PARADIN ENVIROTECH

Software Requirements Specification

ShieldCert System - Asset Auditing and Processing Module

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https://www.securewithpaladin.com

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1 Document Information

Field	Value
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Client	Paladin Envirotech
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2 Project Overview

2.1 What Are We Building

2.1.1 System Function

Comprehensive asset data capture, auditing, grading, and processing workflows that handle the complete asset lifecycle from initial data capture through final disposition, including barcode scanning, serial number tracking, parts harvesting, grading, data sanitization verification, and inventory management.

2.1.2 Users

- Auditing Operators: Asset data capture and processing
- Receiving Associates: Initial asset auditing after receiving
- Grading Specialists: Asset condition assessment and grading
- QA Staff: Quality assurance and data verification
- Warehouse Operators: Asset movement and inventory updates

2.1.3 Problem Solved

Eliminates manual asset tracking, ensures accurate data capture through barcode scanning, automates status progression based on client decision trees, provides complete asset traceability, ensures data security compliance, and maintains real-time inventory accuracy.

2.1.4 Key Success Metric

99% asset tracking accuracy, 100% data security compliance, 50% faster auditing process, zero asset loss, and complete audit trail for all asset transactions.

2.2 Scope

2.2.1 In Scope

- Asset auditing dashboard for orders waiting to be audited
- Product data capture with barcode scanning
- Serial number and client asset tag recording

- Product status management with decision tree processing
- Parts harvesting and component tracking
- Asset grading and condition assessment
- Data safety verification and wiping confirmation
- Asset status updates and inventory movement
- Bulk asset processing and editing capabilities

2.2.2 Out Of Scope

- Physical data destruction equipment integration
- Automated barcode label printing
- RFID tag integration
- Mobile auditing applications

3 User Requirements

3.1 Auditing Dashboard

Feature Code	I Want To	So That I Can	Priority	Notes
FT-AUD-DASH	See dashboard of orders waiting to be audited	Quickly identify which orders need auditing with SLA tracking	Must	Shows orders with received date, audit due dates, and days remaining

3.2 Asset Data Capture

Feature Code	I Want To	So That I Can	Priority	Notes
FT-AUD-CAPTURE	Start product data capture process for selected order	Record accurate product details associated with inbound pallets	Must	Includes model selection, serial numbers, client asset tags, and pallet assignment
FT-AUD-GRID	View grid of all captured assets with editing capability	Review and correct asset information before marking audit complete	Must	Editable until audit marked complete, then becomes read-only
FT-AUD-DECISION	Apply client-specific decision trees for product status	Ensure product status complies with client SOW requirements	Should	Overrides default status rules when decision tree applies

3.3 Parts Harvesting

Feature Code	I Want To	So That I Can	Priority	Notes
FT-HARVEST-PARTS	Initiate and perform parts harvesting process	Capture and save all required information about harvested parts	Should	Harvests components from parent assets with QA validation
FT-HARVEST-BULK	Harvest components from multiple parent assets	Process bulk component harvesting efficiently	Should	Auto-distributes harvested components evenly across servers

3.4 Asset Grading

Feature Code	I Want To	So That I Can	Priority	Notes
FT-GRADE-ASSET	Grade assets based on condition and predefined criteria	Accurately record asset condition for valuation and sales	Must	Includes cosmetic and functional grading with comments
FT-DATA-SAFETY	Mark assets as data safe after wiping verification	Ensure compliance with data protection requirements	Must	Required for assets containing data before final status assignment

3.5 Inventory Management

Feature Code	I Want To	So That I Can	Priority	Notes
FT-MOVE-INVENTORY	Move assets to inventory after QA completion	Update asset location and status for sales availability	Must	Final asset status assignment and pallet location tracking

Feature Code	I Want To	So That I Can	Priority	Notes
FT-SHRED-ASSETS	Record asset shredding for destruction	Mark assets as destroyed with audit trail	Must	Irreversible status change with complete audit logging
FT-UPDATE-STATUS	Update status of single or multiple assets	Manage asset progression through workflow stages	Must	Bulk status updates with validation and audit trail

4 Detailed Feature Requirements

4.1 Ft Aud Capture

4.1.1 Priority

Must Have

4.1.2 User Story

As an operator, I want to start the product data capture process for a selected order so that I can record accurate product details associated with inbound pallets

4.1.3 Preconditions

Order has been received, inbound pallets created, operator has auditing permissions

4.1.4 Postconditions

Asset data captured with unique asset numbers, linked to order and pallet

4.1.5 Acceptance Criteria

- System displays order number and processing instructions
- Operator selects inbound pallet from dropdown of received pallets
- Model number selection from approved model catalog
- Auto-display of product name and weight from model
- Weight can be modified at asset level
- Product status defaults: Above tech line = Received, Below tech line = Pending Recycle
- Serial number capture with uniqueness validation across inventory
- Client asset tag capture based on SOW requirements (up to 4 tags)
- Pallet selection for asset placement
- Persist model and pallet info for multiple items with same model
- Auto-generation of unique asset number: WCYYXXXXXXX (warehouse + year + sequence)
- Race condition prevention for asset number generation

4.1.6 Test Cases

Id	Description	Weight
AUD-TC-001	Verify asset data capture with all required fields	High
AUD-TC-002	Verify model selection auto-populates product details	High
AUD-TC-003	Verify serial number uniqueness validation	High
AUD-TC-004	Verify asset number generation with correct format	High
AUD-TC-005	Verify client asset tag capture based on SOW configuration	Medium

4.2 Ft Grade Asset

4.2.1 Priority

Must Have

4.2.2 User Story

As an operator, I want to grade an asset so that I can accurately record its condition and status based on predefined grading rules

4.2.3 Preconditions

Asset exists in system, operator has grading permissions

4.2.4 Postconditions

Asset graded with condition comments, data safety verified if applicable, final status assigned

4.2.5 Acceptance Criteria

- Operator scans asset number to begin grading
- System displays product type and current asset status

- Display all grading comments associated with product type
- Multiple grading comments can be selected
- Grade selection from predefined grading values
- Data safety marking required for assets containing data
- Data wiping method selection and confirmation required
- Final asset status selection with validation
- Assets not confirmed as data safe cannot be saved
- Pallet selection for graded asset placement
- Validation of asset number, grade selection, and data safety

4.2.6 Grading Comments

Comment	Type	Applies To
Scratches	Cosmetic	Laptop, MacBook, Surface, Chromebook, Desktop/ Workstation, Routers, Access Point, Network Switches, Server, UPS, Docking Stations
Worn keys	Function	Laptop, MacBook, Surface, Chromebook
Missing keys	Function	Laptop, MacBook, Surface, Chromebook
Missing Battery	Function	Laptop, MacBook, Surface, Chromebook
Cracked Chassis	Cosmetic	Laptop, MacBook, Surface, Chromebook

4.2.7 Test Cases

Id	Description	Weight
GRADE-TC-001	Verify asset grading with condition comments selection	High
GRADE-TC-002	Verify data safety verification for data-containing assets	High

Id	Description	Weight
GRADE-TC-003	Verify grading comments filter by product type	Medium
GRADE-TC-004	Verify final status assignment validation	High

4.3 Ft Harvest Parts

4.3.1 Priority

Should Have

4.3.2 User Story

As an operator, I want to initiate and perform the parts harvesting process so that I can capture and save all required information about harvested parts

4.3.3 Preconditions

Parent assets exist in system, components pass QA, operator has harvesting permissions

4.3.4 Postconditions

Harvested components recorded with unique asset numbers, linked to parent assets

4.3.5 Acceptance Criteria

- Operator scans or enters parent asset number or serial number
- Model selection for component being harvested
- System displays product type and weight from model
- Status based on tech line: Above = Received, Below = Pending Recycle
- Serial number capture for harvested component
- Pallet selection for component placement
- Quantity of components harvested from parent asset(s)
- Auto-distribution of components evenly across servers
- Validation of parent asset existence and quantity
- Persist parent, model, and pallet info for multiple items

- Grid display of harvested components with asset numbers
- Edit capability only while order in progress

4.3.6 Test Cases

Id	Description	Weight
HARVEST-TC-001	Verify parts harvesting from single parent asset	High
HARVEST-TC-002	Verify component distribution across servers	Medium
HARVEST-TC-003	Verify harvested component grid display and editing	Medium

5 Data Model

5.1 Entities

5.1.1 Asset

5.1.1.1 Description

Core asset information and tracking

5.1.1.2 Key Fields

- asset_id (Primary Key)
- asset_number (Unique: WCYYXXXXXXX)
- order_id (Foreign Key)
- pallet_id (Foreign Key)
- model_id (Foreign Key)
- serial_number (Unique when not shipped)
- client_asset_tag_1
- client_asset_tag_2
- client_asset_tag_3
- client_asset_tag_4
- product_status
- weight
- parent_asset_id (For harvested components)
- created_date
- created_by
- last_modified_date
- last_modified_by

5.1.2 Assetgrading

5.1.2.1 Description

Asset condition and grading information

5.1.2.2 Key Fields

- grading_id (Primary Key)
- asset_id (Foreign Key)
- grade
- grading_comments (JSON array)
- data_safe
- data_wiping_method
- final_status
- graded_date
- graded_by

5.1.3 Assetstatushistory

5.1.3.1 Description

Asset status change tracking

5.1.3.2 Key Fields

- history_id (Primary Key)
- asset_id (Foreign Key)
- previous_status
- new_status
- change_reason
- changed_date
- changed_by

5.1.4 Harvestedcomponent

5.1.4.1 Description

Parts harvesting tracking

5.1.4.2 Key Fields

- component_id (Primary Key)
- parent_asset_id (Foreign Key)
- harvested_asset_id (Foreign Key)

- quantity_harvested
- harvest_date
- harvested_by

6 Business Rules

6.1 Asset Data Capture

- Asset number format: WCYYXXXXXXX (warehouse + year + 7-digit sequence)
- Serial numbers must be unique across inventory (except shipped assets)
- Client asset tags captured based on SOW requirements (0-4 tags)
- Product status defaults: Above tech line = Received, Below tech line = Pending Recycle
- Decision tree rules override default status when applicable
- Asset editing allowed only until audit marked complete

6.2 Asset Grading

- Data safety verification required for assets marked as containing data
- Assets not confirmed data safe cannot receive final status
- Grading comments filtered by product type
- Final status assignment validates data safety requirements
- Grade and data safety status required before inventory movement

6.3 Parts Harvesting

- All components must pass QA before system entry
- Harvested components distributed evenly across servers
- Parent asset relationship maintained for traceability
- Harvested components receive unique asset numbers
- Edit capability locked when order completed

6.4 Status Management

- Status progression: Received → In Progress → To Be Sold/Recycled/Destroyed/Redeployed
- Final statuses: Sold, Recycled, Destroyed, Redeployed, Donated
- Assets in final status cannot be edited
- Status changes logged with user and timestamp

- Bulk status updates validate each asset individually

7 Integration Points

7.1 Inbound Systems

System	Integration Type	Data Flow	Frequency
Inbound Operations	Database	Order and pallet information for asset auditing	Real-time
Model Management	Database	Model catalog for asset data capture	Real-time
Account Management	Database	SOW decision trees and asset tag requirements	Real-time

7.2 Outbound Systems

System	Integration Type	Data Flow	Frequency
Sales Operations	Database	Asset availability and status for sales orders	Real-time
Warehouse Management	Database	Asset location and pallet assignments	Real-time

8 Sign Off

8.1 Approval

Role	Name	Signature	Date

8.2 Document History

Version	Date	Changes Made	Changed By
1.0	2025-12-22	Initial Asset Auditing module SRS	SRS Development Team