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Executive Summary

Each year, The Rose Bowl Stadium houses many events including the traditional Rose Bowl Parade, the annual Rose Bowl Game and many concerts of globally recognized artists. Being the 11th largest stadium in the United States¹, this giant complex can host up to 92,542 attendees. The parking lot of this complex, however, isn't enough to host the cars of all of the attendants. Due to lack of public transportation opportunities around the area and the shortage of parking lots, the attendees are having a hard time trying to find a parking space right before the event. In addition to this problem, the shortage of parking space motivates the parking lot owners to increase prices, leading helpless customers to park their cars on the sidewalks with the risk of getting tickets or getting their cars towed. There are parking lots owned by independent parties around the area, which might be used by the attendees. In order to solve this problem of parking space shortage, SpotOn, came up with a specialized approach to connect third party parking lot owners with attendees.

SpotOn is developing a mobile application and a website to connect attendees with the parking lot owners. With SpotOn, attendees have the opportunity to remotely book a space for their car before attending an event. The payment as well as the booking will be done online to enhance the usability of this product. Currently, there are similar mobile and web applications serving the same business function; however, SpotOn aims to differentiate itself by being event – oriented (i.e. the lot owners can rent their space only for events) rather than being location – oriented as well as serving a niche market. The founding team decided to focus on a single site to enhance the customer experience as much as possible and to acquire as many customers as possible: the parking lot owners will be inspected one by one to ensure that their parking space is following the rules of California Vehicle Code and the cars of the attendees are kept in a safe space (i.e. protected from any kind of external damage, such as being close to a flooding area or having no security measures). By gaining the trust of our customers, providing them this service at a reasonable price and most importantly making their concert experience pleasant by not letting them miss anything because of parking conflicts, we aim to reach and bond with a niche group of clients, who will remain to be our clients in the future.

After thorough market analysis, the founding team of SpotOn determined that the current market of cars requiring a parking lot right before an event in Rose Bowl only in January consists of 184,784 cars. Detailed competitor analysis and interviews with potential clients showed that despite the presence of numerous parking applications in the region, there is still an obvious shortage of parking lots, signaling the need for a event oriented and a focused tool to connect more parking lot owners to event attendees.

SpotOn's aim is to focus on a single site, The Rose Bowl Stadium, in its first year operation to engage with as many customers as possible. Many technological ventures fail to actively engage with their end-users in their initial years of operation and therefore lose connection with them and run into many operational problems. We aim to avoid this by finding our niche market and promising our customers a quality service with reasonable price. In addition to this value proposition, SpotOn aims to

¹ [https://en.wikipedia.org/wiki/Rose_Bowl_\(stadium\)](https://en.wikipedia.org/wiki/Rose_Bowl_(stadium))

determine the market potential of this industry before shaping its expansion strategy. With this, both the founding team and the investors will have real time data of SpotOn's operational metrics and come up with future plans accordingly. The second and third year operational model forecasts the addition of three more stadiums in total and to expand the customer base.

Rapid adoption of our product might pose a risk, especially in a market where there are multiple products with the same business function; however, SpotOn believes that by making focused and effective marketing strategies it can reach a significant number of customers immediately. Moreover, The Rose Bowl is expected to increase its capacity by adding an additional 3,000 seats with no anticipated renovation in its parking lot space, meaning that the number of cars in need of a parking lot will increase. The founding team also checked if there are any plans to improve the public transportation alternatives in the area; however, none of the upcoming construction plans focus on improving the current state of the public transportation in Pasadena. Keeping these factors in mind, the founding team determined the level of external risks to be relatively low. The only current risk is the abundance of similar products in the market.

Further quantitative market research also revealed that the total addressable market in only in Rose Bowl surpasses \$5.5M per quarter, signaling a great abundance of opportunity. SpotOn anticipates a requisite of \$725K to break even in its second year of operation. SpotOn currently seeks \$250K in seed financing to fully establish its technological infrastructure and marketing operations in preparation for a \$500K in series A. We anticipate growing to 12 employees in the second year of our operation. The core team includes:

- Duru Kahyaoglu, candidate for B.S. in computer engineering with a concentration in entrepreneurship from Columbia University. Duru has experience working at a Forbes 100 financial services company as a technology analyst as well as working as a software engineering intern at a Series A nanotechnology startup.
- Keith Ramljak, candidate for B.S. in operations research: engineering management systems and minor in economics at Columbia University. Keith has experience working for top 5 global investment bank by assets where he worked in a structured credit origination group specializing in underwriting leveraged buyouts.
- Xiaoning Ma, candidate of M.S. in operations research from Columbia University. Xiaoning has experience working at several top notch financial services companies in Asia as corporate finance analyst and dealing with success startup companies while working in a private equity firm.
- Zhengkang Wang, a candidate of M.S. in civil engineering management with a interest in project finance and management from Columbia University. Zhengkang worked as an intern at transaction advisory service department in EY Advisory.

Vision

We strive to improve people's lives through the easy and safe parking booking experience we deliver through our mobile and web application, while constantly improving our technological and operational infrastructure. Our goal is to be the leader in our industry by 2023 and to be globally known for our expertise in finding people parking lots in the right time and place.

Mission

Our mission is to eliminate the chaos that comes with finding parking for a major event. Gone are the days of driving in circles in search of public parking, only to find the overpriced, event provided parking lot full when the search proves futile. We believe the event experience can be improved by providing affordable, on-demand parking, while providing passive income to anyone with a driveway or extra parking space.

Our business model is summarized in the table below:

| | |
|--|---|
| Customer Selection | Tech savvy fans and attendees of major events who need affordable parking |
| Value Proposition | Ease of use/mobile based application. Quality service at low cost. Passive income to providers. |
| Differentiation and Control | Focusing on a single site to maximize quality service with the optimal parking lot options and maintaining full customer engagement by starting our operations with a niche market |
| Scope of Product and Activities | Mobile marketplace connecting event attendees with need for parking with those who can provide a space. Product will use machine learning to intelligently adjust prices based on demand and size of event. Payment processing and other backend functions will also be implemented and monitored by the company. |
| Organizational Design | Technology and marketing driven firm |
| Value Capture for Profit | Low fixed cost and negligible marginal costs allow high margins. Charge providers a % fee of their revenue |
| Value for Talent | Opportunity to work with highly motivated individuals from different backgrounds and chance to take active role in an emerging, high potential startup |

Opportunity Analysis and Market Research

In order to determine the size of the target market, we made top-down market analysis. The details are given below:

Top-Down Market Sizing:

We first divided the attendees into two categories: ones who require parking and ones who don't. In order to estimate the number of people who go to the events without a car or with a third party car we first determined the alternatives to get to Rose Bowl. The only way of going to Rose Bowl with public transportation is using the Gold Line and taking off at Memorial Park station. Research shows that an average of 50,000 people use the Gold Line everyday². Normal hours of operation are from 6 am to 12 pm and therefore the subway is active from 18 hours³. Assuming that people start using the subway 3 hours before the event, we can say that $(3/18) * 100\% = 16.67\%$ of the rides will be used by Rose Bowl guests. Assuming a normal distribution between the number of people using the subway and the hour of operation (i.e. every hour is equally popular), we can say that $50,000 * 16.67\% = 8334$ people will use the subway during those hours. Out of these 8334 passengers, we can assume that 90% of them will attend the event. This would give us $8334 * 90\% = 7500$ people using the subway to attend the event at Rose Bowl. The official Rose Bowl website says that passengers coming from three nearby counties can use MetroLink to get to Rose Bowl through Gold Link. The average number of daily users of MetroLink is 41,000 and we can assume that 5% of the daily passengers are going to the event at Rose Bowl⁴. This would give us an additional 2050 passengers. So the total number of public transportation users is $2050 + 8334 = 10,384$ people. Assume that an additional 1000 people are attending the concert through other means of public or private transportation that doesn't require a parking lot. Therefore the total number of people going to the Rose Bowl and not requiring a parking lot is $10,384 + 1,000 = 11,384$ people.

In January 2016, the number of people who attended the official Rose Bowl Game was 94,268 and in 2013, the number of people who attended the annual Rose Bowl Parade was 700,000⁵. For the Rose Bowl Game, the expected number of people using cars is $94,268 - 11,384 = 82,884$ people. As of 2015, there were 6,293,639 cars registered in Los Angeles County and the total population of Los Angeles is 18,690,000. Therefore the number of people per car is $18,690,000 / 6,293,639 = 2.97$, which is rounded to three⁶. Since there are 82,884 people were estimated to be using a car, the number of cars requiring a parking lot would be $82,884 / 3 = 27,628$ cars. Rose Bowl doesn't have any parking lot capacity information disclosed; however, similar stadiums (i.e. with a capacity of 90,000 attendees, hosting concerts and games) have a parking lot capacity of 24,000 on average⁷.

² <http://www.lamag.com/driver/expo-gold-line-extensions-turning-rail-ridership-around/>

³ [https://en.wikipedia.org/wiki/Gold_Line_\(Los_Angeles_Metro\)](https://en.wikipedia.org/wiki/Gold_Line_(Los_Angeles_Metro))

⁴ [https://en.wikipedia.org/wiki/Metrolink_\(California\)](https://en.wikipedia.org/wiki/Metrolink_(California))

⁵ https://en.wikipedia.org/wiki/2016_Rose_Bowl

⁶ <http://www.laalmanac.com/transport/tr02.htm>

⁷ <http://www.metlifestadium.com/stadium/about-us>

In order to determine the number of people requiring an additional parking lot for the Rose Bowl Parade, we first determine the number of people attending the event. Based on previous numbers, we assume that 700,000⁸ people will attend the event. So the number of people requiring a parking lot will be scaled up according to the case study given above. The ratio of total attendants to the number of cars requesting a parking lot is $94,268 \text{ people} / 27,628 \text{ cars} = 3.41$. Therefore the number of cars requiring a parking lot in the Rose Bowl parade is equal to $700,000 / 3.41 = 205,156$ cars. Since 24,000 cars will use Rose Bowl's parking lot, $205,156 - 24,000 = 181,156$ cars will require a car park. Our business currently plans to operate in these two events and therefore the total number of cars requiring a car park in the first month of operation is $3,628 + 181,156 = 184,784$ cars in total.

Market research suggests that the current parking apps charge \$20 to \$40. Therefore taking the average price, \$30 per car, gives us a total addressable market (TAM) of $184,784 \text{ cars} * \$30 = \$5,543,505$ in the first quarter of our first year of operation. Similarly, on average the number of attendees to a concert is 90,000 people and therefore the number of cars requiring a lot would be 3,628 cars per concert.

In the long run (i.e. in the next three years), we plan on adding three more stadiums to our business (all of them in Los Angeles – Southern California region), which would give us the opportunity to serve 12 events per stadium per quarter ($4 \text{ stadiums} * 4 \text{ events/month} * 3 \text{ months/per quarter}$). Assuming that these events host the same number of people as the events in the Rose Bowl, we would have the opportunity to serve attendees attending two games and two concerts. And if we assume that out of these 48 events, four of them is as big as the Rose Bowl Parade, we could have the opportunity to have $3,628 * 44 + 184,784 * 4 = 898,768$ cars per quarter and $898,768 * 4 = 3,595,072$ cars annually.

⁸ [https://en.wikipedia.org/wiki/Rose_Bowl_\(stadium\)](https://en.wikipedia.org/wiki/Rose_Bowl_(stadium))

Five Forces Analysis:

In order to determine the current condition of the market and understand if it is the right time to enter the market or not, we made a five forces analysis. The results are discussed below⁹:



Threat of New Entrants: New entrants can enter the market fairly easily. Because the only requirement to make this product is building an application, there are few barriers to entry. Regulation issues might come up in the future as more companies enter the market. Because the owners will be listing their own properties, there are few regulations. However, for new entrants, gaining substantial market share requires a series of marketing activities. We should note that the key to this service would be acquiring the parking space providers and the customers. Thus, the threat of the new entrants could be considered high.

Bargaining Power of Suppliers: The suppliers are parking space owners. We think the bargaining power of suppliers is fairly weak. Since there will be a large number of suppliers in addition to the public parking near the events and the customers will be able to choose from all of them, it would be hard for the suppliers to offer an unreasonable price. Also, we will give recommendation price for the suppliers based on the demand.

Threat of Substitutes: The threat of substitutes comes from public parking and temporary event parking. For customers the switching costs are low; Substitute product is similar or more expensive than our product; Substitute product quality is equal or inferior to our product quality, since sometimes it takes some time before we can find an available spot in a large parking lot¹⁰. Thus, the threat of substitutes could be considered low.

⁹ https://en.wikipedia.org/wiki/Porter's_five_forces_analysis

¹⁰ <https://strategiccco.com/threat-of-substitutes-one-of-porters-five-forces/>

Bargaining Power of Buyers: During major event time buyers are less concentrated than sellers, that is there are few sellers and many buyers. While at usual, buyers are concentrated compared to sellers. The switching costs are low. The buyers cannot easily backward integrate. The customer is price sensitive and well-educated regarding the product. The customer does not purchase large volumes of products from the seller. Substitute products are available on the market¹¹. Thus, the bargaining power of buyers is medium or high.



Industry Rivalry:

- i. Number of competitors: Currently there are two similar apps, Spotter and Kirb.
 - ii. Size of competitors: Both startups with small amount of customers
 - iii. Industry's fixed cost: Fixed cost include application development fee and maintenance fee.
 - iv. Brand loyalty: insignificant and switching costs are low.
 - v. Exit barriers: costs or losses incurred as a result of ceasing operations is low.
- Thus, the intensity of rivalry among industry firms is low.

¹¹ <https://strategiccfo.com/buyer-bargaining-power-one-of-porters-five-forces/>



Current Competitors in the Market:

The following table summarizes the key information about the current competitors in the market:

| Company | Services | Customers | Pricing |
|---|--|---|---|
|  <p>12</p> | <ul style="list-style-type: none"> - Application allows user to enter his/her current location and find the parking lot near by - Event oriented, also has airport parking and even regular Parking (daily and monthly) - Available in iOS, Android and Web - Available in New York, Chicago , San Francisco and LA - User receives an online parking pass which is used for user verification upon parking - Has 3,815 different parking locations and also cover more than 500 venues across the US for those needing event parking | <ul style="list-style-type: none"> - Anyone who is looking for a parking spot near office space, airport or at any event | <ul style="list-style-type: none"> - What you see online is what you pay as long as you park within the timeframe on your parking pass. Any time parked outside the arrival or departure listed on your pass will likely incur an additional onsite fee, as determined by the parking provider. - Some locations enforce oversize vehicle fees, which may apply to any vehicle larger than a sedan. |
|  <p>13</p> | <ul style="list-style-type: none"> - Application allows user to enter his/her current location and find the parking lot near by - Event oriented, has airport parking and even regular parking (daily and monthly) - Available in iOS, Android and Web - It is Featured in DC ,Baltimore ,San Francisco ,Chicago, NYC ,Philadelphia , Atlanta and Pittsburgh - Parking Panda's Ticketless Valet utilizes mobile technology and provides a digital valet solution on a handheld device that can track and record all operational data and provide a ticketless customer experience. It allows the valet to upload vehicle information by scanning a VIN, create a digital ticket to send to the customer, and collect and show real-time snapshots of the parking operation. | <ul style="list-style-type: none"> - Anyone who is looking for a parking spot near office space, airport or at any event | <ul style="list-style-type: none"> - What you see online is what you pay as long as you park within the timeframe on your parking pass. Any time parked outside the arrival or departure listed on your pass will likely incur an additional onsite fee, as determined by the parking provider. |

¹² <https://www.parkwhiz.com/rose-bowl-stadium-parking/2017-tournament-of-roses-parade-476743/>

¹³ <https://www.parkingpanda.com/>

| | | | |
|--|---|--|--|
|  <p>14</p> | <ul style="list-style-type: none"> - Application allows user to enter his/her current location and find the parking lot near by - Event oriented, has airport parking and even regular Parking (daily and monthly) - Available in iOS, Android and Web - Available in New York, Chicago and San Francisco - It enables user to find parking spaces near hotels, landmarks ,theatres, stadiums ,airports ,restaurants ,universities & schools and also office buildings | <ul style="list-style-type: none"> - Anyone who is looking for a parking space | <ul style="list-style-type: none"> - What you see online is what you pay as long as you park within the timeframe on your parking pass. Any time parked outside the arrival or departure listed on your pass will likely incur an additional onsite fee, as determined by the parking provider. |
|  <p>15</p> | <ul style="list-style-type: none"> - They rent out private parking spaces - Its based only in Rhode Island - Available in iOS and Web - It gives turn by turn direction to the customer and even provides photo of the driveway - It gives the option of paying online using credit card or using paypal account | <ul style="list-style-type: none"> - Anyone looking for a cheap parking space in Rhode Island | <ul style="list-style-type: none"> - All spots are currently listed at \$1/hour. |

¹⁴ <https://spothero.com/>

¹⁵ <http://www.parkwithspotter.com/>

Value Proposition Matrix:

Based on the market research, we came up with the important features to form a value proposition matrix:

| Value Proposition | Park Whiz | Parking Panda | SpotHero | ParkWithSpotter | SpotOn |
|--|-----------|---------------|----------|-----------------|--------|
| Available in Los Angeles | ✓ | ✗ | ✗ | ✗ | ✓ |
| Available in web, iOS and Android | ✓ | ✓ | ✓ | ✗ | ✓ |
| Available in other areas (i.e. other than LA) | ✓ | ✓ | ✓ | ✓ | ✗ |
| Event Oriented | ✓ | ✗ | ✓ | ✗ | ✓ |
| Parking Lots/Garages Only | ✓ | ✓ | ✓ | ✗ | ✗ |
| Customers can leave reviews | ✓ | ✗ | ✗ | ✗ | ✓ |
| Parking Lots include Private Property Owners Who Let Others Use Their Property | ✗ | ✗ | ✗ | ✓ | ✓ |
| 24/7 Customer Help Line | ✗ | ✗ | ✗ | ✗ | ✓ |

Legend:

✓ - company has the given attribute

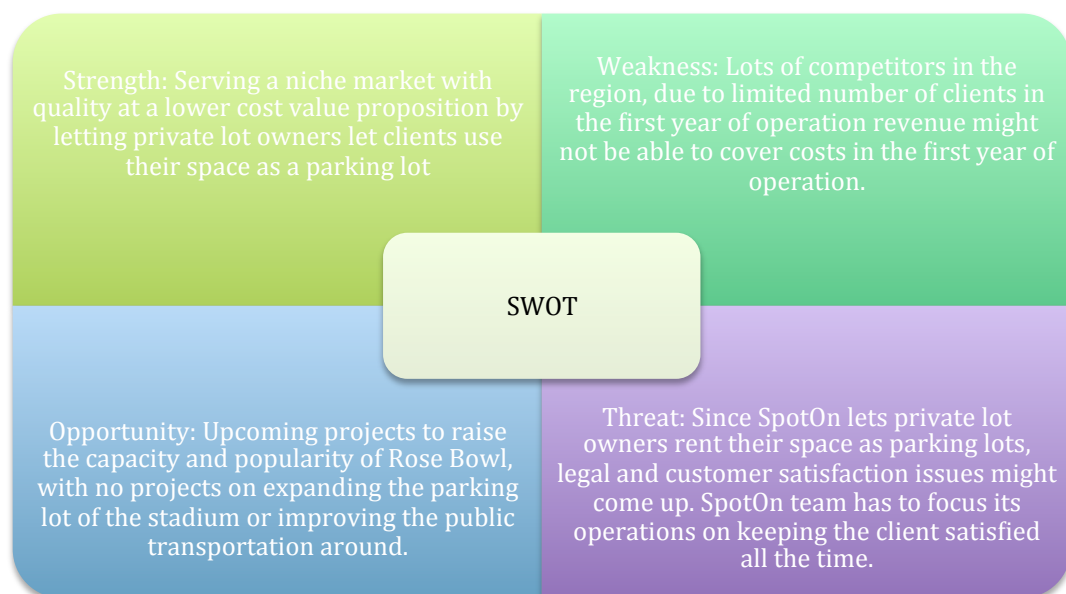
✗ - company doesn't have the given attribute

How is the current market context favorable or not?

The current market context is favorable from the perspective of our venture in numerous ways:

- Lack of public transportation options to Rose Bowl: The only way to go to Rose Bowl via public transportation is to use the Gold Line in Los Angeles Metro. Further research suggests that there aren't any plans to improve the subway construction in this particular line so there aren't any risks in terms of losing our potential clients to public transportation. It should be noted, however, that there was an instance where the metro administration decided to add commemorative cars to the annual Rose Bowl game in 2007, which increases the risk of losing potential clients. However, the public transportation haven't seen any other improvements ever since and therefore this risk is considered to be quite low.
- Future plans to increase the capacity of the Rose Bowl: The official website of the stadium released a news article in 2010 saying that they are planning to increase the capacity of the stadium by adding 3000 seats. Although the construction plan was never executed (it was planned to start in 2014 but due to deficit the plans got delayed), recent public releases suggest that such a renovation will take place soon. Having 3000 extra seats means having more visitors attending an event with their own cars and therefore looking to find a place to park their own car¹⁶s.
- Using the sidewalk as a parking place is illegal: "No person shall stop, park, or leave standing any vehicle whether attended or unattended . . . on any portion of a sidewalk, or with the body of the vehicle extending over any portion of a sidewalk (California Vehicle Code §22500).¹⁷"

After analyzing the opportunity from various perspectives, we came up with the following SWOT map:



¹⁶ <http://www.sportsvideo.org/2014/01/16/extensive-renovation-project-aims-to-take-rose-bowl-through-its-next-century/>

¹⁷ <https://www.dmv.ca.gov/portal/dmv/detail/pubs/calvehcode>

The Solution And Concept

Description of the Product: SpotOn is a mobile application and web platform that lets private parking lot/space owners to rent their space and also helps customers find and book available parking lots. The client can enter the time and hour of reservation, as well as the event that he/she is attending and search for the available parking lots. Client can also pay for the service through the application. After done with parking his/her car the client can leave a review about the parking lot owner or the space. The parking lot owner can update his/her profile by updating availability status, location and amenities description. Upon successful booking, the client will receive an online booking confirmation document, which he/she will show to the parking lot owner or the valet. The valet will also have the same document and check the client's document for verification. Transactions will be done after the client leaves the parking lot. If the client has any complaints about the parking lot, he/she can call the call center and make his/her complaint. If the complaint is found to be rational by our operational team, a full refund will be made. Client can cancel his/her booking anytime before parking his car to the designated area. Parking lot owners can apply to be on our platform and certain owners whose parking lots comply with our company's standards will be chosen. Our operational team will inspect the site prior to advertisement of the parking lot on our platform. A 15% fee will be deducted from the parking lot's earnings from the customer.

To view the preliminary design and the wireframes of our platform please see Appendix.

Describe a "Day in the Life" of the Customer Before and After the Solution:

Before: The customers have a huge choice of phone applications; however, it was observed that due to the popularity of the events taking place in Rose Bowl, the number of available parking lots around the area wasn't enough. Because of this the customer is entitled to pay a higher fee many days prior to the concert to reserve a parking space in the parking lot of the stadium, or park his/her car on the sidewalks, facing the risk of his/her car getting towed or being fined. This also posed the problem of traffic jams after and before the event and delayed arrival times.

After: Since SpotOn incorporates private lot owners to the market (not just garage owners), customers have a higher supply of parking space and therefore the prices drop to acceptable levels and the availability increases. The client doesn't have to stress about finding a parking space and missing the event or getting fined. In case of complaints and questions, the client can instantly access the call center or leave a review. Therefore the client will be given the privilege of paying for a parking space at the acceptable market price with no need to book days in advance and also given a personal and high quality service.

What is Unique and Defendable About SpotOn:

Unique: Event based parking lot reservation system that allows everyone (not just garage owners) to rent their space to clients. This way, the supply of parking space is increased pushing the price downwards. Customers are provided with low prices and

since SpotOn aims to keep its operations limited to certain Rose Bowl events, the service is always personal.

Defendable: Customer friendly as it aims to push the market price downwards by allowing all eligible lot owners to join the system. Supplier friendly as it allows everyone eligible to make passive income.

SpotOn Business Model:

Key Partners: Garage and eligible lot owners, Clients (looking for a parking lot before the event)

Value Propositions:

- **Garage and Eligible Lot Owners:** Opportunity to make passive income by remotely and easily reaching to clients
- **Clients:** Personable and quality service with easy and cheap access to various parking options.

Key Resources: Eligible parking sites, technology, prospective clients

Cost Structure: Technology and marketing costs, salaries of employers and fixed costs such as office rent

Revenue Stream: Commission from the parking lot owners charging customers

Current Pricing: Pricing depends on many factors; however, a through market research reveals that a typical parking lot rent is at three distinct levels: \$20, \$30, and \$40.

Financial Analysis

LTV Assumptions:

The revenue per customer calculation is a weighted average of the three popular pricing options currently observed in the market. Marginal cost per consultation is the sum of the variable costs: server cost and the park owner's cut. We assumed that 20% of our clients would refer us and 70% of our clients would reuse our product. For a typical startup a discount rate between 30% and 50% is assumed and therefore we used a discount rate of 30%. We obtain LTV by summing up the contributions in each quarter.

| | Q1-2017 | Q2-2017 | Q3-2017 | Q4-2017 | Q1-2018 | Q2-2018 | Q3-2018 | Q4-2018 | Q1-2019 | Q2-2019 | Q3-2019 | Q4-2019 |
|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Revenue Per Customer | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 |
| Marginal Cost Per Customer | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 |
| Marginal Contribution | \$6 | \$6 | \$6 | \$6 | \$6 | \$6 | \$6 | \$6 | \$6 | \$6 | \$6 | \$6 |
| Referral Rate | | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Reuse Rate | | 70% | 70% | 70% | 70% | 70% | 70% | 70% | 70% | 70% | 70% | 70% |
| Total Retention % | 100% | 90% | 14% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Expected Contribution | \$6.13 | \$5.51 | \$0.83 | \$0.12 | \$0.02 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Discount Rate | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% |
| PV Factor | 0.93651 | 0.87706 | 0.82138 | 0.78923 | 0.7204 | 0.67466 | 0.63183 | 0.59172 | 0.55415 | 0.51897 | 0.48802 | 0.45517 |
| PV of Contribution | \$5.74 | \$4.83 | \$0.68 | \$0.10 | \$0.01 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| LTV | \$11.36 | | | | | | | | | | | |

Break-even Analysis Assumptions:

| | | |
|--------------------------|----|-----------|
| Marginal Revenue | \$ | 28.50 |
| Marginal Cost | \$ | 22.38 |
| Marginal Profit | \$ | 6.13 |
| Total Fixed Cost(Annual) | \$ | 461,212 |
| Break-Even Point (Units) | | 75,300.00 |

Assuming that all non-COGS expenses are fixed costs, the annual fixed cost is calculated as the sum of the four quarters of 2017 for line items listed under Expenses of P&L spreadsheet given below. Break-even point is calculated by taking the ratio of Annual Total Fixed Cost to Marginal Profit.

COCA Analysis Assumptions:

We assumed that SpotOn will acquire clients through online advertisement, billboards or salespeople. We assumed that billboard advertisement is a fixed cost and therefore we only included online advertisement and salespeople in our COCA analysis. Click through rate is assumed to be based on the figures given from Hochman Consultants with additional benefits¹⁸. Additionally, we assumed a 2% conversion rate based on

¹⁸ <https://www.hochmanconsultants.com/cost-of-ppc-advertising/>

the information given in the search engine optimization company Wordstream¹⁹. Assuming that 40% of our customers will be acquired through online advertisements and the rest will be acquired through salespeople, we came up with a COCA value of \$8.91.

| COCA for Online Advertisement | | COCA for Sales Through Salespeople | |
|---|------------|------------------------------------|--------|
| Ad spend | \$1,000.00 | | |
| CPM | \$3.00 | Percent of Average Price | 2% |
| | | Average Price | 28.5 |
| Views | 333,333.33 | | |
| Click-through rate | 0.70% | COCA | \$0.57 |
| | | | |
| Landing page | 2,333.33 | | |
| Conversion rate | 2.00% | | |
| | | | |
| Trial Customers | 46.67 | | |
| | | | |
| COCA | \$21.43 | | |
| | | | |
| Weighted Average of COCA | | | |
| Percent of customers acquired through online adds | 40% | | |
| Percent of customers acquired through salespeople | 60% | | |
| COCA | \$8.91 | | |

Feasibility Analysis:

According to our break even analysis, the number of clients that we need to break even is 75,300. Considering the fact that our service attainable market is 3,595,072 cars, we require 2.1% of the market to succeed. Therefore, our business seems to be feasible in the long run. In order to satisfy this requirement we have to expand our customer base by increasing the number of events under our service rapidly in the first three years of operation. Our COCA was calculated as \$8.91 while our LTV was \$11.36. Since COCA is less than our LTV, we can assume that the business will be feasible. One should bear in mind, however, that the two values are quite close to each other and therefore customer acquisition costs have to be driven down in the long run. This might be a challenge in the long run as the company aims to increase its stadium and event network and therefore more attention has to be given to this issue in the upcoming iterations.

Income Statement:

The following income statement forecasts the earnings and spending of the company in the next three years of operation:

¹⁹ <http://www.wordstream.com/blog/ws/2014/03/17/what-is-a-good-conversion-rate>

| Income Statement- Annualy | | | |
|----------------------------------|-------------|--------------|--------------|
| | 2017 | 2018 | 2019 |
| Revenue | \$2,198,804 | \$18,518,855 | \$97,965,480 |
| Cost of goods sold | 1,726,254 | 14,538,926 | 76,911,495 |
| Gross Profit | \$472,550 | \$3,979,929 | \$21,053,985 |
| Gross Margin % | 21% | 21% | 21% |
| Expenses | | | |
| Salaries | 240,000 | 550,000 | 860,000 |
| Other headcount expense | 36,000 | 82,500 | 129,000 |
| Marketing expense | 80,000 | 160,000 | 320,000 |
| Expense of Acquiring Doctors | 42,062 | 361,025 | 1,739,156 |
| Server Expense | 9,000 | 15,000 | 18,000 |
| Office expense | 34,650 | 50,400 | 58,800 |
| Other expense | 16,500 | 24,000 | 28,000 |
| Total expense | 529,963 | 1,881,310 | 6,575,942 |
| Pre-tax profit/(loss) | (57,414) | 2,098,620 | 14,478,043 |
| Tax expense | 2,467 | 839,448 | 5,791,217 |
| Profit/(loss) | (\$59,880) | \$1,259,172 | \$8,686,826 |
| Cumulative profit/(loss) | (211,527) | 2,275,343 | 23,529,010 |

Driver Assumptions

| | |
|---|------------|
| Drivers | |
| Basic business model drivers: | |
| Price of Cheapest Parking Option | \$15.00 |
| Price of Mediocre Parking Option | \$30.00 |
| Price of Expensive Parking Option | \$60.00 |
| # of Cheapest Parking as Percentage of Total | 50% |
| # of Mediocre Parking as Percentage of Total | 30% |
| # of Expensive Parking as Percentage of Total | 20% |
| Weighted Average Price | \$29 |
| Percentage Cut of SpotOn | 25% |
| Cost to acquire a customer | \$8.91 |
| Cost to acquire a lot owner | \$5.00 |
| Referral rate | 0.20 |
| Reuse rate | 0.70 |
| # of parking lot owners to parking spaces ratio | 0.30 |
| Rate of Parking Lot Owner Attrition | 0.10 |
| Variable cost drivers: | |
| Server Cost | \$1.000 |
| Lot Owners' Cut | \$21.38 |
| Variable Cost | \$22.38 |
| Overhead expense drivers: | |
| Rent/month | \$1,750.00 |
| Rent/person/quarter | \$1,050.00 |
| Fringe rate | 0.15 |
| New employee expense | 100 |
| Other expense/employee/quarter | 500 |
| Server cost/month | \$300 |
| Server cost/quarter | \$900 |
| Other drivers: | |
| Tax rate | 40% |

From market research, we noticed that there were three popular price points \$15, \$30 and \$60. Therefore we took a weighted average of the three to come up with a general price to use in our further calculations. We assumed that the cheapest option would be preferred the most followed by the mediocre and expensive options. In 2017, since we will be having our first year of operation, we decided to have a percentage cut of 25% from the lot owners. We assumed that the cost to acquire a parking lot owner is \$5.00, since it requires a minimal inspection and an information exchange between the lot owner and the SpotOn representative. We assume that we need one lot for three cars since we are allowing private lot owners to open their garages for business as well. We assumed that 10% of the parking lot owners will leave our platform every quarter. For the first year of operation, we assumed that 70% of our clients will reuse our product and 20% of our clients will suggest this product to other users.

Variable costs are the marginal costs associated with each parking. They are mainly lot owner's cut and server cost. Server cost assumptions are outlined in the appendix. Lot owner's cut is calculated to be a 75% cut of the average price of parking (which is \$29), which is equal to \$21.38.

For the employers, a WeWork office at Pasadena was determined to be sufficient. According to the prices of WeWork Pasadena, an office for five employees would cost \$1,750²⁰. We also realized that the rent will increase proportionally with the number of employees and therefore we assumed a rent cost of \$1,050 per person per quarter. In order to keep our employees motivated, we decided to distribute limited non-cash benefits of 15%.

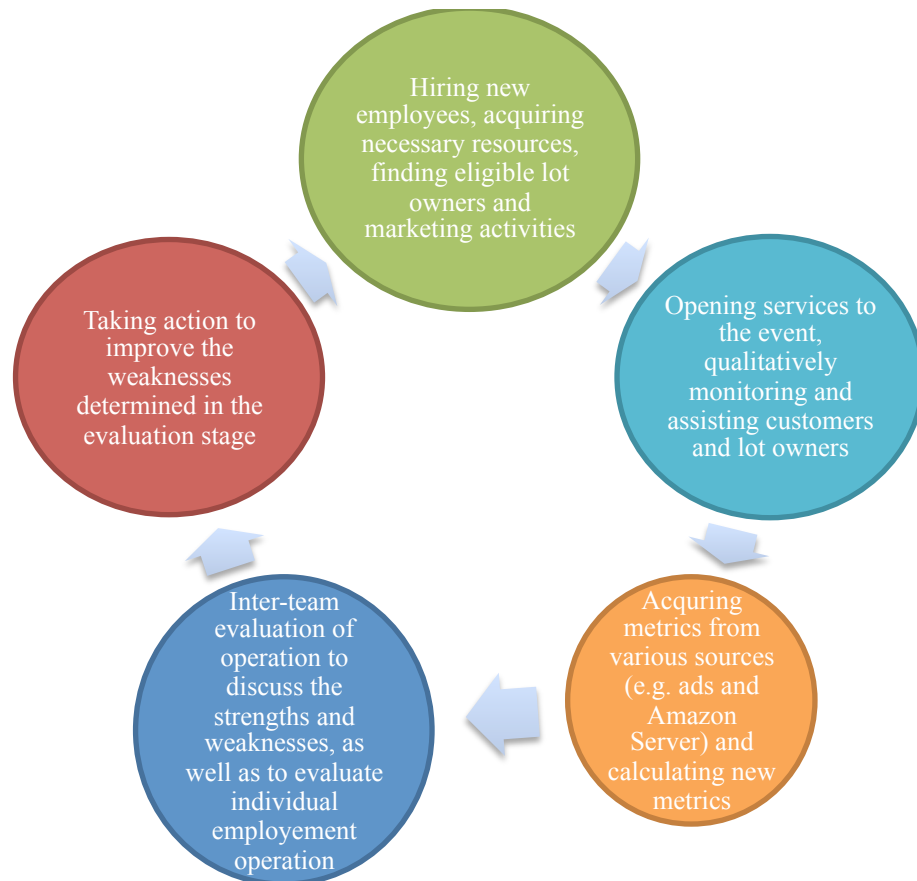
Revenue Assumptions:

We assume that in our first quarter of operation, we will serve in four main events, one of them being the Rose Bowl parade. Since the parade hosts a huge number of people, we decided to take the ratio of marketing spend to COGS and multiply it by 8. For the rest of quarters in 2017, we decided to keep the concert multiplication factor steady at 4. After the first year of operation, we decided to expand our service network to another stadium in Los Angeles and therefore the concert multiplication factor was raised to 20, assuming that there would be 3-4 events in each stadium per month. The concert multiplication factor was assumed to remain the same throughout the year. For the third year of our operation, we will expand our stadium network to four stadiums, which raises our concert multiplication factor to 48. You can find the detailed revenue spreadsheet in Appendix.

²⁰ <https://www.wework.com/buildings/pasadena--los-angeles--CA>

Product Development and Operations

In order to closely monitor the operation of our company we set iterations after each quarter to evaluate our operation and to search for new ways of improvement. Every iteration consists of a product development/improvement cycle as described below:



Milestone timeline:

- Meeting with the board members and investors to determine the current financial situation and discuss future plans – these meetings are scheduled after key events outlined as below:

Milestone 1: After Rose Bowl Parade and Rose Bowl Game – these two events are particularly important as they will be the first real time data that our operating team will obtain and update our financial projections as well as our development strategies accordingly. Certainly, a meeting with the board advisors will determine how much the company receive for funding and what the investors think about our company overall. Valuable ideas and suggestions will be received from the investors and the product will be improved accordingly. The event and stadium expansion plan will be revised as well.

Milestone 2: After Quarter 4 of 2017 – the year as a whole will be evaluated and the aforementioned actions will be taken.

Milestone 3: After Quarter 4 of 2018 – the year as a whole will be evaluated and the effectiveness of the expansion model will be discussed. At this point the startup has certainly past its initiation stage and coming towards the end of its development stage. Main questions to answer would be: Do we require new VCs? If yes where can we find and how much do we need? How can we require our product? Are there better ways to determine how our end-users feeling about the product? Should we revise our employee hiring plan? Do we require more employees or fewer employees? How can we improve our product?

Milestone 4: After Quarter 4 of 2019 – this is an absolutely important milestone for the company as the company will certainly pass its growth stage and enter its maturation stage. At this point, the investors and the board of advisors might start discussing liquidity events and alternatives. Founding team members should also come up with new cities to find similar opportunities. The income statement and all other financial forecasts should be revised for the next three years. Current employee situation should also be revised.

Appendix:

| Income Statement- Quarterly | | | | | | | | | | | | | |
|---------------------------------|------------|------------|-----------|-----------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--|
| | Q1-2017 | Q2-2017 | Q3-2017 | Q4-2017 | Q1-2018 | Q2-2018 | Q3-2018 | Q4-2018 | Q1-2019 | Q2-2019 | Q3-2019 | Q4-2019 | |
| Revenue | \$511,588 | \$358,111 | \$685,527 | \$643,577 | \$2,910,729 | \$3,334,794 | \$5,008,614 | \$5,637,823 | \$16,910,298 | \$19,606,639 | \$28,036,640 | \$31,610,079 | |
| Cost of goods sold | 401,641 | 281,149 | 538,199 | 505,265 | 2,285,178 | 2,618,106 | 3,930,631 | 4,426,186 | 13,276,067 | 15,392,932 | 22,011,222 | 24,816,685 | |
| Gross Profit | \$109,946 | 76,963 | 147,328 | 138,313 | 625,551 | 716,688 | 1,075,983 | 1,211,637 | 3,634,231 | 4,213,708 | 6,025,418 | 6,793,394 | |
| Gross Margin % | 21% | 21% | 21% | 21% | 21% | 21% | 21% | 21% | 21% | 21% | 21% | 21% | |
| Expenses | | | | | | | | | | | | | |
| Salaries | 53,750 | 58,750 | 63,750 | 63,750 | 137,500 | 137,500 | 137,500 | 137,500 | 215,000 | 215,000 | 215,000 | 215,000 | |
| Other headcount expense | 8,063 | 8,813 | 9,563 | 9,563 | 20,625 | 20,625 | 20,625 | 20,625 | 32,250 | 32,250 | 32,250 | 32,250 | |
| Marketing expense | 20,000 | 20,000 | 20,000 | 20,000 | 40,000 | 40,000 | 40,000 | 40,000 | 80,000 | 80,000 | 80,000 | 80,000 | |
| Expense of Acquiring Lot Owners | 26,926 | (5,383) | 19,117 | 1,402 | 122,709 | 37,639 | 105,540 | 59,572 | 622,963 | 230,913 | 546,879 | 335,636 | |
| Server Expense | 18,850 | 13,465 | 24,954 | 23,482 | 103,031 | 117,910 | 176,571 | 198,718 | 594,244 | 688,852 | 984,642 | 1,110,026 | |
| Office expense | 7,350 | 8,400 | 9,450 | 9,450 | 12,600 | 12,600 | 12,600 | 12,600 | 14,700 | 14,700 | 14,700 | 14,700 | |
| Other expense | 3,500 | 4,000 | 4,500 | 4,500 | 6,000 | 6,000 | 6,000 | 6,000 | 7,000 | 7,000 | 7,000 | 7,000 | |
| Total expense | 138,439 | 108,045 | 151,334 | 132,146 | 442,465 | 372,275 | 498,836 | 475,015 | 1,566,157 | 1,268,715 | 1,880,471 | 1,794,611 | |
| Pre-tax profit/(loss) | (28,492) | (31,083) | (4,005) | 6,166 | 183,087 | 344,414 | 577,147 | 736,623 | 2,068,074 | 2,944,993 | 4,144,947 | 4,998,783 | |
| Tax expense | - | - | - | 2,467 | 73,235 | 137,765 | 230,859 | 294,649 | 827,230 | 1,177,997 | 1,657,979 | 1,999,513 | |
| Profit/(loss) | (\$28,492) | (\$31,083) | (\$4,005) | \$3,700 | \$109,852 | \$206,648 | \$346,288 | \$441,974 | \$1,240,844 | \$1,766,996 | \$2,486,968 | \$2,999,270 | |
| Cumulative profit/(loss) | (28,492) | (59,575) | (63,580) | (59,880) | 49,972 | 256,620 | 602,908 | 1,044,882 | 2,285,726 | 4,052,721 | 6,539,690 | 9,538,960 | |
| Total Fixed Costs | 461,212 | | | | | | | | | | | | |
| Income Statement- Annualy | | | | | | | | | | | | | |

| Headcount | | | | | | | | | | | | | | | |
|-------------------------------|--------------------|--------------------|--------------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Title | Salary p.a. (2017) | Salary p.a. (2018) | Salary p.a. (2019) | Q1-2017 | Q2-2017 | Q3-2017 | Q4-2017 | Q1-2018 | Q2-2018 | Q3-2018 | Q4-2018 | Q1-2019 | Q2-2019 | Q3-2019 | Q4-2019 |
| CEO | \$5,000 | \$20,000 | \$60,000 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Head of Development | \$5,000 | \$20,000 | \$60,000 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Head of marketing | \$5,000 | \$20,000 | \$60,000 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Developers | \$60,000 | \$60,000 | \$70,000 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Marketers | \$20,000 | \$50,000 | \$60,000 | 1 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| Finance | \$60,000 | \$60,000 | \$60,000 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| Other | \$50,000 | \$50,000 | \$50,000 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Total headcount | | | | 7 | 8 | 9 | 9 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 |
| Total salaries | | | | \$53,750 | \$58,750 | \$63,750 | \$63,750 | \$137,500 | \$137,500 | \$137,500 | \$137,500 | \$215,000 | \$215,000 | \$215,000 | \$215,000 |
| 'Fringe' | | | | \$8,063 | \$8,813 | \$9,563 | \$9,563 | \$20,625 | \$20,625 | \$20,625 | \$20,625 | \$32,250 | \$32,250 | \$32,250 | \$32,250 |
| New employee expense | | | | \$700 | \$100 | \$100 | \$0 | \$300 | \$0 | \$0 | \$0 | \$200 | \$0 | \$0 | \$0 |
| Total other headcount expense | | | | \$8,763 | \$8,913 | \$9,663 | \$9,563 | \$20,925 | \$20,625 | \$20,625 | \$20,625 | \$32,450 | \$32,250 | \$32,250 | \$32,250 |

| Number of Parking Lot Owners in | | | | | | | | | | | | | |
|----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|
| | Q1-2017 | Q2-2017 | Q3-2017 | Q4-2017 | Q1-2018 | Q2-2018 | Q3-2018 | Q4-2018 | Q1-2019 | Q2-2019 | Q3-2019 | Q4-2019 | |
| Total Parkings | 17,950 | 12,565 | 24,054 | 22,582 | 102,131 | 117,010 | 175,671 | 197,818 | 593,344 | 687,952 | 983,742 | 1,110 | |
| # of Parking Lot Owners Required | 5,385 | 3,770 | 7,216 | 6,774 | 30,639 | 35,103 | 52,701 | 59,346 | 178,003 | 206,386 | 295,123 | 33 | |
| Beginning Parking Lot Owners | - | 5,385 | 3,770 | 7,216 | 6,774 | 30,639 | 35,103 | 52,701 | 59,346 | 178,003 | 206,386 | 29 | |
| +New Parking Lot Owners | 5,385 | (1,077) | 3,823 | 280 | 24,542 | 7,528 | 21,108 | 11,914 | 124,593 | 46,183 | 109,376 | 6 | |
| -Parking Lot Owners who quit | 0 | 539 | 377 | 722 | 677 | 3,064 | 3,510 | 5,270 | 5,835 | 17,800 | 20,639 | 2 | |
| Ending Parking Lot Owners | 5,385 | 3,770 | 7,216 | 6,774 | 30,639 | 35,103 | 52,701 | 59,346 | 178,003 | 206,386 | 295,123 | 33 | |

Web Server Calculation Assumptions:

In order to host our application both in the web and in mobile platforms along with a secure, scalable and reliable environment, we decided to use Amazon AWS. In order to determine what kind of services we need, we found the case study Airbnb²¹, which connects users to houses instead of parking lots. We deliberately chose this startup since the services they provided were delivered to the customer in a very similar way (i.e. lot search). After this research, the following services were determined to be essential for application²²:

- Amazon Elastic Compute Cloud: to run our development and production environment
- Amazon Simple Storage Service (S3): to have a secure, durable, highly – scalable cloud storage. This service enables us to retrieve any amount of data from anywhere on the web.
- Amazon Route 53 Service: highly available and scalable cloud Domain Name System, which would enable our users to our internet application by translating its domain name (www.spoton.com) into the numeric IP addresses. This service makes use of load balancers to ensure that the traffic is always under control and our application is always accessible.
- Amazon Cloud Front Service: is a global content delivery network (CDN) service that effectively delivers our website and video content to our users.
- Amazon RDS: a cloud relational database service to enable our content (such as doctor information, patient symptoms etc.) into a reliable and secure database. This service provides us access to popular databases. For our application (and website), we decided that a MySQL server would be the most appropriate choice, due to its scalability and compatibility with mobile applications.
- Amazon DynamoDB: fast and flexible NoSQL database service for all applications that require consistent and quick access at any scale. Some of the data we plan to store might be better with a NoSQL service.
- AWS Data Transfer Costs: Cost of moving data in and out of EC2.
- AWS Support: Provides critical services such as CloudWatch, which enables us to monitor our system and to check if there is anything wrong. It also provides us very critical metrics on usage and data transmission.

Our system requires the following non-functional requirements to be satisfied at all times and our research shows that the optimal way of doing is utilizing Amazon AWS:

- Security: our users are asked to input credit card information and our lot owners also input some critical information about their lots. Therefore our system has to be secure all the time.

²¹ <https://aws.amazon.com/solutions/case-studies/airbnb/>

²² <http://calculator.s3.amazonaws.com/index.html#key=calc-MarketingWebSite-140324>

- Scalable: Our system must be able to host increased number of users since the growth of our projected users increase at a very fast rate. Therefore our system must be able to host the maximum possible number of users concurrently.
- Compatibility: We plan on making our system in web and mobile platforms and therefore it should be available in different platforms. These services operate in different environments, which is critical to our technical infrastructure.
- Performance and Reliability: Our clients will use our application on the run, particularly while they are on their way to the event. Therefore they need a product that can quickly fetch them the results. Because of this performance and reliability play key role.

Select Time:

From:

Dec. 12, 2016 5:00 PM ▼

To:

Dec. 12, 2016 8:00 PM ▼

691 Westgate Street 0.6 Miles
\$20.00/day

View Details

772 Linda Vista Avenue 1.6 Miles
\$18.00/day

View Details

Sort By:

Distance ▼

Select Your Event:

Beyoncé Formation World Tour

Select Your Location:

Current Location



SpotOn

Login

Email:

First Name:

Last Name:

Phone:

Password:

Confirm Password:

Invite Code:

☐

I agree to the Terms of Service.

Create Account

SpotOn

Sign In

Email:

Password:

Login

Forgot your password?

Pay Now

691 Westgate Street

0.6 Miles
\$20.00/day



Parking Lot Image

From:

Dec. 12, 2016 5:00 PM ▼

To:

Dec. 12, 2016 8:00 PM ▼

About: This garage is located in 691 Westgate Street across Rose Bowl Drive. SUVs and vans with a capacity of 15 people or more are subject to different rates. When you arrive at the garage, please present the confirmation page (printout or screen shot on your Smart Phone) to the attendant on-site. Reservations are 100% refundable up to the start time of your reservation.

SpotOn

Logout

Pay Now

Credit Card Number*:

Expiration Date*:

CVN*:

Billing Address*:

Zip Code*:

Pay Now

SpotOn

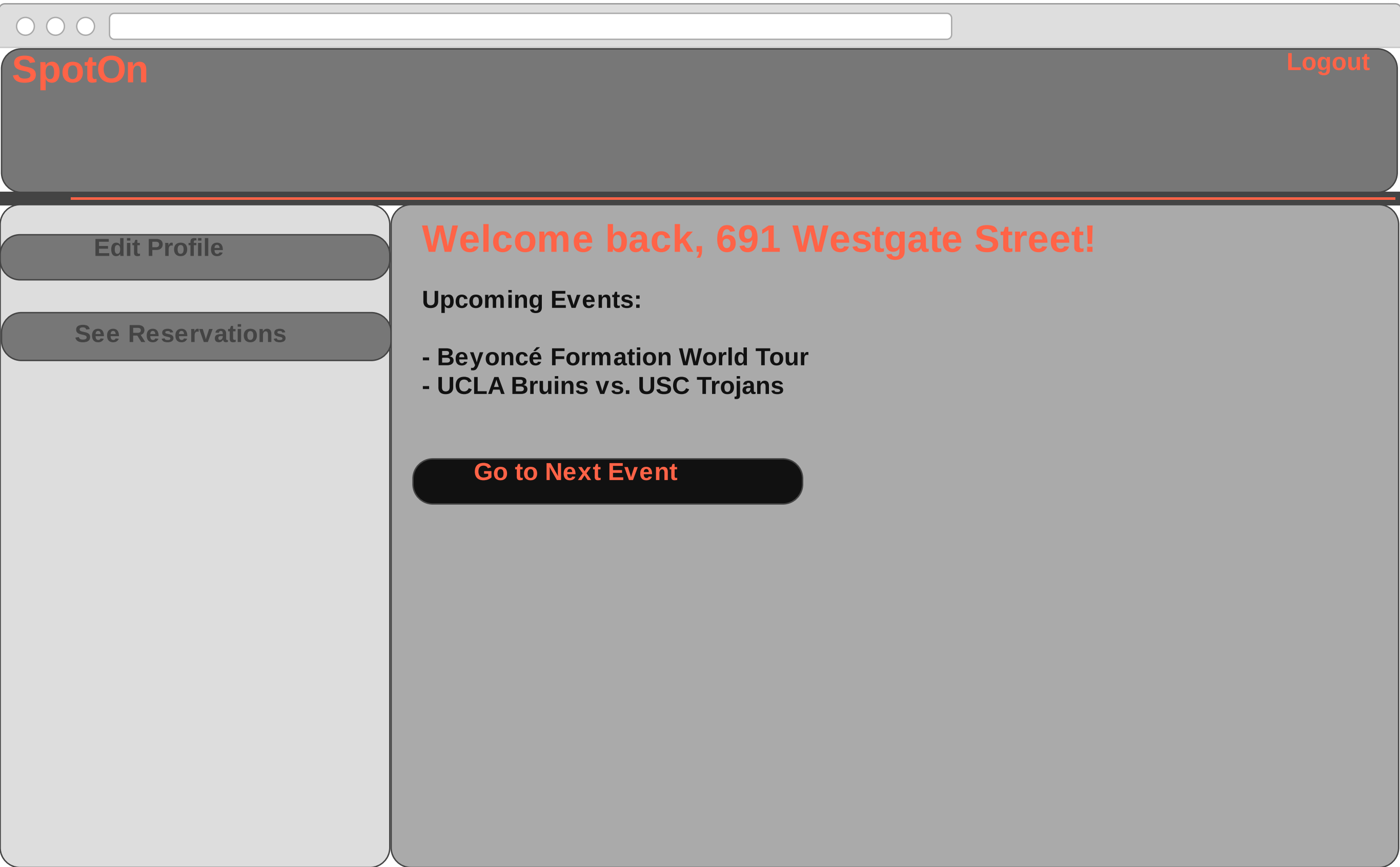
Logout

How Was Your Spot?

Leave Comments:

Give a Rating*: ☒ ☒ ☒ ☐ ☐

Submit



SpotOn

Logout

Edit Profile

See Reservations

Welcome back, 691 Westgate Street!

Upcoming Events:

- Beyoncé Formation World Tour
- UCLA Bruins vs. USC Trojans

Go to Next Event

SpotOn

Logout

Edit Profile

See Reservations:

Event 1: Beyoncé Formation World Tour

See Parking Requests

Reject Request

Why, please specify:

Update Status:

☒ Vacant

☐ Full

Submit

SpotOn

Logout

Edit Profile:

Email:

Name:

Address:

Price (/day):

About:

Save Changes