Supplier Management & Data Capture Guide

For the Replit Development Agent

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1. Objective

This document provides a detailed technical guide for the Replit Agent to build the complete supplier data capture and management system. This system must support three distinct data entry workflows: **1) by the internal Avallen Solutions team**, **2) by the supplier directly**, and **3) by a client on behalf of their supplier**.

2. Part 1: Core Database & Service Enhancements

To support these workflows, we will modify the database schema and integrate a geocoding service.

2.1. Modification to verified_suppliers Table

This table will now serve as the master list for all suppliers, regardless of who submitted them, with a status to track their verification level.

Column Name	Data Type	Constraints	Description
... (existing columns)			
submitted_by	VARCHAR(50)	NOT NULL	Indicates who submitted the data ('ADMIN', 'SUPPLIER', 'CLIENT').
verification_status	VARCHAR(50)	NOT NULL, DEFAULT 'pending_review'	Status: 'pending_review', 'verified', 'client_provided'.
address_street	VARCHAR(255)	NULLABLE	Street address of the supplier's primary facility.
address_city	VARCHAR(100)	NULLABLE	City of the supplier's facility.

address_postal_code	VARCHAR(50)	NULLABLE	Postal/ZIP code.
address_country	VARCHAR(100)	NULLABLE	Country of the supplier's facility.
latitude	NUMERIC(9, 6)	NULLABLE	GPS latitude for distance calculation.
longitude	NUMERIC(9, 6)	NULLABLE	GPS longitude for distance calculation.

2.2. Service Integration: Geocoding API

- **Requirement:** The backend must integrate with a geocoding service (e.g., Google Maps Geocoding API or Nominatim) to convert physical addresses into latitude and longitude coordinates.
- **Logic:** Whenever a supplier's address is created or updated, a backend service will automatically fetch and save the coordinates. API keys must be stored in Replit Secrets.

3. Part 2: Workflow 1 - Data Entry by Avallen Solutions Team (Admin)

This is the internal workflow for adding fully vetted suppliers to the network.

3.1. Frontend (Admin Dashboard)

- **Location:** /app/suppliers page, visible only to admin users.
- **UI Component:** SupplierAdminTable listing all suppliers.
- **Action:** A primary button **"Add New Verified Supplier"**.
- **Form:** Clicking the button opens a multi-step form.
  - **Step 1: General Information:** Admin enters supplier_name, supplier_category, website, contact_email, and the full address.
  - **Step 2: Product Data:** Admin uses a repeatable form to add products. The form fields will be dynamically generated based on the supplier_category (as detailed in the previous version of this guide).

3.2. Backend Logic

- On form submission, a new record is created in the verified_suppliers table with submitted_by = 'ADMIN' and verification_status = 'verified'.
- The geocoding service is triggered to populate the latitude and longitude.
- The supplier and their products are immediately available to all clients in the network.

4. Part 3: Workflow 2 - Data Entry by the Supplier Directly

This workflow allows suppliers to onboard themselves after receiving an invitation.

4.1. Frontend (Supplier Portal)

- **Trigger:** A supplier receives a unique, secure invitation link via email (sent by an admin or a client).
- **Interface:** The link leads to a dedicated **Supplier Onboarding Portal**.
- **Form:** The portal will guide the supplier through a version of the dynamic data capture form:
  1. Create a simple account (using Replit Auth).
  2. Fill in their company's general and address information.
  3. Add their products using the same dynamic, category-specific forms.
  4. For any product-level data, they must be able to upload supporting documentation (e.g., spec sheets, EPDs).

4.2. Backend Logic

- On submission, a new record is created in verified_suppliers with submitted_by = 'SUPPLIER' and verification_status = 'pending_review'.
- An alert is sent to the admin team's review queue.
- **Admin Action:** An admin must review the submission and the supporting documents. If everything is correct, they change the verification_status to 'verified'. Only then does the supplier become visible in the main network.

5. Part 4: Workflow 3 - Data Entry by a Client

This workflow empowers clients to add their suppliers' data directly if they have it, without waiting for the supplier.

5.1. Frontend (Client Onboarding)

- **Location:** In the client's LCA data collection flow (e.g., when adding a bottle).
- **Trigger:** When searching for a supplier in the network, if the supplier is not found, a new option appears: **"Add your supplier's data manually."**
- **Interface:** Clicking this option opens a simplified version of the dynamic data capture form within a modal.
- **Form:** The client fills out the form with the data they have for their supplier and their specific product (e.g., Bottle Producer -> material, weight, recycled content, and the supplier's location).

5.2. Backend Logic

- On submission, a new record is created in verified_suppliers with submitted_by =

'CLIENT' and verification_status = 'client_provided'.
- A corresponding supplier_products entry is also created.
- **Crucially:** This client_provided data is **only visible and usable by the client who submitted it**. It does not appear in the general network for other clients.
- The data is immediately available for the client's own LCA calculation.
- The submission also creates a notification in the admin dashboard, flagging this new supplier as a potential candidate for official outreach and verification by the Avallen team.