

Designing Mobile Services, Spring 2010 James Morris / John Zimmerman Carnegie Mellon University Aliya Maria Baptista Nicole Fernandez Neo Zhe Han Namrata Verma

Changing Focus
Research
SET/POG
Co-Construction of Value
Personas
Cultural Model
Competitive Analysis
Potential Revenue Streams

### The Original Idea

The original focus for our project centered on the idea of a service for your mobile device that would allow you to discover music that people nearby were listening to. We were inspired by this idea to research and understand the music discovery and sharing behaviors of college students in order to design a service in the end that would facilitate a social, on-the-go music discovery and recommendation experience. With this idea in mind, we believed that a service that allowed music lovers to discover and experience local music would be a perfect fit.

We spoke to several college students and performed user interviews to understand the needs and desires of our users. Our initial findings were not particularly supportive of our local music service idea. Instead, our users seemed to be more concerned about finding personally tasteful music in general (not specific to local) and going out to see bands they were already familiar with. We tried to pull any bit of evidence for our original idea, but it soon became clear that we were trying to find a need that didn't exist.

#### A New Direction

Seeing as there already exist several music applications that cater to a user's musical taste, we decided to broaden our scope and try to find a need from our existing data. One user complaint that seemed to crop up now and then through our research was that often the user had planned to go to a concert or small showing with friends, but upon arriving to the event, realized they could not attend due to an issue with the venue. This issue often resulted in a change of plans and the user having to settle for another event nearby or cancelling their night out completely.

Our second round of user interviews focused on understanding what factors play into a user's decision to go out and how the user accommodates after being forced to change their plans while already out. This time we did not have an end service in mind like we did in our first round of user interviews, which kept us from leading the user to talk about issues that would provide evidence for only that service and ignoring their other needs.

### **Hunt Statement**

Investigate on-the-spot information needs of consumers, trends in information exchange, and methods of capturing environment/location conditions in order to develop a mobile device app that supports real-time decision-making for end users.

#### User Interviews

We interviewed 12 students (grads and undergrads) for our second round of interviews. Their ages ranged from 18 to 30. During this set of interviews, we asked the users questions about their experiences going out with friends and resources, tools that they used, and concerns and breakdowns they anticipated or encountered. Some questions included "Do you use your phone while you're out with friends? Why?" and "Think back to the last time you went out. What problems did you run into? How did you resolve them?"

After performing all of our user interviews, we came together and created an affinity diagram to highlight the users' needs and concerns when planning a night out. These are the issues that repeatedly came up:

### Transportation

How do I get to the event? Do I have to pay for parking? Will I be able to find a taxi for my way back?

#### **Ambiance**

What is the venue like right now? Is it crowded? Are people allowed to smoke? How loud is the music? Is is a small or large venue? Will I be able to talk to my friends comfortably?

#### Time

How long will it take to get to the venue? How long will I have to wait to get in? What time will I come home?

#### Money

How much is the event? Is it worth it? Is there a cover? Will I buy drinks there?

### Quality

Is there good music playing? Are the food and drinks good? Does this place have good reviews? Have my friends been here? Is the venue "happening" right now?

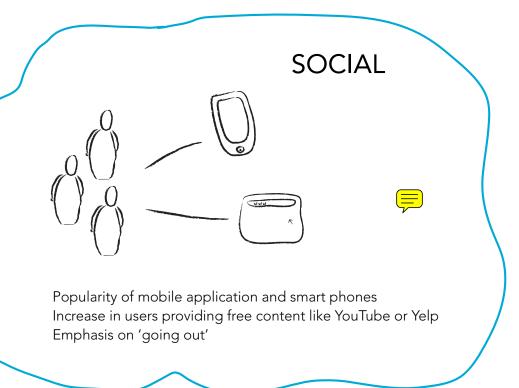
#### **Options**

What else is happening in the area right now?

### Social Media

We also asked our users about their mobile device use while out. Almost all users indicated that they used their phone in some way while out with friends. This included Tweeting, taking pictures and posting them on various social networking sites like Facebook or Instagram, and updating their Facebook statuses. Users also relied on their phones when searching for a new venue\* while on-the-go. They typically used applications like Yelp that reviewed different venues or geo-location services like Google Maps to find similar, high-quality venues and events in the area.

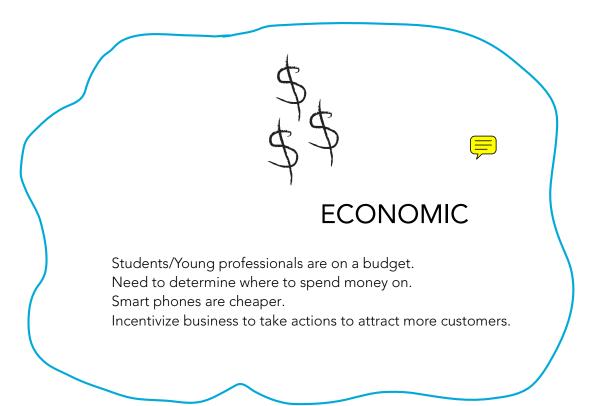
\*In this report, venues refer to a places of business where you typically meet up with friends, such as coffee houses, bars, concerts, clubs, house parties, etc.



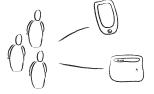
Advances in smart phone technology Increase in WiFi coverage Increase in capability to provide content in real time



**TECHNOLOGY** 



### **SOCIAL**



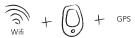
Popularity of mobile application and smart phones Increase in users providing free content like YouTube or Yelp Emphasis on 'going out'



**ECONOMIC** 

Crowd-Sourcing Social Experiences

Advances in smart phone technology Increase in WiFi coverage
Increase in capability to provide content in real time



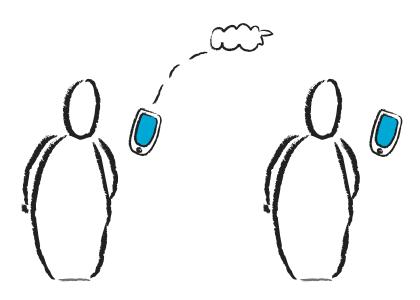
**TECHNOLOGY** 

Students/Young professionals are on a budget. Need to determine where to spend money on. Smart phones are cheaper.

Incentivize business to take actions to attract more customers.

#### Co-creation of Value

From our research, we believe that a service that provides users with real-time information about a venue's ambiance will satisfy our users' needs and aid their plans for going out or last-minutes changes. Since several people indicated that they created posts about the venue they're currently at or instantly uploaded pictures of that place, we believe we can mine that data and present it to our users to give a multi-media snapshot of a venue's ambiance. A mobile service that crowdsourced this information would accurately reflect the mood of a venue at that moment. It may seem difficult at first to attract users to create content for this service, but there are several instances today of sites, such as Yelp, YouTube, or Wikipedia, that successfully crowdsource content from its users where the users do not expect any return from the site for the content. With the right implementation, our service could incentivize our users to do the same.



# Contributer

Post real-time media Share online

Benefit from location discounts

### Consumer

View real-time media Access to information



### **Location Owner**

Allow for media gathering More customers Provide incentives to contributers

### Contributer

Chloe Chang, 28 Human Resource Manager, IT Firm, Pittsburgh





Life Goals

"Be young (at least at heart!) and be fun. Forever!"

### **Experience Goals**

Have a good time. Have a fun time. Never feel bored.

#### **End Goals**

More convenient way to share the fun experiences that she has when she is out with friends.

Chloe is single and works for an IT firm that's based in Pittsburgh.

Weekends are usually the times when she meets up with her friends. They will usually decide on a dinner place beforehand, and meet directly at the dinner location. After dinner, she and her friends will decide what they want to do (e.g. watch a movie, dance at a club, chillout at a bar) and where they want to go.

Chloe relies heavily on the build-in camera of her iPhone to capture pictures of her gatherings with her friends. This is so that her friends and her can 'remember the occasion' and 'the fun that we(they) had'. After she takes the photos, she usually uploads them to Facebook after she reaches home. Once the photos are on Facebook, she or her friends will tag the friends in her photos so as to 'share' the photo with them.

Most of the pictures in her Facebook account are from her gatherings with her friends.

#### Consumer

# Samuel McDonald, 24 Grad Student, Heinz College, CMU



Life Goals

Make a name for himself in politics in the US.

### **Experience Goals**

Have good fun, enjoy the companionship of his friends

#### **End Goals**

Not go to another bar/pub with lousy music again. Not miss out on another hot event because he only found out about it later.

Samuel is a 2nd year student reading a Masters in Public Policy Management. He has an undergraduate business degree from the University of Pennsylvania. He grew up in San Francisco, but currently lives in Pittsburgh because of his graduate studies During weekdays, most of his time is spent in classes or at project meetings. The only time he has for social activities are the weekends. He goes out with his friends on most Friday and Saturday nights. Most of the friends he goes out with are also in the same masters program as him, or are students from other masters programs at Heinz College.

He and his friends like to visit the bars and pubs. Some of his friends have cars, and so he will usually get to hitch a ride in his friend's car. They rarely go to any bars or pubs that take longer than 15~20 min to reach by car, unless there is an event going on that really interests them.

When deciding where to go, he prefers places where people are not smoking. The music that is played at the location is also very important to him. If he went to a place, and it played bad music, he would avoid going to it again. Sometimes, the musical style of a place changes, and he has visited places that changed to playing music that he dislikes, when he previously enjoyed the music that the location played. He also bases his decision on recommendations from his friends.

He is comfortable with technology, and will often use his iPhone when he is at bars or pubs to send short messages to his other friends, to find out where they are and what was going on at their location. He especially hates it when he misses out on an interesting and 'hip' event because he did not know about it in time.

## Location Owner

James Sunderland, 40 Owner of 'James' Bar'



Life Goals
Be a successful businessman

### **Experience Goals**

Sense of freedom and empowerment from being his own boss

#### **End Goals**

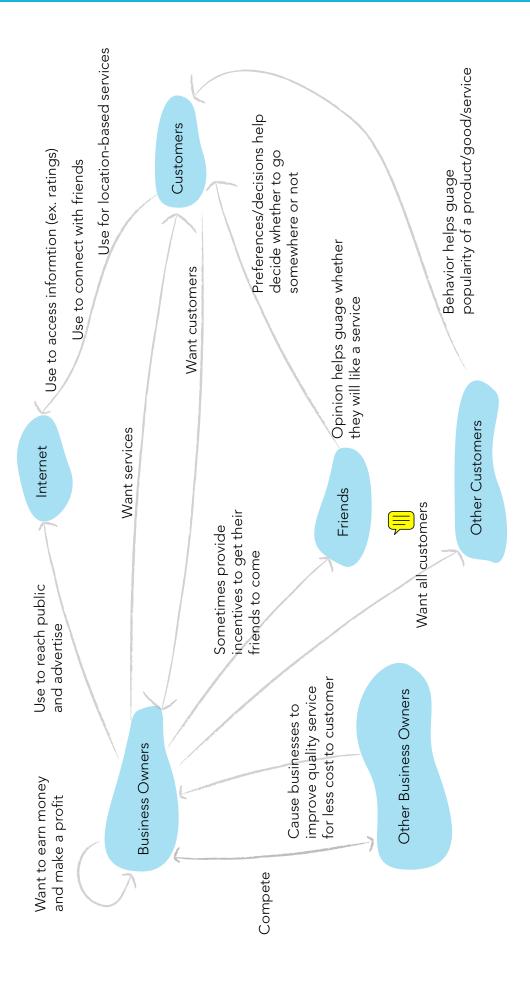
Keep James' Bar up and running. Get more publicity and awareness for James' Bar.

James has lived in Pittsburgh all his life. He is single and never married. Before becoming the owner of James' Bar, he was working as a business analyst for a local consulting firm. Two years ago, he opened James' Bar using his own savings.

Since James' Bar is a relatively new entrant in the local nightlife scene, getting more publicity and consumer awareness for James' Bar is a constant worry on his mind. James does not have a large budget for marketing or publicity, and hence he is always on the look out for the cheapest ways to draw customers to his bar.

James has tried placing ads in the local papers, but finds the cost to be prohibitive. He is interested in exploring opportunities for marketing his cafe online and at a lower cost than in print.

James has realized that holding events and activities at the bar are a good way of drawing people. He has found that inviting local bands to perform gigs at his bar is a reliable way to ensure a good night of business. He wants to publicize the dates when there are bands performing, but lack the technical knowledge to maintain a website for the bar.



### Competitive Analysis

With this idea in mind, we performed a competitive analysis to assess the market's current offering of products and services in this domain in order to see what was working, what failed, and how we could learn and build from them.

The competitors we looked at were driven by three key takeaways from our findings:

- (1) people used social networks to communicate with their friends and stay updated with information;
- (2) people used mobile rating services for information on the quality of the experience they can expect to get;
- (3) people used GPS-based mobile services for time and location information, to plan and get to the venue.

A few of the applications we looked into had some interesting features, which could address some concerns raised in our research.

Loopt helps people know which friends are near them, what events are occurring nearby, and who has publicly checked in at nearby events by displaying them as icons on a map. The visual presentation of the information makes this application an attraction among users and it also addresses the issue of coordination and knowing the location of friends. Five star reviews suggests that the application is accurate in real-time and satisfies consumer expectations, but no reviews describe whether the application is useful for event coordination or for capturing the quality of an event.

Docoloco uses short recommendations to describe places, and then groups them according to place, topics and people. It allows users to follow topics, people, neighborhoods, or businesses of their choice. This is a valuable feature because it enables people to tune into events or topics of their interests. Docoloco's design is great for keeping track of interesting locations. However, this application does not have the means to let friends know real-time information about the changing ambiance of places.

Graffiti Geo allows users to tag locations with short descriptions to capture the experience at a location. It aggregates the reviews as icons on a map with a plus or minus sign, to emphasize when a significant number of people have contributed positive or negative reviews for that location. Again, Graffiti also does not capture the experience of a location in real-time.

#### Revenue Streams

The next step in our process was to determine if a profit could actually be gained from this idea. We looked at several existing business models to see how other companies generated revenue for their business. We also spoke to a few local business owners to see which platforms they used to advertise their advertise their business and how they leveraged mobile to incentivize people to become patrons.

Our interviews with business owners were overall unsuccessful. The owners all seemed to feel that mobile advertising would not impact their business and relied solely on local advertising. They also did not seem to understand the purpose of providing real-time data of their venue. While these findings do not offer a hopeful outlook, we do not believe they conclusively state that a profit could not be generated from our idea. We feel that if we were to interview more successful businesses whose business ranged outside of the local realm, we'd find owners who would be more receptive to mobile advertising and finding a value in providing real-time content. We believe this to be true because we have found some evidence for it from research on other companies providing similar services.

Our idea, to provide users with real-time data about the ambiance of a venue, is similar in some aspects to existing businesses. For example, Yelp provides reviews for a variety of venues. These reviews are averaged over time as opposed to our our service which would in a way provide a temporary rating for a place that changes on the mood of the place. Yelp creates revenue by allowing business owners to create accounts in order to upload photos of their business as well as provide more information about their business to the reviewers of the site. Businesses that pay Yelp also receive the benefit of coming up higher in results as a sponsored search result. This revenue along with minimal banner advertisements creates a profit for Yelp.

Twitter has also just begun creating revenue through its promoted tweets, trends, and accounts. Companies can pay Twitter to promote a tweet or trend so that these tweets show up higher in searches and gets actively displayed on their website. If a company pays for a promoted account then it becomes more likely that your business will appear as a suggested account to "follow." Our service, which would be operating with real-time information like Twitter, could employ the same strategy and promote different businesses as a possible revenue stream.

Another way to produce revenue would be to allow for banner advertisements in the application as many mobile applications do today. The application could even be set up with a Freemium business model so that a free account gives you access to the app with advertisements, whereas if you pay a fee, the advertisements would be removed and other features would be revealed.





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