

# PROJECT PROPOSAL

## Hubba

Version 1.0

Prepared By: Development Hell

Class: CECS 491A-04

Date: September 23, 2022

[Github Repository](#)

**Team Leader**

Kevin Dinh

**Members**

Garrett Tsumaki

Bryan Tran

Jett Sonoda

Tien Nguyen

Darius Koroni

# Table of Contents

<b>Table of Contents</b>	<b>2</b>
<b>Version History</b>	<b>3</b>
<b>Glossary</b>	<b>4</b>
<b>Introduction</b>	<b>5</b>
<b>Project Description</b>	<b>6</b>
Value	6
Project Scope	6
Product Scope	6
App Features	7
<b>Competitors</b>	<b>12</b>
<b>Delivery Timeline</b>	<b>13</b>
<b>Vision</b>	<b>14</b>
<b>References</b>	<b>15</b>

## Version History

Version	Overview	Date
v1.0	Initial Hubba RFP	September 23, 2022

## Glossary

Term	Definition
Host	Authenticated users who create a listing available for renting.
Listing	A product created by Hosts that are discoverable and rentable.
CAPTCHA	A verification method to prevent non-human entities from accessing the service.
User	Anyone who is using the service.
Authenticated User	Any user who has registered an account, verified their email, and is currently logged into that account.
Banned user account	A user who is flagged and restricted from certain features of the service.
Event	Any type of actions within the service that may be logged.

## **Introduction**

A majority of people have property that they do not use constantly. Some own private workshops, non-living spaces, tools, large properties, etc. that go unused for days, weeks, or months, depending on the owner's other commitments. The time these properties sit unused is potential money and time wasted.

There are also those that need these types of things, but don't have the money or space to justify full purchases or long term commitments. People who want to do woodworking, but don't have the money or space to buy and/or horse large woodworking machines; people who want to do electrical work, but don't have access to the equipment to assemble and test circuits, even people who just want to host private events need what they need only for short periods of time.

The ideal situation is to help those who need these items or locations for short amounts of time to find those that have them. With this, those that have would be able to make some cash on the side renting out unused property, those that need can use the locations, tools, or whatever they need for as long as they need, and there less wasted time and money on both ends.

# **Project Description**

## **Value**

Hubba is intended to bring together those that have things that they aren't using and those that need those things. These types of services are oftentimes currently mixed into classifieds, a sea of useless text and unknown sources. Our intent is to create a single place to list, find, contact, and rent out whatever product is needed, whatever that may be on a convenient and trustworthy platform.

## **Project Scope<sup>1</sup>**

### **Application Type**

Hubba will be a Single-Page Web Application which allows for the majority of processing to be done on our servers rather than a user's device, increasing accessibility. Hubba also aims to adapt to mobile device platforms, hence Single-Page Web Application provides the best flexibility in the future.

### **Supported Culture**

Hubba's initial release will be in California for product testing, monitoring purposes, and to ease the product into the market. The localization of the application will be in US English and the Imperial System of measurement to fit within .

### **Supported Client**

Hubba will support the Google Chrome browser (version 104.x (64 bit)) due to its majority share of popularity among internet browsers, currently 65.2% of the world's population (Turner, A. 2022<sup>2</sup>). This ensures the greatest amount of support in its initial implementation.

### **Target Audience**

Our platform targets individuals who lack access to tools and spaces they would otherwise be unable to procure on their own. From woodworking shops, to ballrooms, to power drills any space or tool is available for rent from one user to another. This platform is intended to be based in California and restricts user age to be 14 years of age or older. In the case of a minor, a guardian must be present to utilize our platform.

## **Product Scope**

Hubba as a complete application will include the following features and their scope:

---

<sup>1</sup> As recommended by Vong, along with alterations recommended by Vong.

<sup>2</sup> Turner, A. (2022). *How Many People Have Smartphones Worldwide?* BankMyCell

## App Features

### **Scheduling System**

The Scheduling System is to provide all users a clear view of the availability of a particular listing. A calendar view will provide an unambiguous visual to users rather than any other view, such as a listview, displaying a mess of dates and times. From this feature, authenticated users will be able to rent and add a listing to their cart for the time and date they selected.

#### **Scope**

- Can configure calendar view
- Calendar must initially be set to the relative time of the user
- Users can view all time periods for a listing
- Users can only set filters for valid time ranges
- Users can filter their calendar view
- Authenticated users can select an available time period for a listing
- Authenticated users can rent a listing with a verified payment method

#### **Implementation**

- Authenticated users can rent a listing for one-time or recurring
- Users can filter by time ranges and days through inputting a date range or by clicking the available days within the calendar
- Time ranges will be to the nearest following hour
- Time ranges and days are auto-updated per hour
- Changes to a listing's availability auto-updates the Scheduling, Listing Profile, and Discovery systems
- Authenticated users can add the listing to their cart or rent the single listing immediately
- Authenticated users can select one or more available time periods for a listing

### **Discovery System**

The Discovery System provides a unique interface for users to find and rent listings of interest. This feature includes a search function with the ability to add filters to modify a user's search query results. If the user is authenticated, the service will accumulate a user's past search data to provide targeted listings of their interest.

#### **Scope**

- Can configure filter/sorting of the list
- Can configure the view of listing
- Users can input text into the search bar
- Users can filter/sort their search query
- Users are provided with a list of listings relevant to their search query

#### **Implementation**

- Auto-suggestions in user's search query
- Each listing on the list will display:
  - Summarized description
  - Default picture

- Distance
  - Average rating
  - Price (based on next available time period)
  - Next available time period
- Users can complete their search through various methods
- Users can apply one or more filters
- Changes to a listing's availability auto-updates the Scheduling, Listing Profile, and Discovery Systems

## Account System

The Accounts System allows users to unlock certain features within the app to allow the authenticated users to schedule, rent, and create a listing providing the necessary information for each feature. All users will be able to sign up for an account with Hubba.

### Scope

- Can configure password encryption method
- Can configure user authentication login methods
- Users must make an account in order to rent a listing and list their own
- Users become authenticated users upon account verification and login
- Authenticated users can delete their account
- Users can log in to an account
- Authenticated users can log out of their account
- Authenticated users can reset their password
- Authenticated users can add and update their account information
- Authenticated users can filter/sort their search and rental history
- Authenticated users can view their search and rental history
- Authenticated users can cancel their rental

### Implementation

- Usernames must be unique
- Passwords will have requirements to be valid
- Account registration has the required fields:
  - Username
  - First Name
  - Last Name
  - Email
  - Password
- Users can login through email or username
- Users can use their username or email to reset their password
- Users will be prompted a CAPTCHA upon multiple login attempt failures
- Authenticated users must complete a given prompt before account deletion
- Account deletion will wipe all account information and activity after a TBD time period
- Authenticated users can apply one or more filters
- Authenticated users can cancel their rental with a fee
- Non-host authenticated users will be refunded for their cancellation



## Listing Profile System

The Listing Profile System provides relevant information for a particular listing. Hosts will be able to easily create a public listing for authenticated users to rent. All users will be able to verify the quality of the item listing through public ratings and comments on the listing. Authenticated users will be able to provide their rating and comments anonymously through a five star system.

### Scope

- Can configure valid file type
- Can configure valid file upload size
- Can configure listing type
- Can configure listing template based on type
- Can configure limit of files per listing
- Hosts can add, edit, and remove a listing
- Hosts can save a listing as a draft
- Hosts have required fields when creating a listing:
  - Description
  - Address/location
  - Image
  - Price
  - Availability
- Hosts can link an item listings to a venue
- Users can view a listing
  - Description
  - Rating(s)
  - Distance
  - Price (based on next available time period)
  - Image(s)
  - Next available time period
- Authenticated users can provide a comment along with their rating on one to five rating scale
- Authenticated users can be displayed as anonymous within their rating
- Users can filter/sort previous ratings and comments
- Users can view a breakdown chart of each rating
- Users can report a listing

### Implementation

- Auto-retry file upload if failed to upload
- Hosts can publish a listing one at a time
- Hosts can specify:
  - Availability time range (in local timezone)
  - Price rates per day or recurrent prices
  - Available listing quantities after creation
- Changes to a listing's availability auto-updates the Scheduling, Listing Profile, and Discovery systems

- Authenticated users must have a previous renting history with a given listing before providing a rating and comment
- Hosts can link an item listing to a venue one to multiple at a time
- Users will have the ability scroll through item listings within the Listing Profile system
- Users can apply one or more filters

### **Payment System**

The Payment System provides authenticated users with a safe transaction between two users using the service. Once an authenticated user has scheduled to rent a listing, they will be able to add the purchase to a cart or immediately rent out the item. After the user selects and fills a payment method form, users are able to save their payment methods for future use.

#### **Scope**

- Can configure valid payment methods
- Payment method will be verified
- Authenticated users can store a payment method after verification
- Authenticated users can checkout multiple listings within their cart
- Hosts will be paid through the platform

#### **Implementation**

- Authenticated users can add and store one or more payment methods
- Authenticated users need verify their payment method through a transaction
- Authenticated users will pay through the platform, to which the platform takes a cut
- Host payment will be made through bank accounts once the rental time period starts

### **Notification System**

The Notifications System keeps authenticated users up-to-date with any relevant events. As the platform grows, more notifications are bound to flood the system. Authenticated users can avoid being spammed by disabling certain notifications as well as filter and sort in order to find relevant notifications.

#### **Scope**

- Can configure notification methods
- Can configure notification types
- Authenticated users can configure notification methods
- Authenticated users can configure notification types
- Authenticated users can filter/sort notifications by notification type
- Authenticated users should be able to read and clear a notification

#### **Implementation**

- Authenticated users can save one or more notification methods
- Authenticated users can apply one or more filters
- Authenticated users can clear multiple or all their notifications

### **Messaging System**

The Messaging System provides authenticated users a secure and convenient communication channel with a host. Any additional information needed can be discussed or displayed through pictures or different files.

**Scope**

- Can configure valid file type
- Can configure valid file upload size
- Can configure message encryption method
- Authenticated users can create a direct message channel with a host
- Authenticated users can send and view messages
- Authenticated users can upload and download a file

**Implementation**

- Authenticated users can manually retry sending for files that fail to send
- Authenticated users can upload one or more files at once
- Authenticated users can download a file one at a time or multiple files in succession
- Messages will be kept for a TBD time period before deletion
- Sending messages will have a cooldown period

**Moderation System**

The Moderation System provides administrators and developers manage the growing platform of users. A ticketing system will be in place to provide a direct communication channel between the user and users with access for customer support related issues. Event logs are created to allow users with access to monitor the platform for analytical purposes.

**Scope**

- Can configure logging storage location
- Can configure logging level of events
- Can configure support ticket follow-up communication method
- Can configure support ticket options
- Can configure censorship of authenticated user input data
- Administrators can ban user accounts
- Authenticated users can submit support tickets
- Events will be logged

**Implementation**

- Logging will be kept for a configurable amount of time before deletion
- Support tickets will be tracked with a generated unique ID
- Support tickets will be communicated through communication method
- Banned user account data will not be deleted
- Authenticated users can submit multiple support tickets

## **Competitors**

There are few companies that could compete with Hubba in some aspects, but they fall short on features and aspects that we feel are necessary for the more fluid and integrated experience that we are capable of providing.

- **Sparetoolz<sup>3</sup>**

Sparetoolz is a mobile-only tools renting app where users can rent only tools directly from the tools' owners, specifically focusing on handiwork. On the other hand, Hubba is intended to be a webapp with the possibility of becoming also mobile that is used to rent out a variety of products, from venues to car jacks. Along with this, Sparetoolz requires external communication, whereas Hubba will facilitate the communication itself.

- **Neighbor<sup>4</sup>**

Neighbor provides a platform to connect storage space's owners with renters. This is a peer-to-peer service that users can search for available storage space to rent. Storage spaces are offered by neighborhood owners who spare their own empty storage to earn extra money. While this service does allow users to rent out spaces, Hubba will allow users to rent out both the space and the tools within the space itself. By providing a discovery page with venues and tools, users will be able to easily be able to rent out their venue or the individual tools within it. Clients would use the discovery page to find a workshop of their choosing and rent out the entire space and tools for usage.

- **Garagetime<sup>5</sup>**

Garagetime's network connects home and commercial garages with auto enthusiasts. Users can rent out garage, lifts or auto tools by hours, days, or months to work on their cars from listed availability in their neighborhood. Currently, Garagetime is no longer an active web application.

---

<sup>3</sup> *Tool rental app for your neighborhood: Rent tools.* Sparetoolz. (n.d.). Retrieved September 22, 2022, from <https://sparetoolz.com/>

<sup>4</sup> *Neighbor: The cheaper, closer & safer storage marketplace.* neighbor.com. (n.d.). Retrieved September 22, 2022, from <https://www.neighbor.com/>

<sup>5</sup> *Rent a DIY garage or lift: Work on your car or motorcycle.* Garagetime. (2021, November 8). Retrieved September 23, 2022, from <https://bookgaragetime.com/>

## **Delivery Timeline**

Deliverables of the project timeline are as follows:

Registration, Logging	11/12/2022
Authentication, Authorization, Account Recovery	12/17/2022
Website Framework, Notification System, Moderation System, Accounts System	Q1 2023
Listing Profile System, Scheduling System, Discovery System, Payment System, Messaging System	Q2 2023

## **Vision**

Although geared towards small-business owners and individual users in its initial state, Hubba hopes to eventually expand its market both nationally and globally. In order to prepare the application for such an expansion, an increase in both resources and features will be required. It is to that goal that is planned to implement the following improvements listed below once a stable version of the product has been delivered.

## **Upscaling**

On launch, Hubba will strictly be a single-page application. As the platform grows, so will the range of consumers. In today's age, 83.4% of people have smartphones, capable of browsing the web and downloading mobile apps (Turner, A., 2022<sup>6</sup>). As everyone can access our platform through the mobile web, there are those who prefer using mobile apps instead. Hubba aims to cater to this audience in the future as the platform expands.

In addition to a growing range of consumers, Hubba aims to be made available on more than Google Chrome in the future. With around 65.2% of people worldwide using Google Chrome, Hubba will be available to a large majority (Ivan, 2022<sup>7</sup>). However, this statistic was extremely different ten years ago, proving that the market is very susceptible to change. As Hubba plans to stay, we must be adaptable to any fluctuations in the current market.

As the platform traffic increases, Hubba will require more servers and languages available. Hubba will be based in California, meaning United States English will be our only language available on launch. However, as the platform potentially expands to a worldwide audience, we will need more servers allocated as well as languages local to the consumers.

---

<sup>6</sup> Turner, A. (2022). *How Many People Have Smartphones Worldwide?* BankMyCell.

<sup>7</sup> Ivan. (2022, July 20). *Google Chrome Statistics*. TrueList.

## **References**

- Ivan. (2022, July 20). Google Chrome Statistics. TrueList. Retrieved September 23, 2022, from <https://truelist.co/blog/google-chrome-statistics/#:~:text=Worldwide%2C%20Google%20Chrome%20owns%2065.21%25%20of%20the%20market%20share.&text=So%2C%20we%20have%20Firefox%2C%20Edge,%2C%20and%202.9%25%2C%20respectively>*
- csulb/sample-requirements.pdf at master v-vong3/csulb. v-vong3 CSULB. (n.d.) Retrieved September 20, 2022, from [https://github.com/v-vong3/csulb/blob/master/cecs\\_491/docs/sample-requirements.pdf](https://github.com/v-vong3/csulb/blob/master/cecs_491/docs/sample-requirements.pdf)*
- Neighbor: The cheaper, closer & safer storage marketplace. neighbor.com. (n.d.). Retrieved September 22, 2022, from <https://www.neighbor.com/>*
- Rent a DIY garage or lift: Work on your car or motorcycle. Garagetime. (2021, November 8). Retrieved September 23, 2022, from <https://bookgaragetime.com/>*
- Tool rental app for your neighborhood: Rent tools. Sparetoolz. (n.d.). Retrieved September 22, 2022, from <https://sparetoolz.com/>*
- Turner, A. (2022). How Many People Have Smartphones Worldwide? BankMyCell. Retrieved September 23, 2022, from <https://www.bankmycell.com/blog/how-many-phones-are-in-the-world#:~:text=How%20Many%20People%20Have%20Smartphones%20In%20The%20World%3F&text=According%20to%20Statista%2C%20the%20current,world%27s%20population%20owns%20a%20smartphone>*