



# Amusement Park GPS System

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## Original Idea

- **Rental services for GPS-based devices at amusement parks**
  - Provides info to increase visit efficiency
    - Map to ease navigation to attractions
    - Factors in ride wait times
    - Configured to the theme of the park
    - Ride and restaurant reservation capabilities
  - Available at a low cost to the consumer (\$4-9 per unit per day)
  - **Market: Amusement Park Visitors**

*See idea memo for more details*

The original idea is a rental service for GPS-based devices at amusement parks. The key points are captured within the slide. In addition, the original idea memo is enclosed [See FirstIdeaMemo.docx]

# Reshaping Process

## • User-centric Approach

- Distilled the original idea into key points
  - Amusement Parks
  - Handheld
  - GPS

We took a user-centric approach to this idea to reshape it into an opportunity. The approach involves understanding the user (the amusement park visitor) and generating from his/her needs as we have defined them. A solution that satisfies the need of a user is more likely to be one that we can support with a sound business model. Our approach will be detailed in the next few slides.

The first step is to distill the original idea from the initial opportunity memo into key points. We thought the key points were: amusement parks, handheld and GPS. These points were written onto sticky notes.

## Reshaping Process (continued)

- Generated on the user experience of the three key points



Next, we independently considered each key point, and wrote down words and phrases we associate with the user's experiences and that point on new sticky notes. For example, for amusement parks we generated:

- Long lines
- Waiting around
- Families

The purpose of this step is to get us more in tune with the users' experience and prime our thoughts. Each of us generated on separate points and shared our results after we were done.

## Reshaping Process (continued)

- **Generated Solutions**
  - Based on user-experiences
  - Thought about the solutions that would best fulfill the needs (without regard to feasibility)

After that priming, we independently generated solutions to user needs based on our perception of user experiences. We have skipped a step here, of explicitly identifying the needs of the user based on detailed research. In a long term project we would put significant effort into interviewing and describing typical amusement park visitors. However, with only short time available, we considered our personal experiences at amusement parks and developed needs from our priming sessions. In solution generation, we thought first about fulfilling a need and then what type of solution would most appropriate solve that need (independent of feasibility).

## Reshaping Process (continued)

- Grouped and Arranged Solutions
  - Categorized with solutions in a similar domain
  - Within each domain, we organized the solutions by feasibility.



We shared our solutions as a group, then grouped and arranged them. The groupings were based on solutions in a similar domain (e.g. time saving). Within each domain, we organized solutions based on their feasibility. We were more concerned with technological feasibility and social adoption of ideas. For instance, a brain scanner which scanned one's brain and produced the perfect itinerary for the park visit is both technologically difficult and probably not socially acceptable. However, including an idea like a brain scanner indicates we believe amusement park goers would be interested in using their time efficiently.

## Reshaping Process (continued)

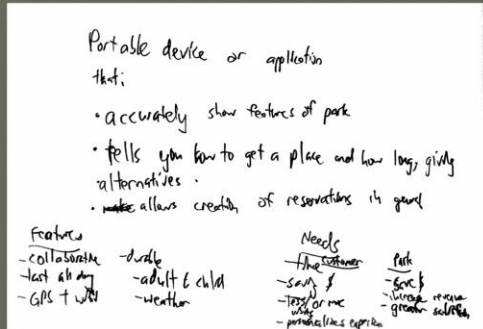
- Looking at these groups of solutions, we each determined which solutions had the most potential benefits for the user
- From those groups, we tried forming stronger solutions based on the solutions found in those groups.

We discussed and determined which group of solutions had the greatest potential benefit to the user. We knew we could not possibly pick all groups, as it would be difficult to form a coherent opportunity with such a wide array of ideas (mapping, personalized itinerary production, reservations, scavenger hunts, mobile applications, handheld device rentals, etc.).

During this process, it was useful to look within each group to see where the different solutions could build off each other in order to form better ideas. The technologically infeasible ideas provided a springboard to shape feasible ideas into a more interesting, forward looking, or useful idea.

## Reshaping Process (continued)

- From the strongest solutions, we created a single-page Gallery Sketch, an organizations of the opportunity, the possible solution we propose, and what needs of the user this will be fulfilling.
- Ideally this would be done multiple times based on the strong solutions to be able to pick the best possible solution.



We captured the stronger solutions on a single sheet of paper, a Gallery Sketch. A gallery sketch captures the opportunity, the solutions we are proposing, and what needs of the user it would be fulfilling, with some focus on specific user interaction.

Ideally we would produce several gallery sketches describing a variety of ideas so that we would have more options to choose between to go forward with. However, with our limited knowledge of users we produced only one reasonable gallery sketch, an idea which we feel improves upon the original opportunity memo.

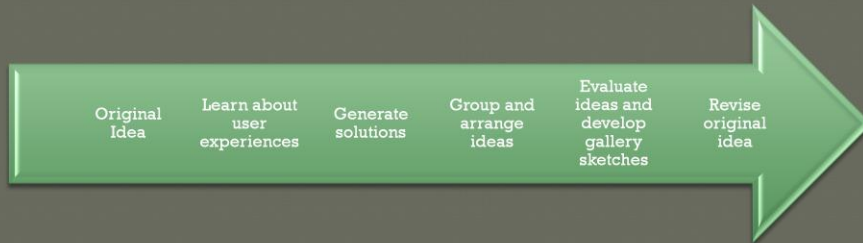


## Reshaping Process (continued)

- From the Gallery Sketch, we went back and revised the idea memo to incorporate the new insights and solutions
- \*See Attached

The gallery sketch was then used as the basis for revising the original idea memo to incorporate new insights we developed through the reshaping process. The new idea memo is attached as a separate documents [See file IdeaMemoRevised.doc]

## Reshaping Process (continued)



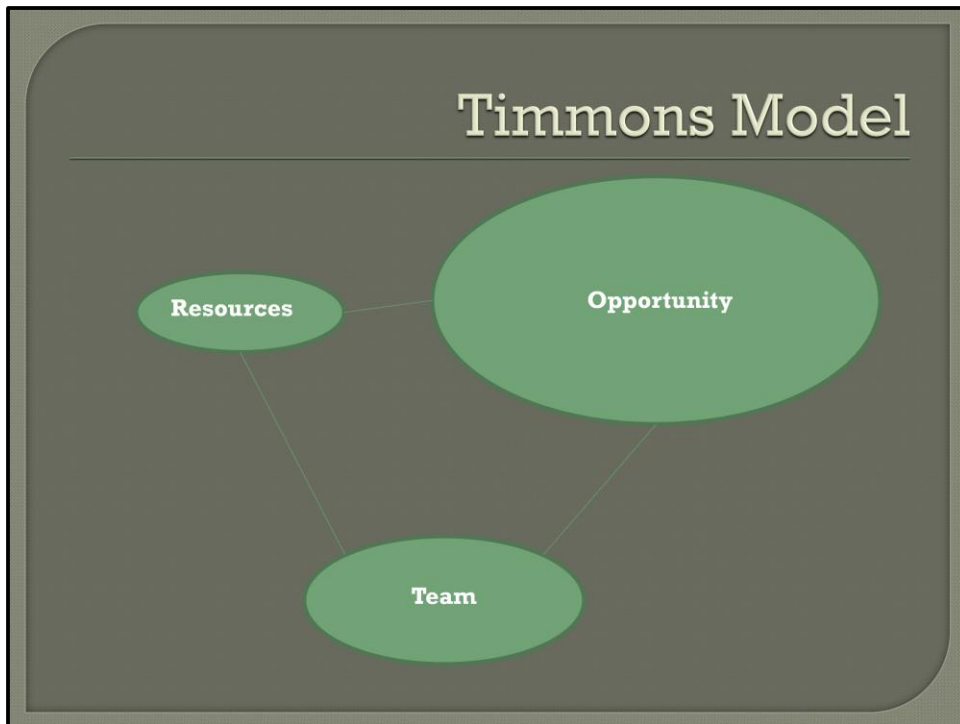
To recap, the user-centric reshaping process we went through started with the original idea. From there we thought about what the potential user experiences were. Then we generated solutions based on those experiences and their implicit needs. Next, we grouped and arranged ideas that were similar. We evaluated the different ideas, then developed simple gallery sketches. Finally, we used the gallery sketches to revise the original idea.

The process we carried out is imperfect. We should learn about user experiences by talking to them, and not just by considering our own personal experiences. Secondly, we should have generated many more solutions, in order to have more gallery sketches to choose from. This suggests that we should iterate through this process after spending more time talking to more users. We will be able to revisit our assumptions and make sure they are consistent with the user data.

## Critical Changes

- Offering service via iPhone/Smartphone app
  - We would provide device for users without a Smartphone
- Along with daily fee, look for other revenue streams as well
- Directs users around the park efficiently
- Targeted advertising

After reshaping the idea, we came up with a few critical changes to the original idea memo that Ross generated. We decided that we should offer the service for sale through iPhone/Smartphone apps as well as through rental of units. We would provide these iPhone/Smartphone units to users that do not have their own Smartphone. Instead of just charging a daily fee for use, we could also earn revenue through different sources, such as charging per reservation, ad-based revenues, etc. We would design the device to direct the users efficiently around the park while including subtle but targeted advertising. These critical changes and additions will increase the potential of the venture.



#### Timmons Model:

**Resources:** Right now, our company is lacking crucial resources. This technology is fairly recent, and some of it is probably protected by IP laws. Therefore, we would have to develop it in-house, or possibly license existing software. We don't know of any amusement parks "asking" for this product. We need at least one theme park to "put some skin in the game" for us to make this successful. We also have virtually no financial backing.

**Team:** Our team consists of three people. One Entrepreneur/Businessman, one user-centric product designer, and one engineer. Our team would not need to grow initially, however we will need to hire people familiar with the domain. We would want to partner with individuals or companies with domain experience in developing Smartphone apps and GPS software. In addition, we would want to work with someone familiar with theme park operations so we can get better insight into the industry.

**Opportunity:** The opportunity appears to be large based on our initial estimates. Therefore, we would have to segment this to determine where our product would be applicable. We have also considered alternative venues where our product could be implemented. The places that came to mind were museums, national/state parks, and tourist cities.

# Opportunity

## ● Market Demand

- Is there a need?
- What is the customer (park) payback?
- How sustainable is the demand?
- How much are users willing to pay?
- How many customers do we want to have (amusement parks & others)?
- Would enough users have the technology base (Smartphone) available to them?

Market Demand (user=amusement park visitor, customer=amusement park)

Is there a need?- We are assuming there is a need because people like to be efficient in theme parks, and currently parks are crowded and can be difficult to navigate.

What is the customer (park) payback?- According to our initial model, we would be paying the park back through ad sales, increased revenues due to less visitor downtime, and a fee for service to the user.

How sustainable is the demand?- We are assuming that the demand is sustainable and growing steadily at already established institutions, however we need to research this further.

How much are users willing to pay?- We are assuming that users feel comfortable paying \$50 or less per day, because we know that users pay that much for similar amenities at theme parks currently (ex. Fast Track at Universal Studios).

How many customers do we want to have (amusement parks & others)? – We want to be able to offer our product to as many amusement parks as possible, but do not want to limit it to those venues. We believe our product will be applicable to museums, parks, cities, and other tourist attractions.

Would enough users have the technology base (Smartphone) available to them?- We are assuming that theme park visitors and Smartphone users have some significant overlap, especially with the introduction of the iPhone and less “business-centric” phones (Droid).

# Opportunity

## ● Market Demand

- Need: Primary research in parks
- Customer (Park) Payback: Determine revenue models
- Sustainability: Secondary Research
- How much are users willing to pay: Competition
- Number of Customers: Based on our dev. costs
- Smartphone Base: Primary and Secondary Reserach

Market Demand (Finding answers to our questions in the previous slide)

Is there a need?- We are going to send our user-centric designers to visit parks and observe, talk, and survey the customers about their Smartphone usage and park experiences. We would also talk to park operators.

What is the customer (park) payback?- We would have to explore what our potential revenue models would be in order to determine this. We would see what existing products there are in the market that are value-added products for the theme parks, and what models the competitors are using. We would perform some modeling to get a good idea of what the payback would be.

How sustainable is the demand?- We will look at historical data for attendance and the purchase of similar items. Since this is a new product, the exact sustainability of the product is virtually unknown, however we can assume that it is directly correlated to the general health of the amusement parks.

How much are users willing to pay?- We would have to either talk to theme parks to look at their primary research if available, or we would have to generate our own research data. We would also think about pricing based upon the cost of other Smartphone apps.

How many customers do we want to have (amusement parks & others)? – We would first have to analyze the development costs for each available segment.

Depending on our costs, we would want to have more or fewer customers.

Would enough users have the technology base (Smartphone) available to them?- We would want to survey visitors at theme parks to see what type of phones they own. There are also a lot of publications on Smartphone users. We also need to be cognizant of what platform the devices of the users surveyed use. It would be a high cost-driver if we had to develop software to work on multiple platforms. We'd like to limit it to as few as possible without significantly compromising our potential market.

# Opportunity

## ● Market Structure

- How fragmented is the market?
- What does the market growth look like?
- How accessible are the customers and users?
- How is the Smartphone app industry structured?
- What are the barriers to entry?

### Market Structure

How fragmented is the market?- We are assuming that the market is pretty fragmented with the exception of Disney being the largest player.

What does the market growth look like?- We are assuming that the market is growing and/or contracting with the general health of the economy. Going to amusement parks is generally funded by disposable income.

How accessible are the customers and users?- We are assuming that the largest theme park operators are relatively inaccessible because they like to do things in-house for control reasons, and because of this, the users are inaccessible while they are in the parks. As well.

How is the Smartphone app industry structured?- We are assuming the industry is very open and flexible, especially considering the software platforms are easily accessible for anyone with the technical expertise to write software. However, we have no idea about what the current state of affairs is related to what other similar products are in the industry.

What are the barriers to entry- We are assuming the barriers to entry are relatively high, as the theme park industry seems to be self-reliant on new developments within their "domain". The market of GPS/mobile mapping and planning devices would likely have relatively low barriers to entry, as there are many available types of technology that either can be easily licensed or



modified significantly enough to be patentable.

# Opportunity

## ● Market Structure

- How fragmented is the market?
- What does the market growth look like?
- How accessible are the customers and users?
- How is the Smartphone app industry structured?
- What are the barriers to entry?

### Market Structure

How fragmented is the market?- We will find this out by consulting with secondary sources such as business databases.

What does the market growth look like- We are assuming that by talking to executives in the business, looking at stockholders annual reports, electronic business databases, and general market trends, we would be able to forecast the market growth for some time based on history.

How accessible are the customers and users?- We will use primary research found by contacting theme parks, and surveying visitors/users of the theme parks. We will focus on the theme park operators which seem to have the most willingness to innovate.

How is the Smartphone app industry structured?- We will conduct primary guerilla research at theme parks to see what percentage of users have Smartphones, and who (what member of the family/group) has the Smartphone so we can see who we are targeting. This is primarily because we want to decide if we would need to make a child model. We will also use secondary research to see more info on the Smartphone user and application development markets, which should be readily available.

What are the barriers to entry- We would need to do a patent search and see if we can find any applicable patents that would fall into our business model. We would also find out what Smartphone apps are applicable to some or all of our intended uses, and see if they are patented.

# Resources

- **Financial Resources**
  - Currently we have very little/none
- **Assets**
  - We will require technology assets to create the product
  - We will need partners to develop and implement the software into theme parks, and their existing technology infrastructure.
  - We will need a hardware partner to offer rental Smartphones for use in the park
- **People**
  - Software developers
  - Sales/Marketing team
- **Business Plan**
  - This will be developed over the initial three months

## Financial Resources

Currently we have very little to none. However, we are proposing for the first three months of research a program that does not require a lot of capital. We would have a small team (the existing three members) travel around to theme parks. The costs would be a per diem rate of approximately \$150 per person, plus admission and travel (airfare or car).

## Assets

We will need technology assets to create the product. We will try to license as much technology as possible to limit our costs. However, this may be difficult as the companies we would try to license from may think we are a competitive threat. We will also need partners to develop and implement the product into theme parks. We currently know nobody in the theme park, museum, or park industries. Having adequate contacts in the industry is the only way we can successfully connect with our first customer(s). Having at least one relationship established with a major firm would be the best way to enter the market. We would plan to establish a contact with the person in charge of business development and innovation at theme parks during our travels. We will also need a Smartphone manufacturing or wireless service provider partner to offer devices to users without Smartphones for a day of use. This could be a mutually beneficial opportunity for us and the partner. We would be able to offer the devices, while the partner would get free advertising by having their device circulating around the park.

## People

We would need to hire software developers to create prototypes in order to demonstrate our product concept to potential customers. We would hire interns from engineering schools for the time being. We would also need to hire sales/marketing personnel down the road, probably after 2.5 months of development at a minimum. We would pay them in a high-commission, low salary fashion to minimize our required financial resources and place ownership on the salespeople.

#### Business Plan

Our initial formal business plan will be created within the first three months. This will be a resource because it will be one of the key ingredients to create a successful package for investment. In addition, we could use it as a guideline for future development of the business.

## Team

- Business- Ross Gale
- User-centric Designer- Jayesh Gorasia
- Engineer- Ryan Harris
- Software Designer- ?
- Software Designer- ?
- Domain Consultant- ?

Our team would consist of the following members

-Business leader- The business leader would direct the company from a non-technical standpoint, and would focus on a lot of the primary and secondary research on the markets and business model. This person would also be responsible for negotiating with potential investors, employees and consultants, and customers.

-User-centric Designer- This person would lead the primary data collection efforts. He would be in charge of absorbing the team into the lives of the users and customers by visiting theme parks, speaking with potential users and customers, etc. He would be in charge of using his insights to develop concepts for software designers to prototype.

-Engineer- This person would be in charge of maintaining the organization of the software development, the interface between the company and Smartphone companies, and technological infrastructures. This person would have a grasp on the oversight of what technology is needed for the company's solutions.

-Software Designers- We would not need full time software designers initially, as we would use interns for these positions for the early stage basic functions. We would look to hire people who have done software startups before in similar domains so they can relay some of their insight into our product vision.

-Domain Consultant- Since we have no experience in any of the target markets, we

would need a consultant with experience in these markets to help us understand the market and how it adopts to new technology and changes. Understanding the market would be almost vital to our success, not to mention a nice thing to have to accelerate our ability to learn about the domain. We would hopefully meet a domain consultant during our visits to the theme parks around the country. We would also network with those we have met along the way to see if they know anyone that would be interested in our business model.

# Competition

	Favorable	Moderate	Unfavorable
Threat of new entrants		X	
Bargaining power of buyers			X
Threat of substitutes			X
Bargaining power of suppliers	X	X	
Intensity of rivalry	X		

**Threat of New Entrants-** We believe the threat of new entrants will be moderate. Some aspects of the product will likely be patentable, however other aspects will be licensed or un-patentable, creating weaknesses in the security of our market share.

**Bargaining Power of Buyers-** We believe the bargaining power of customers to be unfavorable for us. We need the amusement parks to buy into this, as they control a lot of the resources and the distribution channel. If they don't, our opportunity is shot down. They could also circumvent us. Users also can also turn us down.

**Threat of Substitutes-** From the user standpoint, they have other options, one being using no technology and manually navigating around the park, the other being using paper maps. They can also talk to employees in the park to direct them around. Also, the line-skipping (fast lane, fast pass) programs are a substitute (but also a product that would work well in conjunction with ours). Therefore, the threat of substitutes is unfavorable.

**Bargaining Power of Suppliers-** The suppliers of our technology (intellectual property) could take our use of their products and license them directly to amusement parks, allowing them to bypass us. The suppliers could also do the same things we are doing but at a lesser cost since there are no licensing fees applicable to them. Therefore, the bargaining power of suppliers would be favorable if we offer a lot of money, but if we don't then it would be moderate.

**Intensity of Rivalry-** Considering we are offering a specialized product designed for



every individual park, we do not have any major rivals since the park is already locked into our offering. The switching costs would be too high for a customer to switch easily. Therefore, the intensity of rivalry would be more favorable to us.

In summary, it looks like it could be favorable. The unfavorable aspects can be combated. We can mitigate the bargaining power of buyers by partnering up with a major park owner to convince the rest of the industry and the users to join us. The threat of substitutes can be mitigated by us offering a compelling product to the market that would entice users to choose our option versus any other choices.

# Business Model

- **Option One**
  - Lease/Sell hardware units, and software rights to park owners or authorities for rental to park visitors
- **Option Two**
  - Rent hardware units and software to park visitors with a licensing agreement with the park owner.
- **Option Three**
  - Rent software to park visitors and assume that enough potential customers have Smartphones
- **Option Four**
  - Rent hardware units preloaded with our software (and not software by itself) to park visitors

Additional revenue source: with any of these options, we could also earn revenue from advertising through the software

Here are several Business Model Options for the company. We have created a variety scenarios, because it is realistic to assume that many customers will prefer different terms and conditions. We would at some point narrow the options down after we have a better understanding of our customers through interviews.

1. We would lease or sell hardware units and sell software rights to park owners or authorities for rental to park visitors. This removes the company from the transaction between park owners and the users. Our income would be generated by the leasing and sale of hardware units and software rights, and product maintenance and improvements.
2. We would rent hardware units and software to park visitors. We would have a licensing agreement with the park owner to be vendors on the property, paying them a royalty based on the number of rentals. Our income would be from each rental and sale of software, plus additional streams from ad sales, and profit on damaged or lost hardware.
3. Option three would be to rent software only to park visitors and assume that enough potential customers have Smartphones to justify our lack of hardware rentals. We would earn revenue from the software rentals.
4. Option four would be to rent hardware units only. This would be an interesting scenario to the firm because we would have greater daily income by renting essentially the hardware and software to customers versus some customers renting just the software. We would use devices such as Apple's iPod Touch, iPhone, etc. as a platform for our software. This would open another revenue opportunity from the manufacturer of the device, as well as other firms related to

the device (i.e. AT&T, or other cellular provider), that may want to use the devices as a formal marketing tool.

Going along with the devices being used as a marketing tool by their manufacturers, we would also have the opportunity under any of these four scenarios to generate revenue from ad-based operations on the device and software. The devices would display relevant ads that would be of interest to the users.

# Financial Projections

- How to develop projections?
  - Market research data
  - Basic cost analysis for software and hardware
  - General economic data
  - Terms of deals made with parks

We would develop our financial projections after compiling the market research data from our primary and secondary research during the first three months of operation. We would also need to have a basic cost estimate for the licensing of software components, and production of our software. We need to know how many different Smartphone platforms we would be dealing with in our target market, because it would be a significant cost-driver if we have to develop software for multiple platforms in order to be successful. In addition, making a deal with a hardware provider would be necessary. This cost could be reduced by pitching the use of hardware devices as a marketing opportunity in a visible space (amusement parks). Based on the general economic conditions at the end of the three month period, we would modify a lot of our revenue data because if the economy is contracting and disposable income is down, our product price would need to decrease in order to maintain volumes. Likewise, if the amount of disposable income is increasing, the market could sustain a higher price. Finally, the financial projections would rely heavily on the terms of the early deals made with parks. According to the different business models previously mentioned, the revenue would be different under every possible option.

As far as burn rate would be concerned, one of the risks we would be taking is that none of our current team members have been involved in a software design project, so with the limited experience we do not know exactly how to manage costs in software development.

## Critical Risks

- Not being able to source the technology
- Not being able to convince parks of the benefits
- Not being able to convince users of the benefits
- Inability to create a product that is unique enough to be patent protectable
- Low Smartphone penetration among park visitors

Not being able to source the technology- During the first three months, a lot of effort would be put into research and development of the software. If we are unable to source the technology due to patent protection and uncooperative patent holders, we will be unable to complete the development of the product.

Not being able to convince parks of the benefits- If we are unable to convince the parks of the benefits to them, this project will be unable to lift off because without the subscription of the owners of the parks, we will be unable to reach the user market. We need to find this out early during the three month R&D phase.

Not being able to convince users of the benefits- If we cannot convince users of the benefits, having the technology and the parks on board with our idea will be useless, because in the end, users are the ones footing the bill for the product.

Inability to create a product that is unique enough to be patent protectable- If our product does not have the features we think are desirable and distinguish itself from other products in the market, it would be useless. We also will be unable to sustain our market share because of this. We need our product to solve real unsolved user needs, things impeding user satisfaction in the park, which will make our product unique and patentable.

Low Smartphone penetration among park visitors- We will find this out through our observation and secondary research analysis in the theme parks. If penetration is low, then we will have to focus our efforts on getting hardware partners to rent devices in

the parks.

## Go or No Go?

• GO!!!!

From our initial studies, this looks as though it could be a promising market. We feel that after three months of research which would be relatively inexpensive, a further determination of the viability of this idea must be made. However, as it stands it seems to be very intriguing. The competitive analysis depends on a lot of factors that are uncertain until we perform more research.