

Database Schema

Drinks Sustainability Tool

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1. Introduction

This document provides a detailed description of the PostgreSQL database schema for the 'Drinks Sustainability Tool'. This schema defines the structure, data types, and relationships for all data stored within the platform.

2. Schema Diagram (Conceptual)

This diagram illustrates the relationships between the core tables.

erDiagram

```
users ||--o{ companies : "has"
companies ||--o{ company_data : "has"
companies ||--o{ products : "has"
companies ||--o{ suppliers : "manages"
companies ||--o{ reports : "generates"
products ||--o{ product_inputs : "has"
products ||--o{ reports : "is_about"
```

```
users {
    UUID id PK
    VARCHAR replit_user_id
    VARCHAR email
    VARCHAR name
    TIMESTAMP created_at
}
companies {
    UUID id PK
    UUID user_id FK
    VARCHAR company_name
    DATE reporting_period_start
    DATE reporting_period_end
    VARCHAR stripe_customer_id
    VARCHAR subscription_tier
```

```
}
company_data {
  UUID id PK
  UUID company_id FK
  VARCHAR data_type
  NUMERIC value
  VARCHAR unit
  DATERANGE reporting_period
}
products {
  UUID id PK
  UUID company_id FK
  VARCHAR sku_name
  VARCHAR product_type
}
product_inputs {
  UUID id PK
  UUID product_id FK
  VARCHAR input_type
  VARCHAR description
  NUMERIC value
  VARCHAR unit
}
suppliers {
  UUID id PK
  UUID company_id FK
  VARCHAR supplier_name
  VARCHAR supplier_email
  VARCHAR data_submission_status
}
reports {
  UUID id PK
  UUID company_id FK
  UUID product_id FK
  VARCHAR status
  TIMESTAMP generated_at
  JSONB report_data_json
  VARCHAR report_pdf_url
}
```

3. Table Definitions

users

Stores information about the individual users who can log in to the platform.

Column Name	Data Type	Constraints	Description
id	UUID	PRIMARY KEY	Unique identifier for the user.
replit_user_id	VARCHAR(255)	NOT NULL, UNIQUE	The user's unique ID from Replit Auth.
email	VARCHAR(255)	NOT NULL, UNIQUE	User's email address.
name	VARCHAR(255)		User's full name.
created_at	TIMESTAMPTZ	NOT NULL, DEFAULT now()	Timestamp of when the user account was created.

companies

Represents the client companies using the platform. Each user has one company.

Column Name	Data Type	Constraints	Description
id	UUID	PRIMARY KEY	Unique identifier for the company.
user_id	UUID	NOT NULL, FOREIGN KEY (users.id)	Links to the user who owns this company account.
company_name	VARCHAR(255)	NOT NULL	The legal name of the client's company.
reporting_period_start	DATE		Start date for the current reporting period.
reporting_period_end	DATE		End date for the current reporting

			period.
stripe_customer_id	VARCHAR(255)	UNIQUE	The customer ID from Stripe for billing.
subscription_tier	VARCHAR(50)	DEFAULT 'free'	The company's current subscription plan.

company_data

Stores the company's operational footprint data (Scope 1 & 2).

Column Name	Data Type	Constraints	Description
id	UUID	PRIMARY KEY	Unique identifier for the data entry.
company_id	UUID	NOT NULL, FOREIGN KEY (companies.id)	Links to the company this data belongs to.
data_type	VARCHAR(100)	NOT NULL	Type of data (e.g., 'electricity', 'diesel').
value	NUMERIC(12, 4)	NOT NULL	The numeric value of the data point.
unit	VARCHAR(50)	NOT NULL	The unit of measurement (e.g., 'kWh', 'litres').
reporting_period	DATERANGE	NOT NULL	The reporting period this data applies to.

products

Stores information about the specific product SKUs a company wants to analyze.

Column Name	Data Type	Constraints	Description
id	UUID	PRIMARY KEY	Unique identifier for the product SKU.
company_id	UUID	NOT NULL, FOREIGN	Links to the company

		KEY (companies.id)	that owns this product.
sku_name	VARCHAR(255)	NOT NULL	The name of the product SKU.
product_type	VARCHAR(100)		The category of the product (e.g., 'Spirit').

product_inputs

Stores the detailed input data required for a product's LCA calculation.

Column Name	Data Type	Constraints	Description
id	UUID	PRIMARY KEY	Unique identifier for the product input.
product_id	UUID	NOT NULL, FOREIGN KEY (products.id)	Links to the product this input belongs to.
input_type	VARCHAR(100)	NOT NULL	Category of input (e.g., 'raw_material').
description	TEXT		Description of the input (e.g., 'PET', 'Road Freight').
value	NUMERIC(12, 4)	NOT NULL	The numeric value of the input.
unit	VARCHAR(50)	NOT NULL	The unit of measurement (e.g., 'kg', 'tonne-km').

suppliers

Stores information about a company's contract manufacturers.

Column Name	Data Type	Constraints	Description
id	UUID	PRIMARY KEY	Unique identifier for the supplier.

company_id	UUID	NOT NULL, FOREIGN KEY (companies.id)	Links to the client company that invited them.
supplier_name	VARCHAR(255)	NOT NULL	The name of the supplier company.
supplier_email	VARCHAR(255)	NOT NULL	The contact email for the supplier.
data_submission_status	VARCHAR(50)	NOT NULL, DEFAULT 'pending'	The status of their data submission.

reports

Stores the generated LCA reports.

Column Name	Data Type	Constraints	Description
id	UUID	PRIMARY KEY	Unique identifier for the report.
company_id	UUID	NOT NULL, FOREIGN KEY (companies.id)	Links to the company the report is for.
product_id	UUID	FOREIGN KEY (products.id)	Links to the product (if it's a product report).
status	VARCHAR(50)	NOT NULL, DEFAULT 'draft'	The status of the report (e.g., 'approved').
generated_at	TIMESTAMPTZ	NOT NULL, DEFAULT now()	Timestamp of when the report was generated.
report_data_json	JSONB		Stores the detailed results from OpenLCA.
report_pdf_url	VARCHAR(255)		A link to the final, downloadable PDF report.