**Root Cause Analysis for Ecommerce Businesses**

**Section 1. Symptoms**

1. Processing items is a time taking task (sorting and identifying items)
2. Listing Ebay Items takes on average 10 minutes
3. Long turn around times (time from ordering item to listing it) due to inefficiencies in processes
4. Hard to keep track of financials / profitability

**Section 2. Problem Chain**

* Symptom 1:
  + Have to manually identify items found in recently purchased inventory box
* Symptom 2:
  + Ebay site is slow
  + Listing involves a lot of clicks: from getting draft started to listing item
  + Finding the listing price and appropriate title of an item takes a lot of time due to the research necessary
  + Adding photos is inconvenient and takes additional time (have to open draft in phone app or download photos on to pc)
* Symptom 3:
  + Bottle neck in listing / not listing items fast enough
  + Inventory coming in is not tracked well. Inability to keep track of items that have to be listed in an efficient manner.
  + Buyer returns increase turnover time
* Symptom 4:
  + No unique product identifier to keep track of when and for how much item was sold for
  + Need to keep track of inventory remaining and be able to estimate its price

**Section 3. Root Cause(s)**

**Root Cause 1**: No central system to keep track of current inventory.

* 1. Can’t track individuals items (can’t track profits)
  2. Hard to see what else you need to list

**Root Cause 2**: Ebay Listing process involves a slow system and a lot of manual repetitive tasks.

**Section 4. Summary of Potential Solution(s)**

1. **Resource Management System For Ebay** - Creation of a new web app that will allow for automation of new inventory entry and has custom bulk listing tools for ebay. This will also allow for greater inventory tracking and profitability analysis of a particular purchase.

**Section 5a. Solution: Resource Management System For Ebay**

* **Objectives**
  + Build a draft with relevant manifest information to list
  + Deploy ebay drafts from web app
  + Automate process of adding new inventory to system
  + Check if items have been listed or not
  + Be able to calculate profitability for a purchase
  + Generation of reports
  + Have a responsive and user friendly system
* **Performance Criteria**
  + Number of items bought vs Number of items tracked automatically
  + Latency time of system to go from manifest into tracking database
  + Accuracy of listing from manifest gathered information
  + Latency time of system from manifest point to listing point
* **Constraints**
  + Schedule: Have at max 12 weeks to complete project (ideally 5 - 6weeks)
  + Budget: Couple hundred dollars at max
  + Development Knowledge: For a project of this scale the developers are learning a lot of skills as they go
  + Reliability of ebay API
  + Database size (not a big concern if using NoSQL)