustic Drum triggers

Roland drum Module

Sansamp direct box preamp

Computers

MacBook Pro

PowerBook G4

Software

Pro Tools for Mac and PC

Logic 8 for Mac

Waves Platinum

Vocal Booth Construction:

Acoustic Isolation Unit Construction Details

We were presented with a unique situation, to record musicians in a non-studio environment. We needed something to isolate channels as best as possible to produce the cleanest possible recordings. The equipment team devised multiple isolation unit designs before settling on one which best fit our needs. The requirements for the isolation units was that they must eliminate or dramatically reduce acoustic energy, they must be portable, they must fit standard size equipment, and they must be relatively inexpensive to build.

Almost all materials absorb acoustical energy and turn it into heat. The amount of this can be measured in multiple frequency ranges varying from 100Hz to 10kHz and is called the absorption coefficient. Fiberglass is a material with a high coefficient throughout most of the audible sound spectrum. The material chosen to construct the isolation units out of was 2" rigid fiberglass board made by Knauf. This material showed superior absorption over most other materials, it was light at 3lbs per square foot, and was also inexpensive.

The units designed and built were made to isolate the drums by use of a 1/4" acrylic shield in order to reflect sound away from the other musicians while still allowing for visual contact. The guitar and bass amp isolation units used the fiberglass board to reduce sound where it starts,

and was made to fit a 4x4 12" speaker cabinet. The vocal isolation unit was made using the fiberglass as well but was scaled down so it could fit on a music stand so the vocalist can sing into it. Also, two portable walls were built out of heavy cotton blankets, with a respectable absorption coefficient, draped over a PVC frame. These allow for an additional level of sound reduction, and can be strategically placed to make up for doorways and windows in the recording room.

Overall, these isolation units provide our customers and us a better level of recording. By controlling background noise as well as bleed, we can achieve optimum recording results despite unfavorable and unknown recording conditions.

Code of Ethics

In order to provide the best service possible to our current and potential clients, Motion Track Studios holds itself to a serious code of ethics. This code contains the values that underlie the decision making of the company and its employees. Every member of the Motion Track Studios team has committed themselves to upholding the highest standards of personal integrity, honesty, and fair dealing.

With the growth of business, technology, and the music industry over the past twenty years, the number of ethical issues that affect Motion Track Studios has increased. There are a variety of difficult decisions that every team member might have to deal with. The goal of this code is to target those issues and make a firm statement of Motion Track Studios stance on them

General Responsibilities of Motion Track Studios:

1. Law

- Canon: Motion Track Studios will comply with all copyright laws.
- Pressure: Motion Track Studios need to increase revenue
- Risk: Motion Track Studios takes bribes and leaks protected music
- Pressure: Motion Track Studios needs to increase awareness of its work
- Risk: Motion Track Studios displays clients music on its website without obtaining clients permission

2. Personal Relations

- Canon: The Motion Track Studios team will maintain a positive culture of teamwork, cooperation and cohesion.
- Pressure: Avoid personal conflicts with team members
- Pressure: Make sure everyone puts in the same amount of effort so work gets done
- Risk: Members avoid working with a teammate because conflict issues have been left unresolved

3. Community

- Canon: Motion Track Studios will not purposefully ignore anything that could possibly concern the community.
- Pressure: Inform as much of the community of our service as possible
- Risk: Provide false advertising to spread the word
- Risk: Bash local recording service providers, such as small venues that provide musicians with a live recording, in order to spread the word of our service

4. Industry Standards

- Canon: Motion Track Studios will adhere to industry standards regarding the development and recording of music unless the standards conflict with the law.
- Pressure: To keep current customers
- Risk: Return recorded music to clients in a format that would require them to utilize Motion Track Studios as their sole recording/mixing source

- Pressure: To provide an efficient, timely recording experience

5. Professional Codes

- Canon: Motion Track Studios employees will know and respect the Recording Industry Association of America's Code of Ethics and Professional Conduct.
- Pressure: Setup and record a band as quickly as possible
- Risk: We don't consult the band at all about how they want their music recorded
- Risk: Illegally download software that will help with the recording process, rather than waiting and buying it

6. Contracts

- Canon: Motion Track Studios will abide by the best of its ability by all terms of any agreement, both formal and informal, made with clients and contractors.
- Pressure: Increase revenue
- Risk: Get clients to pay up front and then do not provide the service
- Risk: Neglect previous, smaller contracts for more lucrative contracts

7. Moral Values

- Canon: Motion Track Studios will respect the personal code of morals, ethics, beliefs, and religion of every employee.
- Pressure: To accomplish tasks on schedule and achieve high overall performance
- Risk: Forcing employees to repeatedly work on projects beyond their job description, putting tension on their personal/family lives
- Pressure: To avoid conflict with employees of different religious backgrounds
- Risk: Offering days off for certain religious holidays for one group but not another

Results

Ethical Issues:

The major ethical issue discussed was the security of our potential customer's music. Their music is their own intellectual property. However, as the medium in which their property is stored, we could potentially leak or lose that material. Playing songs for anyone else whom is not the engineer working on the project could be potential damaging as the song could be stolen or claimed by an outside party. To keep this from happening, we at Motion Track Studios have the ethical responsibility to keep all recorded material private and only available for the studio engineer and the client. On the grounds of lost music, we will have backups of all recorded material both virtual (hard disks) and physical (DVDs or other storage medium).

Primary Market Research:

Surveys:

In order to see if there was a market for our service we decided to create and distribute a survey to our possible target market. In order to create this survey we considered the customers general satisfaction with the recording experience, where they are currently going to receive recording services, and how much they pay for such services. We then proposed the idea of a mobile recording studio that comes to them and asked questions that attempted to gauge their interest in such a service, and how much they might be willing to pay for such a service.

Once we created our preliminary survey we had it reviewed by marketing specialist to make sure we were asking the right kinds of questions to get the results that we desired. We then also tested the preliminary surveys on close friends whom were musicians to see how comfortable they were taking the survey and to make sure all of our questions were clear. We then took the feedback from marketing specialist and our test survey takers to create a final survey ready for distribution.

Fortunately, we had the opportunity to attend the annual Self Employment in the Arts (SEA) conference in Lisle, IL. Here we were able to hand out our surveys and gain valuable face-

time with our possible market. Here at the conference we were able to collect 28 completed surveys for analysis.

After we left the conference we decided to put our surveys online to get more potential customers fill them out. We posted our survey on surveymonkey.com and used social mediums such as Facebook and Myspace to drive traffic to it. We did so by creating a page on both sites, inviting musicians to be our friends on the sites, and providing them with a direct link to our survey. The online surveys provided us with an additional 22 completed surveys. From these 50 total surveys we were able to gage a small percentage of our market on their interests and expectations for a mobile recording studio, as well as their general experience with other types of recording services. Below is some of the important data that we were able to collect

- 54% play in a band
- 62% consider Rock to be their genre
- 68% previously recording
 - 46% somewhat satisfied- very satisfied with service
 - 54% neutral- not satisfied with service
 - 74% paid nothing for the service. Most of which were recorded by a friend or recorded themselves.
- 54% where somewhat interested to very interested in the idea of a mobile recording studio
- Only 6% not interested at all
- 44% of those interested, willing to pay \$30+ per hour for such a service

From these results we were able to make some assumptions and conclusions. We were able to determine that our potential customers may not be completely satisfied with the current recording options and that there is possibly a market for a service such as ours. We also learned

that those who were interested were very excited about the idea and they are willing to pay money for it. We further validated this point through conversations with potential customers.

Industry Experts:

Once we had completed the surveys and saw that there was a possibility to turn our idea into a business we decided to reach out to people already working in the music industry to see if they could provide us with any insight or advice to help us become successful.

The first industry expert that came into visit us was Mr. Matt Hennessy of VSOP productions. He has been a sound engineer for several years now, and is currently working with some big name artists from the Chicago-land area.

Matt was able to give us first-hand experience when it comes to mobile recording. He has actually tried to record in a mobile set up, both large scale and small scale, and was able to warn us about some of the dos and don'ts. A few of his big concerns were being able to account for technical difficulties (such as a computer shutting down or the electrical power interfering with equipment) that are more likely in a mobile set up. He was also concerned about our safety and the safety of our equipment. He warned us that by moving our equipment from unknown place to unknown place we put ourselves and equipment at the risk of being robbed and stolen. He was able to give us a personal account of such a thing happening. However, he also told us that one of his best recordings came from a mobile set up in an artist's house. He said that the artist was so comfortable and at ease that he was able to deliver one of his best performances ever, which is far more important than any technical aspects of recording.

Aside from the specific advice about mobile recording, he was able to give us insight to the recording industry and process as a whole. He warned us to always keep the lines of communication between yourself and the artist completely open. You must know exactly what the artist expects and wants *before* you record them. You must also let them know what you are

capable of and what you expect from them as artist. This way there is no confusion and no blame to be placed later. He also inferred that such a business may be a lifestyle business and that we must consider that in order to set realistic expectations for ourselves.

The second industry expert to visit us and share his knowledge with us was Mr. Kayo William of Kayquarii productions. He is a songwriter/ sound engineer that has been in the industry for almost 15 years. He was able to give us more insight into starting a business in the recording industry, and the quality that we must achieve in order to be competitive.

The biggest thing that Kayo was able to convey to us was the importance of finding our niche. He suggested that we figure out what we are the “go-to guys” for. He was clear to let us know that even though we pick an expertise this does not mean that we can not do other things. However, it is important to determine what you are good at and market that so that you can build a buzz around your name and your specific expertise. He gave the example of his own set up. He specializes in post-production, but still does recording. However, if he knows he is unable to provide the best quality for a certain job he will forward it to whomever he knows is the go-to guy for that. This also helped to explain the importance of networking at affiliations with others within the industry. He even suggested some foundations that we become a part, and some certificates that we acquire in order to build our credibility.

He also played us some examples of his own work so that we can hear the type of sound quality that we should be striving for. After hearing his mixed and mastered versions we decided that maybe we should stick to just recording until we have the equipment and time available for quality post-production.

After speaking with both of these gentlemen we were able to take another look at our own business plan and set up and make some key changes. We were able to receive some

validation, as both men liked the idea, but suggested that we re-evaluate some things and make a few changes. Some of which are listed below.

- We were better able to access the security issues that we face
- Determine our niche market
- Determine what we are the “go-to guys” for

Secondary Market Research:

In order to determine the viability of the market, and assess which consumers’ needs Motion Track Studios would best be able to serve, we conducted an external industry analysis, focusing on the Chicagoland area as this is where our business will likely begin developing. The market was analyzed based on: studio revenues, number of musicians, and genre variety. According to a University of Chicago study, revenues for sound recording studios in Chicago in 2004 amounted to \$6.5 million. New York, similarly metropolitan, pulled in around \$33.5 million dollars in annual revenues for audio recording studios. Chicago has an estimated 10,778 musicians while 26,178 reside in New York. With New York pulling in almost six times as much revenue as Chicago in sound recording, with only about 2.5 times as many musicians, it became obvious that there was a large underserved market in Chicago of musicians who were not going to the studio to record their music for one reason or another. It was this large market that Motion Track Studios was made for. In order to determine our market niche, we turned to the genre offerings of Chicago’s music scene. The diversity of Chicago’s music scene is unmatched by any other cities except New York and Los Angeles. As diverse as it is, the music offerings of Chicago are led by rock music at 8.7%, followed far behind by rock music at 4.9%. In other words, rock music dominates Chicago’s musical market. Thus, Motion Track Studios aims to target rock bands, specifically those recording music for the first time.

Target Market:

The secondary and primary research that we conducted helped us to determine our target market and our niche. We have decided that we will be the “go-to guys” for first time recorders in a rock band. We decided that this particular market will make us most successful, because as a group this is where most of our expertise lies (recording and performing in rock bands). Rock bands also have a strong presence in the Chicago-land area. Also, since the recording of bands is one of the most difficult recording to capture, by saying that this is our niche and our expertise we also express that we are also able to record most every other genre which are not as difficult to record.

Product Positioning

When a potential customer is interested in scheduling a recording session with Motion Track Studios, they will first have to undergo a basic consultation process. During this process, Motion Track will develop an understanding of who the potential customers are and what they are looking for in the final product. Questions that can be asked during the consultation include:

- How many individuals are in your band?
- How many tracks do you plan to record?
- What type of room is your practice space and what is a rough estimate of its size?
- What are your general expectations for the final recording?
- When would be a good time to record?

Once this information is obtained, the customers will schedule an onsite consultation for a fee of \$20. This fee is then used toward the cost of the client’s recording session after it is scheduled.

During the onsite consultation, Motion Track will:

- Conduct a detailed analysis of the practice space
- Listen to a practice session
- Obtain every band members' expectations for how they want the recording to sound

At the end of the onsite consultation, Motion Track will schedule a time for the recording session. During a basic recording session, only one to two employees are needed. One employee is the chief recording engineer. This person will be responsible for performing the actual recording process. The other individual can assist the recording engineer during the setup and tear-down stages of the project. Once the recording process is completed, Motion Track will deliver the master recording to the clients. Motion Track does have the capability of mixing and mastering the audio it records, but this is not included in its general operations (aside from basic mixing included in the recording process).

The equipment of Motion Track Studios is currently the personal equipment of the company's founders. It is stored in the founders' home, which functions as the headquarters of the company. Motion Track Studios has the capability of transporting this equipment from the company's location to its customers' practice areas. For security reasons, the equipment would not be left at these locations. Motion Track does have several requirements that its clients need to meet in order for business to take place. First, customers must have enough space in their practice area to house not only their instruments, but also the recording equipment. Second, Motion Track is currently capable of traveling no more than thirty miles away from their place of operation to meet a client.

Financial Analysis:

After researching other competitors in our market, and agreeing upon a set pricing structure, the costs associated with the business model were assessed. Our profit analyses for years one through three are below.

# of 4-hr sessions	100	300	600
Revenue	\$20,000	\$60,000	\$120,000
Transportation	(\$4,000)	(\$12,000)	(\$24,000)
Engineer Assistant	(\$4,000)	(\$12,000)	(\$24,000)
Direct Margin	\$12,000	\$36,000	\$72,000
Marketing	(\$1,500)	(\$4,500)	(\$7,000)
G&A	(\$6,000)	(\$6,000)	(\$8,000)
Equip Lease	(\$5,000)	(\$5,000)	(\$5,000)
Profit	(\$500)	\$20,500	\$52,000

The numbers above are based off of the assumption that travel to each four hour session would be on average 20 miles (the cost would be offset by the IRS reimbursement of \$.50 per mile) and our engineering assistant would be paid \$10 per hour per session. The table below shows the direct margin per session.

Per session	
Revenue	\$200
Transportation	(\$40)
Engineer	(\$40)
Direct Margin	\$120

The profit analysis for three years led us to the conclusion that this would have to be a lifestyle business for the owner.

In the first years of operation, the owner will need a full time job and will have to pursue Motion Track Studios as a hobby. In the second year of operation, at least a part time job will be needed to supplement his income. In the third year of operation, the owner could make a living and work the business full time.

Recording Session:

Many digital audio recordings were made throughout the semester using our Motion Track prototype. Of the bands that we made the recordings with, one (Blackdog) was an off-site visit. This off-site visit allowed us to accurately test our service as if we were operating as a stand-alone business. In our business model, two people (one engineer, one worker) show up at a customer's rehearsal space. When we recorded Blackdog, team members Joel Cornelius and Ty Caughell brought the gear into their rehearsal space, and set up in under an hour. Once the rehearsal was recorded, we played back the raw audio tracks to Blackdog, who was quite impressed and satisfied with the quality. Tearing down all the equipment was simple and faster than set-up. From this recording session, we learned that we are capable of delivering everything our business promises to our customers in a timely and satisfying manner. Although a specific date has not been worked out, they tried to figure out a free time slot in the next month or so for us to come back and record their songs for a fee instead of a rehearsal for free.

Other Objectives & Accomplishments:

A major accomplishment for the team was the completion of the mobile recording rig. The rig, containing a successful combination of hardware, software, and isolation booths, was tested in several different configurations and meets the standards of recording professionals.

Another major accomplishment was at the SEA conference when one of our team leaders, Ty Caughell, entered into an elevator pitch competition and won first prize. His first prize winnings of \$1,000 went directly back into the business and helped us to upgrade our equipment improving our quality.

We set out to design a fully functional mobile recording studio, to design and distribute a survey to our target market, and to test the viability of a mobile recording studio. These three main goals were accomplished. We used the data from the surveys to find our target market. We also used the data to develop our pricing structure. This pricing structure allowed use to

determine the businesses viability and profit potential. The main accomplishment we did not achieve was a paid customer.

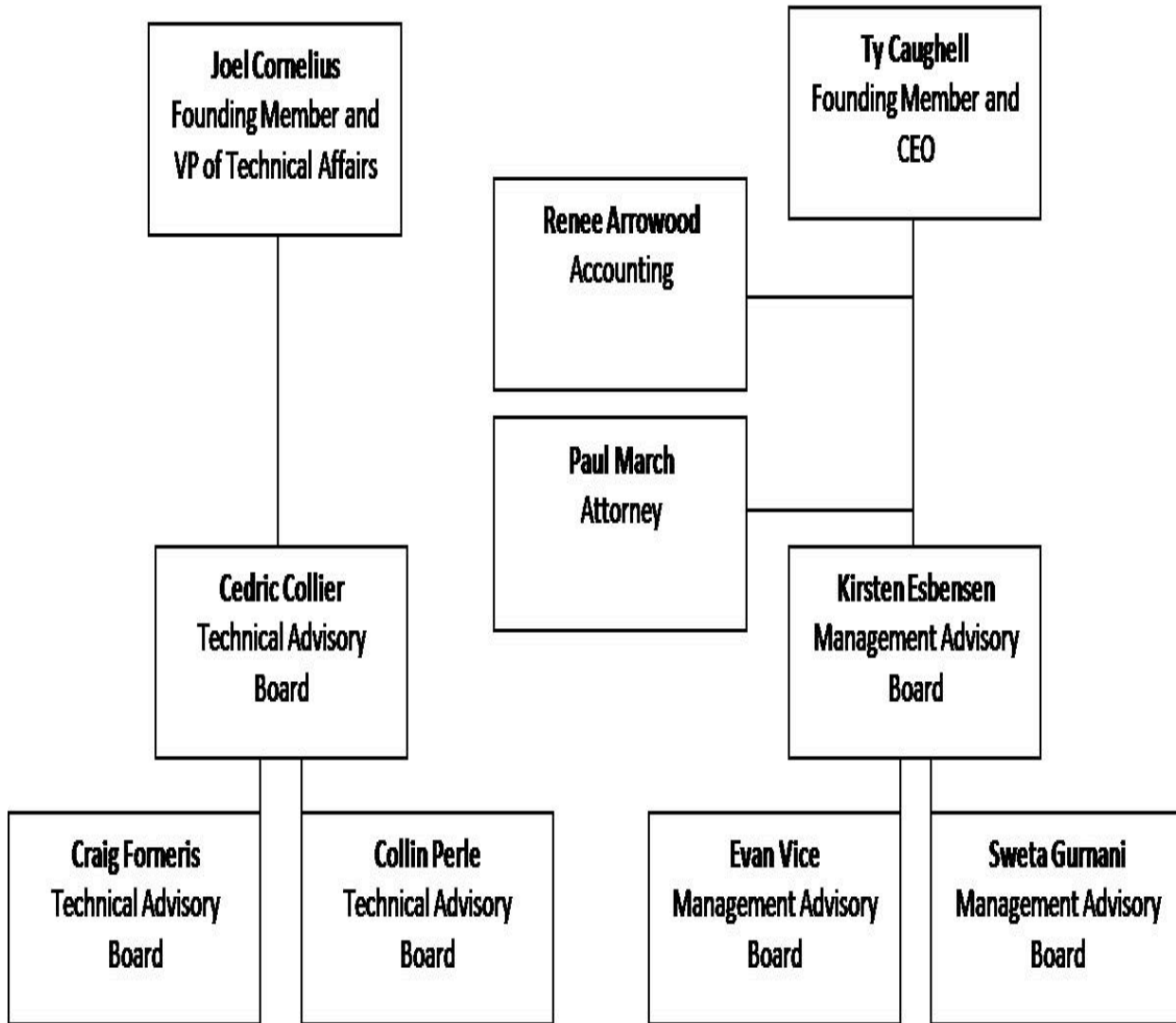
Obstacles

This main obstacle encountered this semester was funding. Our original budget was over four thousand dollars. Most of the costs were from the materials needed for the isolation booths and the equipment needed to make the mobile recording rig's quality competitive with a traditional studio. As a team we went line by line through the budget and made cuts for some luxury items, such as extra microphones. We also cut back on the number of isolation booths we would construct. Even after these cuts, we were still over budget. Luckily, Joel's parents agreed to donate some equipment, which only put use a thousand dollars over the IPRO approved budget of \$800. Given the opportunity to compete in the elevator pitch competition at the SEA conference, our team leader Ty closed the budget gap by winning first place and a cash prize of exactly \$1000. Another obstacle that has yet to be directly addressed is the marketing of the business. Hopefully, if this project is continued the next team could formulate a marketing strategy that would help to secure the volume of clients needed to make Motion Track Studios sustainable.

Recommendations

Company Structure:

From our research and results we have determined that Motion Track Studios would have to be a lifestyle business of 1-2 people to start. However, if it were to expand here is how the team would contribute in the future.



The Next Steps:

Motion Track Studios needs to conduct more in depth market research and test the setup of the equipment on multiple full paying customers. The next steps for future IPRO teams would be to further assess the size of the potential market. Future teams should promote the idea of Motion Track Studios and grow a following especially since research has proven that the music industry survives on word of mouth promotion. Eventually the team needs to assess their ability to record multiple setups (different instruments and genres of music) and provide recordings to industry professionals who specialize in post-recording mixing and mastering. In order for the post-production to be of quality value, the initial recording must be of high quality. If Motion Track can promote that they have validation from industry professionals, the team will have overcome a huge hurdle in proving that Motion Track can offer a quality recording in the comfort and convenience of an artists' home or practice space.

Time not being an issue; Motion Track Studios needs to conduct more research in narrowing down a niche market. The benefit of catering to a specific group is an important ability of a lifestyle business. Through this research Motion Track Studios might not only be able to cut down a number of initial investments but also connect with its new found market segments.

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