System Analysis Proposal

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# A brief history of the organization:

Price Heating and Air is an HVAC company that was founded in 2015. It was founded by Brayden Price. In 2018, he quit his current full-time job to pursue a full-time career with his HVAC business. They are a family-owned and operated HVAC company that specializes in residential and commercial HVAC maintenance. Price Heating and Air serves customers all throughout the Shoals area and North Alabama.

# A description of the current system being used:

Price Heating and Air currently uses a field service management (FSM) system called Sera Software. Sera Software is designed with HVAC companies in mind to provide them with various services to help business operations. Sera’s services help Price Heating and Air identify efficiency gaps, manage scheduling and dispatching, and optimize their workflow all within the one service.

# Problem Statement:

The current system (Sera Software) that Price Heating and Air uses is riddled with issues that cause efficiency problems through unrefined UI and not offering their clients the services they pay for. For example, Sera Software is supposed to offer offline tracking for service calls when technicians enter areas that do not have cell service. This is not the case, however, as the technicians at Price have to manually enter their time and dispatch status due to the software not offline logging their calls. This issue has also caused Price to pay for a different service that can track their technicians when they go on calls. Another problem with Sera Software is that its UI can both confuse its users and delay critical actions with a lack of buttons with definite functions and hide certain actions in places around the screen instead of having them “up-front” for the user. One last issue with Sera Software is that if a technician claims and starts a service call, they are unable to quickly cancel said call without going through several pages on the website. To summarize, Price is paying for a service that wastes time for its employees and does not offer the services that they claim to provide.

# Feasibility Study:

**Economic**

Our project’s economic feasibility will be positive for Price Heating and Air. We aim to provide an in-house developed Field Service Management Software that will increase productivity, save on subscription expenses, and cut costs on operational inefficiencies present with the current SERA Software. Our estimated costs are as follows, development: $20,000, cloud infrastructure hosting: $5,000 Annually, and employee training: $3500. Our estimated benefit is as follows; it saves $9,000 a year (no subscription). Our breakeven point is set to take the firm 2.7 years to break even, this includes the price of training and cloud hosting. We believe that the benefits of this new system will help Price Air maintain financial health both in the short term and long term.

**Technical**

This project will require Price H&A to use cloud infrastructure to host the new application. This will be no issue as the SERA Software currently in use also utilizes the same method. The application will require a secure database, and well-designed web application/interface for both management and technician users. This approach will limit the need for IT/office staff as much of the work will be done on the implementation of the project. All infrastructure and server security will be maintained by the cloud service providers. Our risks include a need for user training and cloud infrastructure training.

**Operational**

The current SERA software causes inefficiencies for both the management and technician users. Our goal is to implement a completely new software solution that will grant users a better experience. We understand that many employees believe the UI of the current software to be outdated and confusing. We believe our proposed system will be able to meet user expectations, integrate with current timekeeping systems, and is overall a highly feasible operation that will allow Price Air a smooth system transition.

**Legal**

This project will require adherence to data protection laws and requires secure storage of both customer, employee, and call data. Any subscriptions for development tools needed for the development of this application will need to be licensed. All current subscriptions to current SERA software will need to be terminated and data must be transferred responsibly.

**Time**

Our timeline for the project spans over six months. We will set milestones for certain parts of the project. We will need to analyze our resources and decide where to use them in the timeframe we have set for the project. We will have a planned schedule, and this will ensure that our project is successful and achievable.

# **Project Proposal Conclusion:**

For our project, we are going to develop an improved FSM (Field Service Management) system. This system will be used for managing off-site workers and the resources they need to do their jobs. Our improved FSM will implement a more efficient User Interface that will provide better web navigation. Also, our FSM will have offline capabilities that work if you have no data service. For HVAC specifically, we want to implement a way for technicians to track part orders.