Vision and Scope Document

for

Auto Track System

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Business Requirements

The business requirements will indicate the information of our client's company and proposes the vision of the automated order processing system for his vintage record shop in the University district.

1.1. Background

In the Bongo Roberts's vintage record shop, all sales and inventory management are recorded on paper or implicitly marked in head. However, as more customers come in and the business expands, it is impossible for Bongo to remember every piece of sales or know where each record locates. If he continues to adopt this method for managing its operation, a number of potential risks will involve. For example, there is a high probability that there would be mistakes recorded in the spiral notebook or forget some sales history. Another problem is that once hundreds of pieces of sales/inventory information come in, a transaction of $140 might be recognized as $160. The records for inventories and sales will be messy. Moreover, when the customers ask for a specific record, and Bongo cannot find for it because the records in store are disorganized, which might make customers run away. If these types of mistakes frequently happen, a significant discrepancy will appear on its according records and hamper its future development. All these hiding issues lead to the need for an automated order processing system, not only for avoiding these problems but also improving the operational efficiency.

1.2. Business Opportunity

The automated order processing system is intended to help Bongo's record shop to catch following opportunities:

- Retrieve the online requests from buyers faster and automatically update on the system
- Make the sales and inventory records organized and make better use of capital in hand.
- Build a solid relationship with current customers and expand the customer pool.
- Discover what customers are looking for recently and provide what they want.
- Provide the reference of price setting from Bongo's competitors and help Bongo set. price more appropriately with the comparison.

1.3. Business Objectives and Success Criteria

The automated order processing system is designed with the following business objectives:

- Eliminate the occurrences that Bongo cannot find the records in stack.
- Clearly and accurately record/update all the sales and inventory changes.
- Provide reminders / warnings when the inventory is too low.
- Connect the Bongo's shop and customers closely. This goal is implemented through interaction between these two parties. The system allows the customers make requests online and leave comments to the shop.

- Decrease storage cost and maintain appropriate amount of inventory in stock.

The effectiveness of this system will be assessed through the following ways:
Note that the measurements are corresponding to the business objectives above, respectively

- Less than 3% of probability that he cannot the records.
- Regularly make a physical count assessment weekly and check if it matches the records on the system. It is expected that the discrepancy is less than 2%.
- The system allows the user to set the minimum level for warning. Once the amount of inventory is lower than that preset value, it will send a warning report to the user.
- Record the time to deal with customers' requests. It meets the goal if it processes 95% of requests within one day.
- Calculate the inventory turnover and compare this ratio with the pre-determined ratio in mind.

1.4. Customer or Market Needs

Bongo currently did not use computer system to record business operation but record on paper or in head, which will be easy to cause errors and be not organized. Once the sales increases tremendously, all records will be in mess-up and cannot be searched handily. The ultimate aim of our system is to help customers improve solve customers' problems:

- ***Problem that the customer is facing:*** Bongo might forget to record some of sales
  How our system helps: The system delivers convenience to the users. Bongo can scan the sold item into the system, and the system will update the inventory automatically.
- ***Problem that the customer is facing:*** Bongo might have typos when he records data of sales or inventory
  How our system helps: The system provides accuracy for recording through barcode reader and allows modifications. The system tracks the sales and inventory accurately using its algorithm once the information has been entered.
- ***Problem that the customer is facing:*** Bongo might not able to find a sales record on a specific date of the history on his spiral notebook because of too many sales data.
  How our system helps: The system provides "search" function for him to handily search any history by date, by amount, or by item.
- ***Problem that the customer is facing:*** When the record buyers make requests to Bongo, Bongo might write it done but might forget later.
  How our system helps: The system documents all requests together and shows the status of which have been done and which are waiting to process.

In general, the system provides an easy-to-use interface for customer to step in and allows users to maintain data through adding, modifying, sorting, deleting, etc. Moreover, every time the purchase is completed in short, the user can either record by tying information into the system or scan the barcode of the product by using a barcode reader. In short, the system is just a software program. To make the system works in the daily operation, the user needs several sets of a computer to install the program, a barcode reader to scan the product's barcode, and a printer to print the receipt or records.

1.5. Business Risks

All software systems, including our automated order processing system, bring with potential risks to customers and are impossible be perfect. Here is a list of potential risks that might exist in this project：

1. **Risk: Low User Acceptance**
   Severity: The customers might not get used to the system once the system is implemented. In other words, it would take a period of time for them to learn how to use it. If the users cannot accept the system, then they will give up the system. Then, this project will become a failure.
   Mitigation action: The provider should provide enough tutoring for users. The system also should not be designed to be too complicated.
2. **Risk: Increase Cost in the Short-Run**
   Severity: The implementation of the systems will require the user to set up the hardware environment, which increases the cost. Moreover, when the users learn to use the system, the efficiency at the early stage might be low or even lower than before.
   Mitigation action: Allows a transition or a testing period for users to get used to it.
3. **Risk: Cannot meet customer's expectation**
   Severity: If what the system provides at completion cannot meet their expectations, then it means this project is useless.
   Mitigation action: Seek for discussions to ensure that the customers' requirements are fully understood.
4. **Risk: High maintenance cost**
   Severity: If the features cannot be universal enough, or the system always create errors, then it will take a high cost to modify the program and debug.
   Mitigation action: Actively have communications with customers at the early stage to learn about what potential features they might need in the future.

2. Vision of the Solution

2.1. Vision Statement

For employees who need to operate purchases and sales of the records, the Auto Track System is an internet-based information system that will provide access for users to manage inventory in a steady flow, control pricing, track purchases and sales, satisfy customer requests and establish good relationship with customers. This system will save the company about 20% on costs by allowing the company to seamlessly integrate the order processing and inventory management process, building long-term customer relationship and achieving higher efficiency. Unlike the current manual order and inventory control system, our product will be able to reach all the order and inventory information instantly from the database and help fast locate the inventory with reasonable price as reference.

2.2. Major Features

This section presents the feature set of the system. The major features include:

1. Create, view, modify and delete item information including type, price, discount range, condition, etc.
2. Create, view, modify and delete customer information including name, email, contact number, purchasing and selling history.
3. Create, view, modify and delete customer request.
4. Establish transactions and record orders with price and volume based on the online order.
5. Categorize customers and send subscriptions based on purchasing and selling history
6. Keep track of inventory flow and remind/warn staff to restock.
7. Provide different level of system access through corporate intranet by authorized employees.
8. Search and present the items in stock in order.
9. Provide reference price when new item is bought by presenting prices for similar records and past price for records in inventory.
10. Set up a friendly interface and provide guidance for users when necessary.
11. Request information about total purchases and sales in selected periods such as weeks, months and years.

2.3. Assumptions and Dependencies

To ensure the project can be successfully implemented, we need to identify the assumptions and dependencies for the project so that different parties involved share the same understanding during the project implementation.

Assumptions:

1. The shop already has an online request website that allows customers to check their item availability and pre-order the item before the employees record it on book.
2. The system will replace the existing manual order and all the operations will be conducted within the system.
3. The developers will remain committed to developing the project and software tools to satisfy the project needs.
4. The employees will check the notification from the system within 10 minutes to ensure that new information will be captured instantly.
5. The budget estimated for the project is sufficient and will be able to support the project to its successful delivery.

Dependencies:

1. The system is internet-based so internet-enabled computers will be available in the shop to allow the staffs to access the system and get instant and synchronized information.
2. The development team will be able to provide adequate resources to ensure the successful delivery of this project.
3. The shop will provide barcodes for each record in stock so that each item can be scanned and the system will display the information.

3. Scope and Limitations

Based on the practical situation and resources available, it is obvious that all of the major features will be achieved at the same time. Therefore, in this section, we will further divide the features and realize part of them in the initial release with the rest of the features realized in subsequent releases.

3.1. Scope of Initial Release

The initial release will cover the basic features for the system to work on the fundamental basis which include:
1. Create, view, modify and delete item information including type, price, discount range, condition, etc.
2. Create, view, modify and delete customer information including name, email, contact number, purchasing and selling history
3. Create, view, modify and delete customer request
4. Establish transactions and record orders with price and volume based on the online order.
6. Keep track of inventory flow and remind/warn staff to restock.
7. Provide different level of system access through corporate intranet by authorized employees
8. Search and present the items in stock in order
10. Set up a friendly interface and provide guidance for users when necessary.

3.2. Scope of Subsequent Releases

The subsequent release will add more value-added features and further integrate the system. The following features are those which will achieve in the subsequent releases according to the list of major features:
5. Categorize customers and send subscriptions based on purchasing and selling history
9. Provide reference price when new item is bought by presenting prices for similar records and past price for records in inventory
11. Request information about total purchases and sales in selected periods such as weeks, months and years.

3.3. Limitations and Exclusions

This section identifies desirable features that might be anticipated by customers and stakeholders, but are outside of the scope of this project:

1. The system will integrate with all the work office computers only. It is not allowed to access the system with other computers outside.
2. The system will not replace any existing communication like phone or email. The staffs and managers are still able and encouraged to communicate with customers using phones or emails even though some subscription emails will be sent.
3. The system will be only limited to track the purchases and sales of the vintage records.

4. The system will only be able to provide several referential prices for new item. Setting the final price of the item is still the manager's decision. The system cannot set it automatically.

4. Business Context

This section summarizes the business issues around the project including stakeholder profiles, project priorities and operating environment.

4.1. Stakeholder Profiles

Within the Bongo's business, we have assumed the following stakeholders and their value and constraints here.

Stakeholder	*Major Value*	*Attitudes*	*Major Interests*	*Constraints*
Staff	Improved productivity;	Receptive when the system can lower their workload; but may concern about possible downsizing	Job security; less workload	Training for staff in system usage needed
Manager	Reduce rework; streamlined business process; manager customer relationship	Receptive because the system will provide better management of the inventory and order; but may concern that his/her work will get replaced	Job preservation; concerns about the cost brought by the software system versus the benefit it would deliver; roles of other employees	Not enough budget and time to train all the employees;
Shop owner	Monitor the shop	Highly receptive since the software system will save money and increase revenue	Concerns about maximizing revenue , minimizing costs and how to retain current customers while attracting more new customers to grow the business	Cost of the implementation
Project Manager	Improved productivity; reduce costs;	Very glad about the system since it will provide great benefits and faster interaction with clients	Efficiency of the project; the difficulty of implementation	The system's compatibility; Time (Schedule for the project)
Customers	Bring sales;	Highly receptive about the product because it gives more convenience	Ease to order; user-friendly interfaces;	Budget constraint for consumers
Inventory monitor	Improved productivity; cost savings	Receptive because the system helps manage inventory in	May concern about the job preservation	The time it takes for the monitor to find the item

		more details		is almost unchanged

4.2. Project Priorities

Dimension	Driver (state objective)	Constraint (state limits)	Degree of Freedom (state allowable range)
Schedule	Release 1.0 should be available by, and release 2.0 three months after 1.0		
Features			At least 70% of high priority features must be included in release 1.0
Quality			At least 90% of user acceptance tests must pass for release 1.0, 95-98% for release 2.0
Staff		The team size is 4 developers and 2 part-time testers. But the project manager will also be prepared to add more developers or testers if the project needs more time.	
Cost			Budget overrun up to 10% acceptable without executive review

4.3. Operating Environment

Potential users in the system are only employees and staffs in the shop using the computers provided by the shop. Users only access the system when they are on duty in the shop. The data about inventory is generated during there are new records put in stock. Information about each record should be recorded in the system and a reference price for the record should be set. The data will be used when there are requests about the inventory or when there are transactions happening. The users can tolerate service interruptions in a short time but it is not acceptable for a long time period. Customers will complain if the processing time is too long. There is specific access control for the system where manager and owner of the shop can have full access to the system including tracking inventory records and setting the price or discount. However, as for employees who work in the shop, they have limited access to setting the price and tracking all the inventory as well as costs and revenue for the shop. Employees can receive orders and finish the whole ordering process.