Hope Haven FAAST Inventory System

Version <1.0>

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Revision History

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# Introduction

## Senior Project Team Singularity has been contracted by the Florida Alliance for Assistive Services and Technology’s (known as FAAST) Northeast Regional Demonstration Center, located at Hope Haven in Jacksonville, to develop an online inventory tracking system to replace and improve on their current system. The new inventory system will be called FAASTER and will be an online web application accessible to FAAST Administrators.

## Purpose

The purpose of this document is to collect, analyze, and define high-level needs and features of

the FAAST Inventory System. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how the FAAST Inventory System fulfills these needs are detailed in the use-case and supplementary specifications.

## Scope

This Vision Document applies to the FAAST Inventory System, which will be developed by Senior Project Singularity Team. This system will allow FAAST Administrators to be able to track Clients, Assistive Technology Information and Referrals, Adaptive Equipment and Toy Loans, Demonstrations/Tours/Presentations, Assistive Technology Evaluations and Training, and generate reports on this information.

## Definitions, Acronyms, and Abbreviations

* FAAST – FAAST, the Florida Alliance for Assistive Services and Technology program, is administered through the Florida Department of Education, Division of Vocational Rehabilitation and is federally funded by the Rehabilitation Services Administration (RSA) under the Assistive Technology Act of 1998, as amended in 2004 (P.L. 108-364).

Since its inception in 1998, FAAST has been and continues to be a resource to provide Floridians free access to information, referral services, educational programs, and publications in accessible format on extensive topics related to disability rights, laws/policies, assistive technology (AT) device loans as well as funding opportunities for AT.

* AT – Assistive Technology is any item, piece of equipment, software, or product system that is used to increase, maintain, or improve the function of individuals with disabilities.
* Hope Haven - a non-profit that is the location of the FAAST Northeast Regional Demonstration Center. This is the where AT device demonstrations and loans are given.
* FAASTER – Florida Alliance for Assistive Services and Technology Electronic Records - The new inventory system that will be developed by Team Singularity for the Hope Haven FAAST Admins

## References

None.

## Overview

This document addresses the scope, positioning, stakeholders and user descriptions, product overview, and other requirements.

# Positioning

## Business Opportunity

Individuals with disabilities often need specialized AT devices or services to accomplish tasks non-disabled persons take for granted. Often these AT devices are very expensive and very hard to find locally which makes it very difficult to assess the effectiveness in determining whether they will meet the specialized needs of each individual disabled person. Having an available library of AT devices locally from which a disabled person can borrow and test out on a trial basis, helps them determine which device best meets their particular needs before having to make a large investment in such a device with no hands on knowledge of it. Knowing which devices are available at any given time in the library and when those that are loaned out are due back, makes it possible for FAAST Admins to efficiently run the system to meet the needs for as many clients as possible. More accurate inventory information means maintaining the optimal inventory levels for each device to prevent wasted funds on used devices and steer more funds toward high demand devices. In addition, the new inventory system will lessen the work load inefficiencies on FAAST Admins that is currently required to properly account for the number of loans. An aspect required in their reporting.

## Problem Statement

|  |  |
| --- | --- |
| The problem of | FAAST Admins not being able to work efficiently with the current system, get accurate information from the system as to AT devices available to be loaned, and where those that are loaned are due to be returned. Extra time and effort wasted to properly track loans in the system to meet reporting requirements. |
| affects | FAAST Admins extra time spent on system leaving less available time to serve Floridians with disabilities. Unreliability of the current system creating potential instances of misinformation on what AT devices are available to FAAST Clients when in need. |
| the impact of which is | Difficulty in knowing with certainty what AT devices are available at any given time. Difficulty in planning for availability of AT devices and knowing when outstanding devices should be due. Difficulty for FAAST Admins to operate the system in general |
| a successful solution would be | A Simple Concise web application with a low learning curve that can easily be used by FAAST Admins to track clients, inventory items, loans, and make reports. |

## Product Position Statement

|  |  |
| --- | --- |
| For | People who administer the FAAST program to disabled Floridians |
| Who | Have difficulty working with the system that is currently in place |
| The FAASTER System | A software application |
| That | Provides the ability to better track clients, inventory, loans, and do reporting |
| Unlike | The current available system that is inefficient to work with and provides inaccurate information |
| Our product | Provide Admins with a to more easily administer their program. This is accomplished through more efficient interface, accurate information regarding the status of the AT device library, and cut down on extra time spent by Admins to properly track loans to meet reporting requirements |

# Stakeholder and User Descriptions

[To effectively provide products and services that meet your stakeholders’ and users' real needs, it is necessary to identify and involve all of the stakeholders as part of the Requirements Modeling process. You must also identify the users of the system and ensure that the stakeholder community adequately represents them. This section provides a profile of the stakeholders and users involved in the project, and the key problems that they perceive to be addressed by the proposed solution. It does not describe their specific requests or requirements as these are captured in a separate stakeholder requests artifact. Instead, it provides the background and justification for why the requirements are needed.]

## Market Demographics

[Summarize the key market demographics that motivate your product decisions. Describe and position target market segments. Estimate the market’s size and growth by using the number of potential users or the amount of money your customers spend trying to meet needs that your product or enhancement would fulfill. Review major industry trends and technologies. Answer these strategic questions:

• What is your organization’s reputation in these markets?

• What would you like it to be?

• How does this product or service support your goals?]

## Stakeholder Summary

[There are a number of stakeholders with an interest in the development and not all of them are end users. Present a summary list of these non-user stakeholders. (The users are summarized in section 3.3.)]

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| [Name the stakeholder type.] | [Briefly describe the stakeholder.] | [Summarize the stakeholder’s key responsibilities with regard to the system being developed; that is, their interest as a stakeholder. For example, this stakeholder:   * ensures that the system will be maintainable * ensures that there will be a market demand for the product’s features * monitors the project’s progress * approves funding * and so forth] |
| FAAST, inc | asdf | asdf |
| Hope Haven Director |  |  |
| Disabled Floridian |  |  |

## User Summary

[Present a summary list of all identified users.]

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| [Name the user type.] | [Briefly describe what they represent with respect to the system.] | [List the user’s key responsibilities with regard to the system being developed; for example:   * captures details * produces reports * coordinates work * and so on] | [If the user is not directly represented, identify which stakeholder is responsible for representing the user’s interest.] |

## User Environment

[Detail the working environment of the target user. Here are some suggestions:

* Number of people involved in completing the task? Is this changing?
* How long is a task cycle? Amount of time spent in each activity? Is this changing?
* Any unique environmental constraints: mobile, outdoors, in-flight, and so on?
* Which systems platforms are in use today? Future platforms?
* What other applications are in use? Does your application need to integrate with them?

This is where extracts from the Business Model could be included to outline the task and roles involved and so on.]

## Stakeholder Profiles

[Describe each stakeholder in the system here by filling in the following table for each stakeholder. Remember that stakeholder types can be as divergent as users, departments, and technical developers. A thorough profile would cover the following topics for each type of stakeholder.]

### <Stakeholder Name>

|  |  |
| --- | --- |
| **Representative** | [Who is the stakeholder representative to the project? (Optional if documented elsewhere.) What we want here is names.] |
| **Description** | [A brief description of the stakeholder type.] |
| **Type** | [Qualify the stakeholder’s expertise, technical background, and degree of sophistication—that is, guru, business, expert, casual user, and so on.] |
| **Responsibilities** | [List the stakeholder’s key responsibilities with regard to the system being developed—that is, their interest as a stakeholder.] |
| **Success Criteria** | [How does the stakeholder define success?  How is the stakeholder rewarded?] |
| **Involvement** | [How is the stakeholder involved in the project? Relate where possible to Rational Unified Process roles—that is, Requirements Reviewer and so on.] |
| **Deliverables** | [Are there any additional deliverables required by the stakeholder? These could be project deliverables or outputs from the system under development.] |
| **Comments / Issues** | [Problems that interfere with success and any other relevant information go here.] |

## User Profiles

[Describe each unique user of the system here by filling in the following table for each user type. Remember user types can be as divergent as gurus and novices. For example, a guru might need a sophisticated, flexible tool with cross-platform support, while a novice might need a tool that is easy to use and user-friendly. A thorough profile needs to cover the following topics for each type of user.]

### <User Name>

|  |  |
| --- | --- |
| **Representative** | [Who is the user representative to the project? (Optional if documented elsewhere.) This often refers to the Stakeholder that represents the set of users, for example, Stakeholder: Stakeholder1.] |
| **Description** | [A brief description of the user type.] |
| **Type** | [Qualify the user’s expertise, technical background, and degree of sophistication—that is, guru, casual user, and so on.] |
| **Responsibilities** | [List the user’s key responsibilities with regard to the system being developed— that is, captures details, produces reports, coordinates work, and so forth.] |
| **Success Criteria** | [How does the user define success?  How is the user rewarded?] |
| **Involvement** | [How is the user involved in the project? Relate where possible to Rational Unified Process roles—that is, Requirements Reviewer, and so on.] |
| **Deliverables** | [Are there any deliverables the user produces and, if so, for whom?] |
| **Comments / Issues** | [Problems that interfere with success and any other relevant information go here. These would include trends that make the user’s job easier or harder.] |

## Key Stakeholder or User Needs

[List the key problems with existing solutions as perceived by the stakeholder or user. Clarify the following issues for each problem:

• What are the reasons for this problem?

• How is it solved now?

• What solutions does the stakeholder or user want?]

[It is important to understand the **relative** importance the stakeholder or user places on solving each problem. Ranking and cumulative voting techniques indicate problems that **must** be solved versus issues they would like addressed.

Fill in the following table—if using Rational RequisitePro to capture the Needs, this could be an extract or report from that tool.]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
|  |  |  |  | |  |

## Alternatives and Competition

[Identify alternatives the stakeholder perceives as available. These can include buying a competitor’s product, building a homegrown solution or simply maintaining the status quo. List any known competitive choices that exist or may become available. Include the major strengths and weaknesses of each competitor as perceived by the stakeholder or end user.]

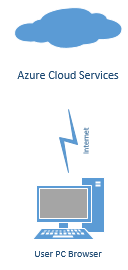
### <aCompetitor>

### <anotherCompetitor>

# Product Overview

## Product Perspective

This product will leverage Microsoft Azure Cloud Services to host the application and its database in the cloud. The system will present a user interface via web browser on the client’s computer. The user will interact with the system via web browser, no other software need be maintained by the user. Graphically, the system may be viewed as follows:



## Summary of Capabilities

**Table 4-1 Hope Have FAAST Inventory System**

|  |  |
| --- | --- |
| **Customer Benefit** | **Supporting Features** |
| FAAST Admin can more quickly enter client information into system leaving more availability to work with customers. | Streamlined User Interface for entering clients, loans, and inventory with no unnecessary additional steps to save data. |
| Customer satisfaction is improved because Admin can provide accurate information on the availability of AT devices . | AT device inventory levels are accurately displayed to Admin when searching. Admins can identify when loans are due to be returned. |
| FAAST Admins can better track overdue AT device loans improving response time. | FAAST Admins are automatically notified when loans are overdue. |
| Easier to read reports that allow Admins to see which devices are in high demand to improve resource allocation. | Streamlined and inventory trend reporting. |
| FAAST Admins can extend loans in system with less effort. | Loan renewal feature to repopulate borrower details from prior loan. |

## 

## Assumptions and Dependencies

1. The default language for the product shall be US English. It is assumed that users who are literate English will be using the system.
2. The system will require use of a computer with a graphical display, web browser and means to input textual and numeric data such as a standard QWERTY keyboard device. It is assumed the user with be using such a computing device and is able to operate it. Any specialized AT device required by the user such as an AT keyboard other input device will be provided by user.
3. It is assumed the user will have access to reliable high speed internet service.
4. It is assumed the user with have electricity to run the computer.

## Cost and Pricing

As a service learning project, there are no development costs to FAAST or Hope Haven. Web hosting of the application will be provided for during the development and launch of application. Subsequent web hosting fees will be the responsibility of FAAST. Specific amount will be based on Microsoft Azure hosting rates. Ongoing development work would require additional costs.

## Licensing and Installation

Product ownership shall remain with team Singularity and perpetual free license provided to FAAST and Hope Haven.

# Product Features

See User Stories

# Constraints

[Note any design constraints, external constraints or other dependencies.]

# Quality Ranges

[Define the quality ranges for performance, robustness, fault tolerance, usability, and similar characteristics that are not captured in the Feature Set.]

# Precedence and Priority

[Define the priority of the different system features.]

# Other Product Requirements

The system must run on a computer with a web browser.

## Applicable Standards

[List all standards with which the product must comply. These can include legal and regulatory (FDA, UCC) communications standards (TCP/IP, ISDN), platform compliance standards (Windows, UNIX, and so on), and quality and safety standards (UL, ISO, CMM).]

## System Requirements

The system will require use of a computer with a graphical display, web browser and means to input textual and numeric data such as a standard QWERTY keyboard device. As well the Microsoft Azure Application Hosting service is required.

## Performance Requirements

[Use this section to detail performance requirements. Performance issues can include such items as user load factors, bandwidth or communication capacity, throughput, accuracy, and reliability or response times under a variety of loading conditions.]

## Environmental Requirements

[Detail environmental requirements as needed. For hardware- based systems, environmental issues can include temperature, shock, humidity, radiation, and so forth. For software applications, environmental factors can include usage conditions, user environment, resource availability, maintenance issues, and error handling and recovery.]

# Documentation Requirements

[This section describes the documentation that must be developed to support successful application deployment.]

## User Manual

[Describe the purpose and contents of the User Manual. Discuss desired length, level of detail, need for index, glossary of terms, tutorial versus reference manual strategy, and so on. Formatting and printing constraints must also be identified.]

## Online Help

[Many applications provide an online help system to assist the user. The nature of these systems is unique to application development as they combine aspects of programming (hyperlinks, and so forth) with aspects of technical writing, such as organization and presentation. Many have found the development of an online help system is a project within a project that benefits from up-front scope management and planning activity.]

## Installation Guides, Configuration, and Read Me File

[A document that includes installation instructions and configuration guidelines is important to a full solution offering. Also, a Read Me file is typically included as a standard component. The Read Me file can include a "What's New With This Release” section, and a discussion of compatibility issues with earlier releases. Most users also appreciate documentation defining any known bugs and workarounds in the Read Me file.]

## Labeling and Packaging

[Today's state-of-the-art applications provide a consistent look and feel that begins with product packaging and manifests through installation menus, splash screens, help systems, GUI dialogs, and so on. This section defines the needs and types of labeling to be incorporated into the code. Examples include copyright and patent notices, corporate logos, standardized icons and other graphic elements, and so forth.]

# A Feature Attributes

[Features are given attributes that can be used to evaluate, track, prioritize, and manage the product items proposed for implementation. All requirement types and attributes need to be outlined in the Requirements Management Plan, however, you may wish to list and briefly describe the attributes for features that have been chosen. The following subsections represent a set of suggested feature attributes.]

## A.1 Status

[Set after negotiation and review by the project management team. Tracks progress during definition of the project baseline.]

|  |  |
| --- | --- |
| Proposed | [Used to describe features that are under discussion but have not yet been reviewed and accepted by the "official channel," such as a working group consisting of representatives from the project team, product management, and user or customer community.] |
| Approved | [Capabilities that are deemed useful and feasible, and have been approved for implementation by the official channel.] |
| Incorporated | [Features incorporated into the product baseline at a specific point in time.] |

## A.2 Benefit

[Set by Marketing, the product manager or the business analyst. All requirements are not created equal. Ranking requirements by their relative benefit to the end user opens a dialog with customers, analysts, and members of the development team. Used in managing scope and determining development priority.]

|  |  |
| --- | --- |
| Critical | [Essential features. Failure to implement means the system will not meet customer needs. All critical features must be implemented in the release or the schedule will slip.] |
| Important | [Features important to the effectiveness and efficiency of the system for most applications. The functionality cannot be easily provided in some other way. Lack of inclusion of an important feature may affect customer or user satisfaction, or even revenue, but release will not be delayed due to lack of any important feature.] |
| Useful | [Features that are useful in less typical applications will be used less frequently or for which reasonably efficient workarounds can be achieved. No significant revenue or customer satisfaction impact can be expected if such an item is not included in a release.] |

## A.3 Effort

[Set by the development team. Because some features require more time and resources than others, estimating the number of team or person-weeks, lines of code required or function points, for example, is the best way to gauge complexity and set expectations of what can and cannot be accomplished in a given time frame. Used in managing scope and determining development priority.]

## A.4 Risk

[Set by development team based on the probability the project will experience undesirable events, such as cost overruns, schedule delays or even cancellation. Most project managers find categorizing risks, as high, medium, and low, is sufficient, although finer gradations are possible. Risk can often be indirectly assessed by measuring the uncertainty (range) of the projects team’s schedule estimate.]

## A.5 Stability

[Set by the analyst and development team, this is based on the probability that features will change or the team’s understanding of the feature will change. Used to help establish development priorities and determine those items for which additional elicitation is the appropriate next action.]

## A.6 Target Release

[Records the intended product version in which the feature will first appear. This field can be used to allocate features from a **Vision** document into a particular baseline release. When combined with the status field, your team can propose, record, and discuss various features of the release without committing them to development. Only features whose Status is set to Incorporated and whose Target Release is defined will be implemented. When scope management occurs, the Target Release Version Number can be increased so the item will remain in the **Vision** document but will be scheduled for a later release.]

## A.7 Assigned To

[In many projects, features will be assigned to "feature teams" responsible for further elicitation, writing the software requirements, and implementation. This simple pull-down list will help everyone on the project team to understand responsibilities better.]

## A.8 Reason

[This text field is used to track the source of the requested feature. Requirements exist for specific reasons. This field records an explanation or a reference to an explanation. For example, the reference might be to a page and line number of a product requirement specification or to a minute marker on a video of an important customer review.]