Team RMAD

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Requirement Gathering

Requirement categories:

-Business Requirements ★

-User Requirements ★

-Functional Requirements ★

-Nonfunctional Requirements ★

-Implementation Requirements ★

\*Colors are corresponding to tagging to the requirements

**Data Requirements/Business Driven Needs:**  
To track and to inventory shipping and receiving parcels. This would increase efficiency of a business from the tools provided in the system - this will ensure that packages arrive on site on time, to plan accordingly for business meetings (i.e. laptop deployment at another site), track time sensitive packages for projects (i.e. cloud service hardware), ensure what is coming and going (for returns, RMD, arrivals, sending off).

**Legal Requirements:**   
The project will be using the MIT license as an open source license to dictate the terms and conditions that come with the use of the open source software.

* ★★★ Must

Parcel tracking and notifications, sending tracking information to the user (tracking number, location, carrier, extra information)

* ★★★ Must

Emails updates when the carrier provides extra information during transit (whether it's shipped, delayed, where it is in transit, when its arrival). This will include CC’d individuals. Be able to securely delete emails from its mailbox.

* ★★ Should

Create a local database (with organization of carrier or date or delivered/transit) of packages if an external one isn’t provided

* ★★ Mus

Validate tracking number received

* ★★ Should

Local Database should be able to be exported easily for auditing

* ★★ Could

Database should have a backup cycle to ensure data integrity (in case of loss or need to be respun).

* ★★★ Won’t

If there are several local hosts with the same database, able to sync up with one another in one localized server/database.

* ★★★★ Should

Search function in the database for lookups for inventory check. Option to send search/history of a package to be sent.

* ★★★ Must

Config file that should contain all of the information needed to run the process. This includes email server credentials and information, database location, type and credentials, deliver Time check intervals per tracking time left, “dwell” times for database entries, carrier information.

* ★★ Should

Integrate the email server to be able to send information to the database, or set up a database integration that can create an entry from an email that is flagged to be added into the database/create entry in the database.

* ★★★ Must

Customizable notification system - should be able to customize the frequency of the email updates. Can make reports of how many emails are sent - whether that’s been x events and send an email, or email every x many days, or send in real time as it happens. Customize carriers in groups and emails.

* ★★★ Could

Adds arrival dates to a calendar (Google, or personal)

* ★★★ Must

Create user roles to ensure security (administrator, editor, reader)

* ★★ Could

Provide inventory for business and organization for businesses that interact highly with vendors.

* ★★ Could

Specify prioritized packages, or packages you only want to hear from.

* ★ Must

Self-hosted container

* ★ Should

Relatively easy to set up and use - this needs to be either an installer or very straight forward with documentation as our users can vary from technical to non-technical (small artist business owners, non-technical business departments, personal users)

* ★★ Could  
  System obviates hardware concerns.low-impact program, can be usable by any desktop of any hardware capability.
* ★★ Should  
  Clear documentation for setting up, management, database utility and security suggestions of local systems.
* ★ Must  
  Menu interface - user will enter login screen, once logged in, will have a clean and simple dashboard that views current tracking information and several links/buttons for customization, emailing, editing database, accessing database, etc.

Use Stories

**Use Case 1:** Small Business Owner, i.e. Etsy Shop Owner. This entity would benefit from having an interface to track their packages and purchases. As a shop owner, they would want to have a list of products that must be shipped out, currently in transit, and arrived. This entity should have information on hand should customers lose information, report a missing package, or a package has not been sent out yet. This also could serve as inventory and sales statistics, as well as cost analysis of shipping and how much has been shipped and where.

**Use Case 2:** Warehouse Manager/Logistics Company. This entity will be able to have an efficient and accurate way of tracking all parcels and their checkins in their warehouse locations during transit. This will help truck drivers/transit drivers as well as their managers on expected locations for their parcels.This would also help with understanding delays during travel because of weather, traffic, or otherwise, and convey information to vendors/customers.   
  
**Use Case 3:** IT Director, deploying and upgrading tech in a corporation. This entity would operate using tracking shipments, for accurate deployment, synchronizing meetings deployment, time sensitive material and/or parcel before leading the project forward. This would serve as inventory of assets and pending assets from separate vendors, organization of vendors, organization of parcels for different departments and employees, follow up analysis for shipping information based on status of the package  
  
**Use Case 4:** The Personal User, aka, You and Me. The average user can use this program to secure a package that arrived safely. With the pandemic, there has been a rise of package theft. If a user purchases an expensive and important item (smart phone, VR equipment, etc), being up to date with when and where the package is informs the user to be present when the package is dropped off and received without concern.

**Use Case 5:** Financial Officer. A financial officer would be able to track shipping information to properly budget package/resource cost for each department. This would allow for accurate representation for the cost/personel spent for projects within a given budget. This will also track the costs of shipping, or if the company is a vendor, how much has been shipped out and not damaged or lost in transit.