Introduction

There are ten general steps in the coffee supply chain: growing, picking, processing, milling, roasting, packaging, shipping, grinding, brewing, and drinking. Our company handles the milling process. The milling process is where the dry coffee becomes ‘green coffee’ beans. When our customers receive our product, the green coffee is at the optimal point for roasting. Continuing its way through the coffee supply chain, until it ultimately ends up in a coffee cup. The system we are developing will focus on the business requirements to support the milling and distribution of beans. Our company receives processed beans from suppliers in Brazil. Once the beans are received into our inventory, the milling process will begin on site. Following the milling process, the beans are packaged for distribution for our customers. The scope of our project will be an IT-solution to support our inventory and receipt processing.

Stakeholders

We operate a relatively small coffee distribution company, with stakeholders being primarily internal. These stakeholders include our company’s founders, our current employees, as well as our customers and suppliers. Our founders have invested time and money into this company to make it what it is today, a small yet rapidly growing coffee bean distribution company. The founders view this project as a priority, and a necessity to ensure customers satisfaction during this time of rapid growth. Our employees are also stakeholders in our As-Is system , as they are the individuals who are having the most interaction. There are three different categories that our employee stakeholders fall into, this is based on which part of the supply chain they are working in. The employees that will be most impacted by this new system are those working within the inventory and billing department of our company. They are most impacted because our system is creating a better way of tracking inventory and receipts.

Employees that are also impacted are those who work with our suppliers, processing orders for beans. They are affected because our inventory systems will be updated and share connectivity with our customer orders. The As-Is system is no longer adequate for tracking our inventory, due to the dramatic growth in our customer orders. Our Brazilian suppliers as well as our customers who receive our milled beans for roasting, represent external stakeholders for our As-Is system. These stakeholders are impacted in a similar way to our internal employees, as they are all members of a common supply chain. We expect with the implementation of our new system, both our internal and external stakeholders will be better served and welcome the changes.

Issues within the organization and/or with the system

The greatest issue facing our company is we are lacking an adequate tech solution for our order processes. Our company is small but is growing at an unprecedented rate. This is causing our employees to lose track of orders, payments, receipts, and inaccurate inventory recordings. Thus far we have had manual inputs of orders, payments, receipts, tracking logs, and inventory levels. This is causing unnecessary stress on our employees who could be directing their time towards customer service. A new automated system will alleviate these problems, reduce the time required, and bolster the productivity of our company.

The first issue we are facing is how we will create this new system, and what we need the system to do. We know a module of the new system needs to receive the orders from customers, accept the payments, then send and save receipts. The next major module of the system will be to track order fulfillment. The system will need to make sure that we always have sufficient quantities on hand to fulfill orders. One of the ways that can be accomplished is if the inventory and ordering modules are linked. Every time an order is placed, the system will automatically

update/decrement the inventory. When inventory levels are approaching reorder points, the system will send an alert to staff to order additional stock. As orders are received, the system will send out an alert to our staff to prepare the requested beans for order. To ensure no orders are lost, our system will establish tracking ids for every order placed. Once the order is shipped, the tracking id will be provided to both the customer and a member of our staff. Finally, we want the system to send confirmation to our staff once the order is fulfilled. At that point, we process a bill for collection and prepare a payment receipt, as well as delivery confirmation to our system. All these modules, once linked, will provide a reliable, accurate, tracking system to support our growing enterprise.

Interfaces

The focus of this project is to create a better system for inventory and receipt tracking for our company's coffee milling and distribution processes. Throughout this process our system will interact with many different entities in our overall system. First, our system will have a customer interface that allows our customers to see their order receipts and a predicted date of delivery. Different features within this interface will be payment acceptance, inventory updates, receipt information, and order information. The second interface will be between our system and our suppliers. This stage consists of interactions with our distributors, those who supply our beans, which will decide our inventory levels. This process is not inherently tied to the system we are building. However, we will be creating reorder points so we may properly record and track inventory changes. These increments and decrements will be linked to the reorder points and reorder quantities within the inventory system. The most important interface for this system will be our inventory levels. We are creating an improved system for our inventory and receipt

tracking; therefore, inventory stock will hold the utmost importance. This interface will also be impacted by interactions with our customers and suppliers, the first decreasing it while the latter increases it. These interfaces will allow our new system to have a successful transition and sound implementation within our current infrastructure.