User Requirements - Equipment Management

The User Requirements document outlines the tasks, and requirements for each task, that a user must be able to perform within the context of the new feature being designed.

Project Description

The Equipment Management Feature will enable users to maintain a detailed list of owner furnished contractor installed (OFCI), owner furnished owner installed (OFOI), and owner furnished vendor installed (OFVI) equipment in e-Builder. The equipment list can be built manually or imported via standard-style data import and will be integrated with Attainia’s equipment management solution(s).

Business Drivers

The Business Drivers section of this document outlines issues encountered by clients in the past as well as future efficiencies that this new feature may address.

- Lack of transparency in the equipment planning, procurement, and installation process
- Duplicate data entry in e-Builder and Attainia
- Duplicate data entry in Attainia and other tools (e.g., Excel)
- Unable to track desired data in Attainia
- Equipment is often ordered at the wrong time
  - Equipment ordered too early must be stored, potentially incurring costs to do so
  - Equipment ordered too late may delay the project
- Difficult to understand the impact of equipment costs on the forecast and budget

**Equipment Management Workflow**

This diagram represents the workflow of the Equipment Management feature in the context of an e-Builder project.

**Workflow with Attainia Integration**

<table>
<thead>
<tr>
<th>Equipment Management Setup (with Attainia Integration)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equipment Planner</strong></td>
</tr>
<tr>
<td>1. Define Equipment Codes in Attainia</td>
</tr>
<tr>
<td>2. Create Equipment List Custom Fields</td>
</tr>
<tr>
<td>3. Define e-Builder to Attainia Field Mapping</td>
</tr>
<tr>
<td>4. Define Role-Based Permissions</td>
</tr>
<tr>
<td>5. Configure e-Builder to Attainia Integration</td>
</tr>
<tr>
<td>6. Set Project-Level Permissions</td>
</tr>
<tr>
<td>Account Set Up Complete</td>
</tr>
</tbody>
</table>

**Account Level Setup**
1. Equipment planner defines equipment codes within Attainia.
2. e-Builder administrator creates equipment list custom fields.
3. e-Builder administrator defines e-Builder to Attainia field mapping.
4. e-Builder administrator defines account-level, role-based permissions.
5. e-Builder administrator creates scheduled tasks for data pushes.

**Project Level Setup**

1. Project administrator defines project permissions.
### Equipment Management Lifecycle (with Attainia Integration)

<table>
<thead>
<tr>
<th>Equipment Planner</th>
<th>e-Builder</th>
<th>Owner Project Manager</th>
<th>Contractor Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Create Equipment List in Attainia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Push Equipment List to e-Builder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Populate/Update Equipment List</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is Equipment List Complete?</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Update Equipment List</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Request Need-by Dates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Provide Need-by Dates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Push Equipment List to Attainia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Create Purchase Order(s) for Equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Push Purchase Orders to e-Builder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Update Equipment List</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Create Commitments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment List Lifecycle Ends</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Equipment List Workflow

1. Equipment planner creates equipment list in Attainia.
2. Equipment planner pushes equipment list to e-Builder from Attainia.
3. e-Builder parses and stores equipment list.
4. Equipment planner makes general updates to equipment list in Attainia.
5. Equipment planner pushes equipment list to e-Builder from Attainia.
6. e-Builder parses and updates equipment list.
7. Owner project manager requests need-by dates.
8. Owner project manager and contractor project manager provide need-by dates.
9. Attainia grabs updated equipment list.
10. Equipment planner creates purchase orders in Attainia.
11. Equipment planner pushes purchase orders to e-Builder from Attainia.
12. e-Builder creates Commitment(s).
   (with associated equipment as line items.)
# Workflow without Attainia Integration

## Equipment Management Setup (without Attainia Integration)

<table>
<thead>
<tr>
<th>eB Administrator</th>
<th>Project Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Create Equipment List Custom Fields</td>
<td></td>
</tr>
<tr>
<td>2. Define Role-Based Permissions</td>
<td></td>
</tr>
<tr>
<td>3. Set Project-Level Permissions</td>
<td></td>
</tr>
<tr>
<td>Account Set Up Complete</td>
<td></td>
</tr>
</tbody>
</table>

### Account Level Setup

1. e-Builder administrator creates equipment list custom fields.
2. e-Builder administrator defines role-based permissions. (who will view data and who will update dates for OI and CI items)

### Project Level Setup

1. Project administrator defines project permissions. (who will view data and who will update dates for OI and CI items?)
### Equipment Management Lifecycle (without Attainia Integration)

<table>
<thead>
<tr>
<th>Equipment Planner</th>
<th>Owner Project Manager</th>
<th>Contractor Project Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Equipment List Lifecycle Ends</td>
<td></td>
</tr>
</tbody>
</table>

#### Equipment List Workflow

1. Equipment planner creates equipment list.
2. Owner project manager requests need-by dates.
   (method is variable: email, process, etc.)
3. Owner project manager and contractor project manager provide need-by dates.

#### Tasks

This section of the requirements document outlines the tasks that will be performed within the new feature, expanding upon the tasks documented within the Workflow. This task information will be used later in the project for the planning of other activities such as usability testing, user assistance development, and marketing the new feature(s).

#### Account Level Setup

- Create equipment list custom fields
- Define e-BUILDER to Attainia field mappings
  - Select Attainia Field to tie to Budget Lines
  - Map Attainia Non-Integrated Fields to eB Custom Fields
- Define account-level, role-based permissions
- Configure integration method from eB to Attainia

#### Project-Level Setup

- Set project-level permissions
Equipment Management Workflow

- View Equipment List
- Filter Equipment List
- Configure Equipment List View
- Save Configured Views
- Edit Configured Views
- Delete Configured Views
- Edit Equipment List Need by Dates
- Import Equipment List
- Export Equipment List
- Add Item to Equipment List
- View Item Details
- Edit Item Details
- Delete Item
- View Item History
- Attach to item (documents, processes, forms, etc.)
- Add Note to Item

Requirements

This section of the requirements document outlines the user requirements for each task that a user will perform within the system.

Account Level Setup

- Create equipment list custom fields
  - Equipment list custom fields will provide standard custom field functionality
  - Equipment list custom fields will be available as a stand-alone entry in the Custom Fields node within eB Setup
- Define e-Build to Attainia field mappings
  - Users must be able to associate e-Build Equipment Item custom fields to Attainia Equipment item fields
  - Users must be able to associate e-Build Commitment fields to Attainia Purchase Order fields
  - Users must be able to associate e-Build Budget Line Item custom field to Attainia equipment code (architectural code) field
- Define account-level, role-based permissions
  - System must allow users to define role-based permissions for:
    - Accessing/Viewing Equipment List
    - Editing Item(s) - Full edit permissions
    - Editing Item(s) - Need by dates only
- Configure integration method from eB to Attainia
  - If necessary.
  - We may consider scheduled task or manual export.
Project-Level Setup

- Set project-level permissions
  - System must allow users to define role-based or user-based permissions for:
    - Accessing/Viewing Equipment List
    - Editing Item(s) - Full edit permissions
    - Editing Item(s) - Need by dates only

Equipment Management Lifecycle

- View Equipment List
  - User must be able to select the project for which they are viewing equipment list
  - Default view should include these columns:
    - TBD
  - Users must be able to sort the equipment list by these columns:
    - TBD
- User must be able to search the equipment list
  - Searchable within the Main eB search
- Filter Equipment List
  - User must be able to filter the equipment list by the following fields:
    - TBD
- Configure Equipment List Views
  - Users must be able to configure the equipment list view to add, remove, and resize columns
- Save Configured Equipment List views
- Edit Configured Equipment List views
- Delete Configured Equipment List views
- Edit Equipment List Need by Dates
  - Provide comment on need-by date
- Import Equipment List
- Export Equipment List
- Add Item to Equipment List
  - Equipment list data fields must include the following:
    - TBD
- View Item Details
  - Equipment list data fields must include the following:
    - TBD
  - View Item History
    - indicate changes that have come over from Attainia
    - indicate changes that have been made within e-Builder
- Edit Item Details
  - Users with appropriate permissions must be able to edit all item details.
  - Users with appropriate permissions must be able to edit Need by Dates only.
  - Users must be able to add a comment when adding a Need by Date
User Requirements -
Equipment Management

- Changes to need by dates need to be pushed back to Attainia for updating in that system
- Attainia should have a way to surface for attention those changes that come over from the e-Builder system
- Need to be able to alert the Owner Project manager that need by dates have been changed by GC
- Delete Item
- Attach to item (documents, processes, forms, etc.?)
  - flow of attachments is one directional, coming from Attainia but not going to Attainia.
- Add Note to Item

Other Functional Areas
- Budget
  - Must be able to enter Architectural code (or other field code) when creating a budget line item
  - Must be able to drill down to view associated equipment
  - Must be able to navigate to equipment details when viewing associated equipment.
- Forecasting
  - Must be able to drill down to view associated equipment
  - Must be able to display equipment details when viewing associated equipment.
- Cash Flow
  - Must be able to drill down to view associated equipment
  - Must be able to navigate to equipment details when viewing associated equipment.
- Commitments
  - Must be able to associate an equipment list item when adding a commitment item.
  - Must be able to navigate to equipment details when viewing associated equipment.
- Invoices? - Maybe for a future phase include the ability to create a general invoice for an equipment list item.
- Reporting
  - Commitment Item Report - Include associated equipment items