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# IT-415: Advanced Info Systems Design

# Final Project – Prompt I

# Project Proposal

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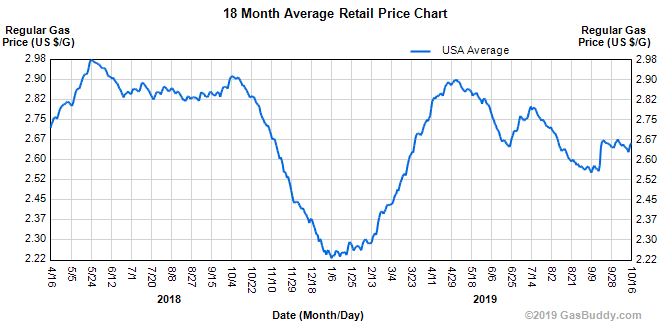
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**I. Proposal**

**Problem Statement**

GasBuddy was founded in 2000. In the beginning, its website allowed users to locate the best gas prices around. Its client base was 60 million strong and spanned the US, Canada and even Australia. They also drew consumers in with free tools such as gas price charts, an outage tracker a trip cost calculator. Later on, they increased revenue by running ads on gas-focused websites expanding to an even wider market. According to the case study: GasBuddy: Fueling Its Digital Platform for Agility and Growth:

*“Within its first year, GasBuddy.com had spawned 110 regionally focused sites across the US and Canada that crowdsourced and reported gas price information within local markets. This number would eventually grow to more than 250 sites including bostongasprices.com, sanfransiscogasprices.com, and so on. To sustain these websites and its free services to consumers, GasBuddy sold ads on its corporate and regional websites.”(Huang, 2018)*



(GasBuddy, 2019)

In 2010, they transitioned into a mobile app for iOS and Android smartphones, known as GasBuddy 2.0, which proved to be quite successful. However, it was still using pretty much its original design and infrastructure.

Then, in 2016, a new CEO was brought in to revamp the business. Walt Doyle transformed the app further still (GasBuddy 3.0) by adding a payment transaction system within the site called “Pay with GasBuddy”, which also offered user the opportunity to earn points towards a $100 gas card drawing. (Huang, 2018). At this point, the GasBuddy service was still free, but they struggled to cover costs and had to begin charging a premium for users. While the revenue generated from the subscription fee allowed them to further their business, the competition was still offering theirs for free.

The problem GasBuddy faced was that by the end of 2017 their active userbase was just over 2.2 million. (Huang, 2018). Without big changes, the company would remain stagnant in its growth. To do this they would need to broaden their horizons and explore several sales channels of opportunities; expanding their customer base to ensure future growth. The platform is already there so they would just be building on it. In that way, they are not starting from scratch. If GasBuddy is to maintain a sustainable and competitive advantage in the market, they need to make profitable changes - but without impacting their existing client base. The changes should be such that they have they have the infrastructure in place for expandability towards future endeavors such as exploring more of the international market and domestically related markets like auto repair facilities.

**Significance**

This project holds certain significance for me at various levels. The GasBuddy app itself appeals to me in general since as a family of four on a budget, we are always looking for cost savings on our expenses, particularly since my wife and I drive SUV’s and fill up at least once a week. Being able to quickly go to an app on our phones that tells us where to find the cheapest gas is a great benefit. Combine that need with the use of technology, such as a laptop or smartphone, plus GasBuddy, and you have a recipe for success.

I am also always impressed by startup companies that not only find a niche but experience rapid growth and success in a relatively short amount of time. In addition, that fact that it combines a means of saving money with the technology aspect of having mobile access to it from a laptop or smartphone interests me even more. Even still, there is always room for improvement and expansion.

I feel that such a company deserves continued success and growth. In order to do that, changes must be made to propel it to the next level. As a Networking and Communications major, the data storage needs, and security of customer’s personal information is of great importance to me as I move towards a career in IT. I would hope that the success of this project would illustrate my determination to make that a reality.

**Objectives**

The scope of this project is not huge, but not a minor one either by any means. The goal is to make changes to the app that are sizable enough to expand the user base and increase revenue, but not cost prohibitive. The main objectives of GasBuddy 3.0 will be the addition of certain filters and search functions for brand name gas stations and charging stations for electric vehicles. Next, will be a brand-new feature aimed at the commercial fleet vehicle market. Perhaps the most involved objective to accomplish is moving to a cloud-based platform for increased data security and expansion capability. This is not a complete overhaul and redesign which is why I believe this could be accomplished in the reasonable timeframe of less than 4 months.

**Deliverables**

One lucrative move in that direction is to incorporate charging station locations in the app. With popularity of electric vehicles like the Nissan Leaf and Chevy Volt, drivers would benefit from being able to locate the nearest charging stations and which ones offer the best rates. (Linkov, 2019). Next, would be to add a filter for Top Tier gas on the gas price map. Top Tier is the quality level that certain car manufactures recommend for their vehicles to allow for both optimal performance and warranty compliance. Top Tier gas is offered by the major gas companies, Mobil, Gulf, Shell, etc. (Top Tier Gas,2019).

Perhaps the largest profits could be gained by not only accommodating the everyday driver, but to branch out to large businesses as well. This would include truck fleet lines like Amazon, Sysco, Walmart Stores, Pepsi, Waste Management. A supplemental consumer-centric move would be to add additional security measures to ensure the confidentiality of user’s credit card information. One of the best ways to accomplish this would be to move the database to the cloud where it is secure from hacker intrusion. To do this, I will be enlisting Rackspace using an OpenStack platform for cloud services. (Brown, 2016)

At the end of the project, the main deliverables would be as follows:

1. Top Tier Gas map and charts

1. Charging Station locations and pricing
2. Fleet truck gas mileage dashboard
3. Cloud-based storage for users personal and credit card information

**Methodology**

In this project, the methodology and techniques I am using follow a two-tiered approach. First, we can perform a SWOT analysis, addressing GasBuddy’s Strengths and Weaknesses as well as potential Opportunities and the Threats they will face.

**S**trengths – GasBuddy has a strong, recognizable brand

**W**eaknesses – Scalability and Computing Power

**O**pportunities - Expanding GasBuddy’s market position into the business client area.

**T**hreats – Competition from other well-known apps such as Waze and GoogleMaps

Next, we need to organize the project development into clearly defined yet flexible steps. In this regard, the ideal project management methodology for this undertaking is Agile. While waterfall is straightforward, it is both time consuming and rigid in its approach. It requires the completion of each step before moving on to the next. The Agile methodology puts the emphasis on individuals and interactions. Separate teams work independent of each other and there is an open dialogue amongst the team members rather than orders being dictated from the upper-management members. The teams can brainstorm ideas and features and benefit from real-time feedback; not only internally but from customer feedback as well. (De Los Angeles, J, 2018)

**Risks**

As with any project there are risks involved that could impede its completion. The proposed GasBuddy project is no different when it comes to risks. The project faces the challenges of staying within budget, personnel schedule commitments, data security issues, and bandwidth issues due to increased customer base.

Below is a simple chart of measurable risks along with their downstream effect on the business, probability percentage, and impact levels.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| **RISK** | **DOWNSTREAM EFFECT** | **EXPLANATION** | **PROBABILITY** | **INITIAL IMPACT** | **EXPOSURE** |
| Project phases not being on schedule could have an adverse effect on the various groups involved. | 1.Performance 2.Cost 3.Capability | Timing of the project’s steps may not be adhered to due to any number of reasons. | 65% | 4 | 3 |
| If the personnel involved in the project change midstream it could affect the outcome of the project | 1. Performance 2. Cost | Scheduling conflicts, vacation and employees who are out sick could change the duration and flow of the project. | 70% | 4 | 3 |
| Lack of Data security if not maintained during the migration | 1. Security 2. Cost | Security must be maintained during the cloud migration or critical data could be compromised | 75% | 5 | 4 |
| Bandwidth and connection speeds | 1. Performance 2. Capability | The new system must be able to handle the added user traffic. Bottlenecks could slow down the app considerably | 60% | 5 | 3 |

These risks have operational consequences as well as business effects. Steps in the project to mitigate these risks will need be strictly adhered to.

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