Roopairs:
Vision and Scope

Roopairs 2.0
Computer Science Department
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Contents

Credits

Name	Date	Role	Version
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Revision History

Name	Date	Reasons for Change	Version
Cesar Chacon	October 1, 2019	Initial version of Section 5.1, 5.2, and 5.3	1.0
Sarah MacDougall	October 1, 2019	Initial version of Section 1.1, 1.4, 2, and 3	1.0
Adam Berard	October 1, 2019	Initial version of 5.4	1.0
Eeron Grant	October 1, 2019	Initial version of Section 1	1.0
Tommy Bergmann	October 1, 2019	Initial version of Section 2	1.0

1 Business Requirements

1.1 Background

Restaurants and other small businesses sometimes need urgent repairs, and will call their usual service company. When repair services are available, owners may be required to wait an extensive time to receive said service. When repair services are unavailable, these owners must continue to search for alternative services, taking extra unnecessary time. The issue is that if they don't receive repairs quickly, they can face major damage to their reputation and massive revenue losses.

1.2 Business Opportunity

There is a potential market for creating an application that simplifies choosing and scheduling repair services for restaurants. By creating an interface for restaurants to effectively schedule services, owners will be enticed to use our product to reduce service delays. There are two fundamental issues to resolve within this market. Firstly, many restaurants face financial and reputation losses if they cannot find repair services fast enough. Since these delays may be urgent, our solution will help prevent a loss of revenue and reputation that could result from these delays. Secondly, many small service companies have restaurants as a small portion of their clients. One potential platform for our solution would be as an application for iOS tablets. Many small restaurants are using tablets for their business tasks such as for transactions, logs, and scheduling; therefore we have the opportunity to cater towards this trend and attract numerous small businesses.

1.3 Business Objectives and Success Criteria

BO-1	Develop an application that provides an interface that uses the Roopair API.
BO-2	Design a simple interface for users to easily interact with application that permits them to request services and view the status of service requests.
SC-1	The application successfully uses the Roopair API to request, schedule, and update the status of services.
SC-2	The application design is simple enough restaurant owners with limited amount of technical skill have a positive user experience with the interface.

1.4 Customer or Market Needs

CN-1	The API must be compatible for both desktop and tablets.
CN-2	The API must integrate with a pre-existing POS for restaurants.
CN-3	The API must have a simple user interface.

1.5 Business Risks

Currently, there are not any business risks.

2 Vision of the Solution

2.1 Vision Statement

Our solution is an application focused on integrating the RooPairs API with some pre-existing point of sales (POS) for restaurants. The main functionality of the application is to be able to send repair requests from the restaurant/apartment to a collection of trusted service repair companies who can reply with quotes for the job. This will provide a market of restaurants for repair companies that is simple to use and provides persistent communication. With our solution, the restaurant/tenant can send a request to fix, a repair company can send a quote back, and the restaurant/tenant can accept or decline that offer.

2.2 Major Features

FE-1	Application will use RooPairs API to send service requests.
FE-2	Application will schedule a service job only after confirmation of quote by service company.
FE-3	Application will save the service history of the user.
FE-4	Application will save equipment details for future jobs and requests.
FE-5	Application will charge invoices for completed jobs.
FE-6	Application will allow restaurants to view the status of current jobs and requests.

2.3 Assumptions and Dependencies

AS-1	The Roopairs application will be linked with the POS system.
AS-2	All users will have a Roopairs account linked with the POS system.
AS-3	Application will be compatible with POS hardware.
DE-1	Application must be compatible with the pre-existing Roopairs API.

3 Scope and Limitations

3.1 Scope of Initial and Subsequent Releases

Feature	**Release 1**	**Release 2**
FE-1	Released	
FE-2	Released	
FE-3	Not Released	Released
FE-4	Not Released	Released
FE-5	Not Released	Released
FE-6	Not Released	Released

3.2 Limitations and Exclusions

LI-1	TBD
EX-2	TBD

4 Business Context

4.1 Stakeholder Profiles

Stakeholder	**Value**	**Attitudes**	**Interests**	**Constraints**
Alex	CTO, knowledge on all technical aspects of Roopair	Engaged	Integrating Roopair API with POS	None
Ray	Understands company vision, insight on how POS client should be designed	Excited	Usability with POS in restaurants	None

4.2 Project Priorities

Dimension	Driver	Constraint	Degree of Freedom
Schedule	Should have a completed release by the end of quarter 3 in order for it be presentable for investors		
Features			Wants an application for the POS app store with its own UI and ability to take notifications
Quality			No measure has been set
Staff		RooPairs students have been broken up into 2 teams of 5, with Alex being the liaison for both	
Cost		Each student should spend at least 8 hours a week either developing or drafting documents	

4.3 Operating Environment

OE-1	The application shall use the RooPairs API
t OE-2	The application shall be able to be uploaded to the Toast marketplace
OE-3	The application shall be compatible with the POS hardware

5 Competitive Analysis

5.1 Overview

The restaurant repair industry has been long established with technicians and restaurant suppliers fulfilling the need. The problem lies in efficiency and the restaurant revenue lost when these technicians and/or suppliers cannot deliver in time. These competitors listed below have sought to improve this area of the industry or similar services. This section will focus on some existing solutions, their features, limitations, pricings, and potential to integrate with the proposed RooPairs project.

5.2 Competitor 1 - ServiceTitan

Platforms: Web, iOS, Android
Dashboard: Web version. Native to iOS and Android
Pricing: Free for Clients, Varied for Companies
Ease of Use: Easy

ServiceTitan is an all-in-one software for residential, HVAC, plumbing, electrical and other home service businesses. It aides technicians in running the workflow of their businesses by assisting with tasks such as scheduling, payments, dispatching, customer service, payroll, inventory and more. For example, a technician can schedule an appointment with a customer, take the payment once the service is done, sign the agreements of the service and create invoices for the customer to have all through this ServiceTitan's software. All of this is automated which saves the technician time to move to the next job/appointment and increase their revenue per year. Service Titan reports that customers increase their revenue by 25% on their first year of using their services.

Service Titan offers software for each of the specific needs such as Quickbooks, Intacct, Marketing & Reporting software, and more to maintain the business. They also offer services in their mobile platforms to help technicians complete their tasks while out in the field. Lastly, they also offer software for the technicians' customers to inform them exactly where the technician is and their estimated time of arrival to the work site.

It should be noted that some of the services that Service Titan offers clash with the services that RooPairs already has such as creating invoices or reporting. Service Titan does not have an open API that is available for integration into our project with RooPairs. Although the software does focus on service technicians, we want to focus more closely on the restaurant industry as opposed to home service businesses which inherently have different roles and needs. The main issue this entails is the integration of RooPairs with a POS system that is tailored to restaurants' unique needs, which is a feature that Service Titan does not have.

Although Service Titan focuses on a different side of the services industry, it should be considered a direct competitor with RooPairs services.

5.3 Competitor 2 - HouseCallPro

Platforms: Web, iOS, Android
Dashboard:
Pricing: varying monthly subscriptions
Ease of Use: Easy

HouseCallPro offers an automated way of both ordering and accepting jobs for servicemen/companies such as plumbing, electrical, home cleaning, window cleaning, and more. This company and service is very similar to Competitor 1 (Service Titan) described in the previous section. At the moment HouseCall

allows for technicians to schedule their customers directly on the website, take payments while out on the field with a 2.69% processing rate, and manage the finances and paperwork. On the customer side, HouseCall tries to boost customer loyalty by sending automated text messages, reminders, marketing and invoicing, and more in the mobile app.

There seems to be no open API that is available for integration into our RooPairs project, although this service does offer some of the same services such as invoicing and managing paperwork for the technicians. However it lacks any POS integration that suits the needs of restaurants. HouseCall Pro is a newer company and does not seem to be a strong competitor at the moment. Changes in this company could impact competitor analysis as well as the potential integration into the RooPairs project.

5.4 Competitor 3 - ThumbTack

Mobile Platforms: webApp, iOS, Android
Dashboard: webApp, iOS, Android
Pricing: Free for Client, Varying Cost for Company
Ease of Use: Easy for Client, Easy-Medium for Company

ThumbTack is a similar website to both Competitor 1 (ServiceTitan) and Competitor 2 (HouseCallPro) with the difference being the main customer focus. ThumbTack organizes itself like an Amazon of service repairs. The main page asks what you need, and after that will show you a list of potential servicemen that can perform that task. While ServiceTitan seems to cater more to the service side of business, ThumbTack caters more to the client's side of business.

ThumbTack works by connecting people and service companies with local, although sometimes not very close, clients. When a client searches or requests a job, the service companies have a choice to provide a response or extend their bid. This costs a certain amount of proprietary currency that the service companies have previously bought through ThumbTack and the cost of each bid depends on the potential profit from the job. Instant responses are an option but can be quite costly since they happen automatically and the lead isn't always viable.

Reviews of ThumbTack from the customer are positive about half the time, with complaints being a lack of responses from servicemen, and the positives mostly having to do with how easy it was to use and find many different potential options. The reviews from servicemen, however, are overwhelmingly negative and have mostly to do with the high cost, or how often leads that seem viable end up falling through.

ThumbTack is not a direct competitor with RooPairs, but it is in similar market space. ThumbTack caters more to household everyday people as its users, while RooPairs (at least for now) is focusing on the restaurant market space. ThumbTack does have service companies that can do restaurant repairs, but it is quite apparent that their main user is somebody at home looking for

repairs or services having to do with household appliances rather than restaurant grade kitchen appliances.