# Project Document

# Table of Contents

**PROJECT DOCUMENT****1**

[**BRIEF**](#_zcxvwu688b7z) **2**

[Team Name](#_j6ygaznf54um) 2

[Team Members](#_16b6xoe5z2jw) 2

[PROJECT](#_gykjp48wbng2) 2

[COMPONENT](#_362jvkvclqcy) 2

[Client](#_gr2u9slhwr06) 2

[Primary Contact](#_3q5iub164w6) 2

[Project document storage location](#_3ootekvp40ym) 3

[Project coding repository link](#_7vnttb5jzw46) 3

[**PROJECT DESCRIPTION**](#_7jmkez4a2fj6) **3**

[Goal.](#_f1xxuvtht08i) 3

[**PROJECT SCOPE**](#_ju70bwhmt9rp) **3**

[1. Standalone Web-based PAR Dashboard](#_hplqudbwl5qc) 3

[2. Inventory Integration (Read-Only Access to IDEAL Database)](#_2c823raw3pjq) 3

[3. PAR Level Management](#_xkgbwqw273u3) 3

[4. Stock Monitoring & Alerts](#_tdx1nk2tuuiu) 3

[5. User Roles & Permissions (Suggestions only)](#_wztqsgswk7w6) 3

[Excluded from Scope](#_p7qlier9o12g) 4

[**STAKEHOLDERS**](#_tngmbebgnw18) **4**

**FUNCTIONAL REQUIREMENTS****5**

**NON-FUNCTIONAL REQUIREMENTS**[**:**](#_dpxvqb35ilzy) **5**

**TECHNOLOGIES/SKILLS**[**.**](#_n9rh0r7bxc8a) **5**

[Database](#_s45htnhlabg7) 5

[Frontend UI.](#_yhtc46mutw55) 5

[Backend.](#_aaetwmesbm5q) 5

APIs[.](#_4h6jqn5y9oah) 5

[**PROJECT DELIVERABLES**](#_snktis256ia5) **5**

[**SUCCESS CRITERIA**](#_ikrmo3utp06o) **6**

[**PROJECT TIMELINE**](#_pe4ls034ua94) **6**

[**CONSTRAINTS.**](#_dhbismsa6ayp) **6**

[**DEFINITIONS**](#_bgauk85s4tfl) **9**

# BRIEF

## Team Name : The Final Four Date: 2/13/2025

## Team Members: Michael Banks, Joe German, David McNair, Skylar Love

| PROJECT: | **EXPANSION OF EXISTING IT INVENTORY SYSTEM** |
| --- | --- |
| COMPONENT: | **PAR Dashboard for IT Inventory Management** |
| Client: | **University of South Alabama Health System – IT Development Team** |
| Primary Contact: | **Jeff Nguyen,** [HNguyen@health.southalabama.edu](mailto:HNguyen@health.southalabama.edu)  **Amber Pond,** [APond@health.southalabama.edu](mailto:APond@health.southalabama.edu) |

## **Project document storage location:** <https://drive.google.com/drive/folders/1vipHzUpHcsJLIoQuUQJ289n0sigg0eM_?usp=drive_link>

## Project coding repository link: TBD

# ***Brief Project Description:*** Develop a standalone, modular, expandable web application to streamline IT Procurement workflow by maintaining a live data dashboard and database pertaining to IT Inventory and its par levels. This will involve not only creating a working par dashboard and alert system, but also building the skeleton for future expansions in terms of data and user roles. Creating this web application will enable USA Health IT Employees to establish par rules and counting rules and then be alerted automatically when inventory items do not fit those par levels.

# Future potential expansions for other teams include the integration of DELL Premier API for tracking orders and DELL stock, Policy management and Status Tracking features to ensure that all Company Devices are compliant with Company Policy, and the use of historical order data to determine new trends in shipment times and stock availability.

## **Goal:** Increase the availability and distribution of IT Equipment across USA Health by optimizing the flow of data and its representation to IT Procurement employees.

# PROJECT SCOPE

## Standalone Web-based PAR Dashboard

1. Internal use only (not public-facing)
2. Separate from the IDEAL system but interacts with it to retrieve item data
3. Hosted on an internal web server

## Inventory Integration (Read-Only Access to IDEAL Database)

1. Pulls item details and stock levels from the IDEAL inventory database
2. Supports searching items by category, model number, or Item ID or Asset ID
3. Will not modify or update IDEAL records

## PAR Level Management

1. Allows authorized users to add, edit, disable, and manage PAR rules
2. Users can define whether an item quantity is tracked by unique product ID (this is an internal IT IDEA id, similar to SKU or manufacturer model) or unique Item ID Quantity or Serial



So if Serialized is Yes, we have to count by Product ID. Otherwise, TotalProduct is our count. Bulk packaged items have aBulk Unit Count. a Parts Per Unit, and a Total product calculated as the product of those 2 fields.

## Stock Monitoring & Alerts

1. Displays item status based on PAR thresholds
2. Allows manual updates on supplier stock status (e.g., backorders)
3. Supports sorting and filtering items based on need

## User Roles & Permissions (Suggestions only)

Viewer: Read-only access for monitoring stock and alerts

Editor: Can suggest adjustments to stock levels & generate reports

Admin: Can modify PAR rules, manage users, and update stock status

### Excluded from Scope

Direct modifications to IDEAL database (PAR data will be stored separately)

Automated Dell Premier API integration (future implementation planned)

Order placement or auto-reordering (handled manually by procurement for now)

# STAKEHOLDERS

***Identify the stakeholders and how they will benefit from and be impacted by your project:***

| *Stakeholder* | *Impact* | *Description of Impact* |
| --- | --- | --- |
| *USA Health Staff* | *MEDIUM* | *The USA health staff in all departments will benefit moderately from equipment availability and thus, faster distribution and setup of IT equipment and assets. Additionally, responsibilities will be better tracked, resulting in more-accurate blame, or proof of innocence, for any lost or damaged equipment.* |
| *Digital Workspace Team* | *HIGH* | Provides security oversight and compliance support, manages on-premises servers and app lockers for software and site distribution, and virtual machines. This team also includes the software developers who will be supporting the maintenance of the systems targeted in this document. |
| *Desktop Support Team* | *HIGH* | Uses the dashboard for visibility into IT stock levels in addition to the main IDEAL (IT Delivery, Equipment, & Asset Logistics) web application. They may want to know if something is backordered or in reorder status due to par trigger. |
| *Asset Management & Procurement Team* | *HIGH* | Primary users for managing inventory replenishment. They’ll benefit from an organized dashboard outlining what items need reordered, maintaining a backorder list, estimating stock needs for projects and smoother operations, and generating reports for budget discussions. |

**Functional Requirements:**

* Users must log in as either Admins or Team Members.
* Admins can search for items by model number, category, or unique identifier and then create a par rule for that item.
* Admins can create, edit, and disable/enable PAR rules. They should also be able to define stock thresholds and the urgency of a restock order.
* Team Members can view PAR levels and report changes or make comments on demand.
* Assign User Role

**Non-Functional Requirements:**

* The dashboard must be a web application, hosted internally and not accessible publicly.
* The database must use Microsoft SQL to integrate with the organization’s Azure infrastructure.
* The backend should be built with C# and .NET
* The system must support role-based access control to restrict unauthorized actions.
* Documentation must be provided to ensure maintainability and future system expansion.

# TECHNOLOGIES / SKILLS

*Discuss exceptions with developers as needed.*

## **Database:** Microsoft SQL (separate from IDEAL but references IDEAL records)

## **Frontend UI:** Flexible, but js derived frontend frameworks (ReactJS, NextJS, VueJS) are preferred as they’ll match our current software stack. Traditional HTML/CSS is welcome.

## **Backend:** C# (.NET preferred, but flexible. ASP.NET MVC or Core are acceptable) Please avoid PHP and Java for data handling, backend, and dynamic UI content due to security and app maintenance considerations.

## APIs & Data Handling: RESTful API calls for fetching IDEAL inventory data.

# 

# 

# PROJECT DELIVERABLES

1. Functional Web Dashboard with user authentication and role-based access
2. PAR Management Features for setting, adjusting, and suspending reorder levels
3. Stock Visibility & Manual Update Options
4. Basic Reporting & Filtering for item tracking
5. Database Schema & Documentation for integration with IDEAL

# SUCCESS CRITERIA

1. **Dashboard is operational** and accessible internally
2. Users can **search, view, and manage** PAR levels **without modifying IDEAL**
3. Procurement specialists can **update stock statuses manually**
4. **Minimal developer intervention** is needed for maintenance

# PROJECT TIMELINE

* **Week 1-2:** Define Functional Requirements & Database Schema
* **Week 3-4:** Develop Frontend & API Connections
* **Week 5-6:** Implement User Roles & Stock Management Features
* **Week 7:** Testing & Debugging
* **Final Week:** Deployment & Documentation

# ***CONSTRAINTS***

# The Final Four team must be granted access to the existing IDEAL inventory\_db (Read-Only).

# DEFINITIONS

**Par Level**

**IDEAL**  – (IT Delivery, Equipment, & Asset Logistics) system

**Usage Rate** – The average number of IT assets consumed or assigned over a given period.

**Lead Time** – The time it takes to receive new assets once an order is placed.

**Safety Stock (10-20%)** – An additional buffer (10-20% of the calculated demand) to cover unexpected delays or spikes in usage.

# TEAMS / EMPLOYEE TYPES

**Digital Workspace Team:**

***Manager:*** oversight, policy implementation, trend analysis, reporting, work metrics

***System Operations Analysts:*** Device compliancy and mobile device management

***Software Developers:*** Maintenance, administration, monitoring, support

**Desktop Support:**

***Supervisor:*** oversight, policy implementation, trend analysis, reporting, work metrics

***Technical Specialist:*** Imaging, configuring, distributing, retrieving, repairing assets.

**Asset Management (possible implementation in future iterations):**

***Director:*** oversight, policy implementation, trend analysis, reporting, work metrics

***Procurement Specialist:*** Ordering, receiving, tracking, storing, issuing IT assets.