# **Technical Requirements Document (TRD)**

**Project Title:** Traveler Workflow & Documentation Enhancement (TWD – Traveler Workflow Documentation)  
**Application:** EVO Application (Modernized Version)  
 **Prepared By:** Preet Raval  
 **Date:** 09/17/2025

## **1. Introduction**

The purpose of this TRD is to define the technical requirements for the enhancement of the EVO Application, which is currently used to generate Travelers in a primarily paper-based workflow. The system will transition from paper travelers to a fully digital traveler system within 1–2 months.

Initial implementation will maintain paper-based traveler output, but digital records will be maintained in parallel. After stabilization, the solution will shift to fully digital traveler management.

## **2. Objectives**

* Support both **paper travelers** (short-term) and **digital travelers** (long-term).
* Enable **manual initial data entry**, with future automation to populate dependent fields once a **Job Number** or **Work Order Number** is entered.
* Enforce **role-based editing rights** with approval workflows for non-authorized changes.
* Improve **traceability, data accuracy, and error reduction** in traveler creation.
* Ensure compliance with **revision history and audit requirements**.

## **3. Scope**

### **In-Scope**

* Paper traveler generation for first 1–2 months.
* Digital traveler module creation.
* Manual data entry with future automation.
* Role-based access control (RBAC) with approval workflows.
* Automated population of related fields (e.g., PO, BOM, Customer details).
* Email notifications for approval of unauthorized edits.
* Barcode integration for traveler and board.

### **Out-of-Scope**

* ERP/CRM integrations (future phase).
* Complete replacement of EVO backend (future modernization).

## **4. Stakeholders**

**Praful** – Traveler Creation & EVO Operations

**Max** – Complex PCB Procurement & Oversight

**Adam** – Engineering (Approval Authority)

**Kris** – Quality & Process Assurance (Approval Authority)

**Bruce** – Business Analysis & Oversight

**Leeann** – Business Analyst

**Khash** – Business Analyst

**Preet** – Engineering Support, Document Owner

**Kanav** – Engineering Support, Document Owner

## **5. System Requirements**

### **5.1 Functional Requirements**

**FR1 – Paper & Digital Transition**

Travelers must be printable for the first 1–2 months.

Digital travelers must be created and stored in the EVO Application database in parallel.

After 2 months, system should default to digital-only.

**FR2 – Data Entry & Automation**

Initial traveler creation requires manual entry of all fields.

Once a Job Number or Work Order Number is entered:

All related fields (Customer Name, PO Number, BOM, Revision History, etc.) auto-populate.

Data pulled from existing traveler records or connected database tables.

**FR3 – Role-Based Editing Rights**

**Adam & Kris**:

Can make edits directly.

All changes auto-saved and version-controlled.

**Other Users** (e.g., Praful, Max, Purchasing, Assembly):

Changes do not overwrite data.

Instead, changes trigger an **email notification** to Adam and Kris.

Only when one (or both) approves, the database is updated.

**FR4 – Approval Workflow**

Notifications must contain:

User who made the edit.

Date/time.

Proposed change.

Adam/Kris can approve or reject the change.

Approved changes update the EVO database and revision log.

Rejected changes are discarded but logged.

**FR5 – Barcode & Traceability**

Each traveler and corresponding board must have a unique barcode.

Barcode must link back to the digital traveler record.

**FR6 – Revision Control**

System must maintain a complete history of:

Date/time of changes.

User making change.

Approval details (if required).

Previous versions must remain accessible.

### **5.2 Non-Functional Requirements**

**Performance:** Traveler creation within 3 minutes including barcode generation.

**Scalability:** Handle 5,000+ concurrent traveler records.

**Availability:** 99% uptime target.

**Security:** RBAC enforced; audit logs mandatory.

**Usability:** Simple UI for non-technical users; intuitive approval workflow.

## **6. Data Requirements**

**Key Data Points Collected:**

* Job Number / Work Order Number
* Customer Name & PO Number
* PCB details, images, revisions
* BOM (materials, quantities, suppliers)
* Instructions (typed + written)
* Sequences (assembly, coating, testing, shipping steps)
* Labor hours (per process)
* Coating details (sent, received, inspected, tracking #)
* Packing Slip details (ship-to, kitting confirmation)
* Barcode IDs
* Revision log

**Data Usage:**

* Auto-population of dependent fields.
* Barcode traceability.
* Audit trail for compliance.
* Reporting for efficiency and errors.

## **7. Process Flow**

### **Traveler Creation (Initial Phase – Manual Entry)**

1. User creates traveler.
2. Enters job number, PO, BOM, instructions manually.
3. Traveler is saved and printed.
4. Digital record is saved in database in parallel.

### **Traveler Creation (Later Phase – Automated)**

1. User enters Job Number or Work Order Number.
2. System auto-populates BOM, PO, Customer data, revisions.
3. Barcode assigned automatically.
4. Traveler created digitally, printing optional.

### **Change Request Workflow**

1. User edits field.
2. If user is Kris or Adam → change saved immediately.
3. If user is not Kris/Adam → email sent to them for approval.
4. Once approved → database updated, revision log updated.

## **8. Risks & Mitigation**

* **Risk:** Resistance to digital-only travelers.
* **Mitigation:** Parallel run (paper + digital) for 1–2 months.
* **Risk:** Delayed approvals slow down workflow.
* **Mitigation:** Allow either Kris or Adam to approve (not both required).
* **Risk:** Errors in auto-populated data.
* **Mitigation:** Manual override with mandatory approval.

## **9. Reporting & Dashboards**

* Traveler completion reports.
* Pending approval reports.
* Revision history logs.
* Efficiency dashboards (manual vs auto-populated).

## **10. Training & Rollout Plan**

Phase 1: Training on digital traveler alongside paper.

Phase 2: Training on approval workflows.

Phase 3: Transition to full digital traveler management.

## **11. Sign-Off**

This TRD has been reviewed and agreed upon by stakeholders.

**Bruce – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_**  
**Leeann – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_**  
**Khash – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_**