<https://gemini.google.com/u/1/app/39ab8052602be0ce>

<https://gemini.google.com/u/1/app/8f9ebd64aa0fd57f>

### Updated Production-Ready Specification: `public.tip\_categories\_master`

Version: 2.1

Date: May 18, 2025

1\. Purpose & Primary Use-Cases

Mission Statement: To define and manage a standardized list of categories for user-submitted tips (user\_waypoint\_short\_tips). This table supports multilingual display of category names (via public.translations), allows for associated metadata like icons and sort order, and enables consistent filtering and organization of tips across the platform. It includes audit fields for administrative changes.

Key User-Story Touchpoints:

\* Pilgrim (Anna): Indirectly benefits by seeing categorized tips, potentially with icons, and being able to filter tips by category.

\* Regional Manager (Sofia) & Admin Team: Directly use these categories for managing and understanding tip content, potentially in their preferred language within admin interfaces. Admins manage the available categories.

2\. Schema

| column | data\_type | constraints | description |

| `category\_code` | `text` | `PRIMARY KEY`, `NOT NULL` | Unique code for the category (e.g., 'practical\_advice', 'safety\_observation'). |

| `default\_name` | `text` | `NOT NULL` | Default human-readable name for the category in the primary reference language (e.g., English). (Translatable via `public.translations`) |

| `default\_description` | `text` | `NULLABLE` | Optional default detailed description of the category in the primary reference language. (Translatable via `public.translations`) |

| `icon\_identifier` | `text` | `NULLABLE` | Optional identifier for an icon associated with this category (e.g., 'icon-lightbulb', 'icon-warning'). |

| `is\_active` | `boolean` | `NOT NULL`, `DEFAULT true` | Whether the category is currently active and available for use/display. |

| `sort\_order` | `smallint` | `NOT NULL`, `DEFAULT 0` | Defines a sort order for displaying categories in UI lists. |

| `created\_at` | `timestamp with time zone` | `NOT NULL`, `DEFAULT now()` | Timestamp of when the category was created. |

| `updated\_at` | `timestamp with time zone` | `NOT NULL`, `DEFAULT now()` | Timestamp of when the category was last updated. Auto-updated by a trigger. |

| `created\_by\_profile\_id` | `uuid` | `NULLABLE`, `REFERENCES public.profiles(id) ON DELETE SET NULL` | Profile ID of the user who created this category. |

| `updated\_by\_profile\_id` | `uuid` | `NULLABLE`, `REFERENCES public.profiles(id) ON DELETE SET NULL` | Profile ID of the user who last updated this category. |

3\. PostgreSQL DDL

SQL

```

-- Table Definition for tip\_categories\_master

CREATE TABLE public.tip\_categories\_master (

category\_code text NOT NULL PRIMARY KEY,

default\_name text NOT NULL,

default\_description text NULL,

icon\_identifier text NULL,

is\_active boolean NOT NULL DEFAULT true,

sort\_order smallint NOT NULL DEFAULT 0,

created\_at timestamp with time zone NOT NULL DEFAULT now(),

updated\_at timestamp with time zone NOT NULL DEFAULT now(),

created\_by\_profile\_id uuid NULL REFERENCES public.profiles(id) ON DELETE SET NULL,

updated\_by\_profile\_id uuid NULL REFERENCES public.profiles(id) ON DELETE SET NULL

);

-- Comments on Table and Columns

COMMENT ON TABLE public.tip\_categories\_master IS 'Master table for defining categories for user-submitted tips, supporting i18n, icons, audit, and lifecycle. Version 2.1.';

COMMENT ON COLUMN public.tip\_categories\_master.category\_code IS 'PK. Unique code for the category (e.g., ''practical\_advice'', ''safety\_observation'').'; [cite: 499]

COMMENT ON COLUMN public.tip\_categories\_master.default\_name IS 'Default human-readable name for the category in the primary reference language (e.g., English). (Translatable via public.translations)';

COMMENT ON COLUMN public.tip\_categories\_master.default\_description IS 'Optional default detailed description of the category in the primary reference language. (Translatable via public.translations)';

COMMENT ON COLUMN public.tip\_categories\_master.icon\_identifier IS 'Optional identifier for an icon associated with this category (e.g., ''icon-lightbulb'', ''icon-warning'').'; [cite: 503]

COMMENT ON COLUMN public.tip\_categories\_master.is\_active IS 'Whether the category is currently active and available for use/display. Defaults to true.'; [cite: 504]

COMMENT ON COLUMN public.tip\_categories\_master.sort\_order IS 'Defines a sort order for displaying categories in UI lists. Defaults to 0.'; [cite: 505]

COMMENT ON COLUMN public.tip\_categories\_master.created\_at IS 'Timestamp of when the category was created.'; [cite: 506]

COMMENT ON COLUMN public.tip\_categories\_master.updated\_at IS 'Timestamp of when the category was last updated. Auto-updated by a trigger.'; [cite: 507]

COMMENT ON COLUMN public.tip\_categories\_master.created\_by\_profile\_id IS 'Profile ID of the user who created this category. FK to profiles.id. ON DELETE SET NULL.';

COMMENT ON COLUMN public.tip\_categories\_master.updated\_by\_profile\_id IS 'Profile ID of the user who last updated this category. FK to profiles.id. ON DELETE SET NULL.';

-- Indexes

CREATE INDEX ix\_tip\_categories\_master\_active\_order ON public.tip\_categories\_master (is\_active, sort\_order);

CREATE INDEX ix\_tip\_categories\_master\_created\_by ON public.tip\_categories\_master (created\_by\_profile\_id) WHERE created\_by\_profile\_id IS NOT NULL;

CREATE INDEX ix\_tip\_categories\_master\_updated\_by ON public.tip\_categories\_master (updated\_by\_profile\_id) WHERE updated\_by\_profile\_id IS NOT NULL;

-- Trigger for updated\_at timestamp (Ensure public.handle\_updated\_at() function exists)

CREATE TRIGGER on\_tip\_categories\_master\_updated\_at

BEFORE UPDATE ON public.tip\_categories\_master

FOR EACH ROW

EXECUTE FUNCTION public.handle\_updated\_at(); -- Assuming public.handle\_updated\_at() is the standard function [cite: 508]

-- Trigger for cleaning up related translations (Ensure public.cleanup\_tip\_categories\_master\_translations() function is created)

CREATE OR REPLACE FUNCTION public.cleanup\_tip\_categories\_master\_translations()

RETURNS TRIGGER AS $$

BEGIN

DELETE FROM public.translations

WHERE table\_identifier = 'tip\_categories\_master'

AND row\_foreign\_key = OLD.category\_code;

RETURN OLD;

END;

$$ LANGUAGE plpgsql SECURITY DEFINER;

CREATE TRIGGER trigger\_cleanup\_translations\_on\_tip\_category\_delete

AFTER DELETE ON public.tip\_categories\_master

FOR EACH ROW

EXECUTE FUNCTION public.cleanup\_tip\_categories\_master\_translations();

COMMENT ON TRIGGER trigger\_cleanup\_translations\_on\_tip\_category\_delete ON public.tip\_categories\_master IS 'Cleans up orphaned translations from public.translations when a tip category is deleted.';

-- RLS Policies

ALTER TABLE public.tip\_categories\_master ENABLE ROW LEVEL SECURITY;

CREATE POLICY "Admins can manage tip categories"

ON public.tip\_categories\_master FOR ALL

TO authenticated

USING (public.has\_role\_on\_profile(auth.uid(), 'admin\_platform')) -- Adjust role check as needed

WITH CHECK (public.has\_role\_on\_profile(auth.uid(), 'admin\_platform')); -- Adjust role check as needed

CREATE POLICY "Public can view active tip categories"

ON public.tip\_categories\_master FOR SELECT

USING (is\_active = true);

COMMENT ON POLICY "Admins can manage tip categories" ON public.tip\_categories\_master IS 'Allows platform administrators (or users with equivalent roles) to manage all tip categories.';

COMMENT ON POLICY "Public can view active tip categories" ON public.tip\_categories\_master IS 'Allows all users (anonymous and authenticated) to view active tip categories.';

```

4\. JSON Schema Mirror

JSON

```

{

"title": "tip\_category\_master",

"description": "Defines a standardized category for user-submitted tips, supporting i18n, icons, audit, and lifecycle. Version 2.1.",

"type": "object",

"properties": {

"category\_code": {

"type": "string",

"description": "PK. Unique code for the category (e.g., 'practical\_advice')."

},

"default\_name": {

"type": "string",

"description": "Default human-readable name for the category in the primary reference language (e.g., English). (Translatable via public.translations)"

},

"default\_description": {

"type": ["string", "null"],

"description": "Optional default detailed description of the category in the primary reference language. (Translatable via public.translations)"

},

"icon\_identifier": {

"type": ["string", "null"],

"description": "Optional identifier for an icon associated with this category (e.g., 'icon-lightbulb')."

},

"is\_active": {

"type": "boolean",

"default": true,

"description": "Whether the category is currently active and available for use/display."

},

"sort\_order": {

"type": "integer",

"format": "int16",

"default": 0,

"description": "Defines a sort order for displaying categories in UI lists."

},

"created\_at": {

"type": "string",

"format": "date-time",

"description": "Timestamp of when the category was created.",

"readOnly": true

},

"updated\_at": {

"type": "string",

"format": "date-time",

"description": "Timestamp of when the category was last updated. Auto-updated by a trigger.",

"readOnly": true

},

"created\_by\_profile\_id": {

"type": ["string", "null"],

"format": "uuid",

"description": "Profile ID of the user who created this category. FK to profiles.id."

},

"updated\_by\_profile\_id": {

"type": ["string", "null"],

"format": "uuid",

"description": "Profile ID of the user who last updated this category. FK to profiles.id."

}

},

"required": [

"category\_code",

"default\_name",

"is\_active",

"sort\_order",

"created\_at",

"updated\_at"

],

"primary\_key": ["category\_code"],

"foreign\_keys": [

{"columns": ["created\_by\_profile\_id"], "references\_table": "public.profiles", "references\_columns": ["id"], "on\_delete": "SET NULL"},

{"columns": ["updated\_by\_profile\_id"], "references\_table": "public.profiles", "references\_columns": ["id"], "on\_delete": "SET NULL"}

]

}

```

5\. Relationships & Integrity

- Primary Key: `category\_code` (text).

- Foreign Key Relationship (Incoming): Referenced by `user\_waypoint\_short\_tips.tip\_category\_code` with `ON DELETE SET NULL` and `ON UPDATE CASCADE`.

- Audit Relationships: `created\_by\_profile\_id` and `updated\_by\_profile\_id` reference `public.profiles(id)` with `ON DELETE SET NULL`.

- Translations: `default\_name` and `default\_description` are stored in the primary reference language. Other language versions are stored in `public.translations` table, linked by `table\_identifier = 'tip\_categories\_master'`, `column\_identifier = ('default\_name' or 'default\_description')`, and `row\_foreign\_key = tip\_categories\_master.category\_code`. The `trigger\_cleanup\_translations\_on\_tip\_category\_delete` ensures orphaned translations are removed.

- Mermaid ER Snippet:

Code snippet

```

erDiagram

profiles { uuid id PK }

tip\_categories\_master {

text category\_code PK

text default\_name "(Translatable)"

text default\_description "(Translatable)"

text icon\_identifier

boolean is\_active

smallint sort\_order

uuid created\_by\_profile\_id FK

uuid updated\_by\_profile\_id FK

timestamptz created\_at

timestamptz updated\_at

}

user\_waypoint\_short\_tips {

bigint id PK

text tip\_category\_code FK

}

translations {

text table\_identifier

text column\_identifier

text row\_foreign\_key

text language\_code FK

}

tip\_categories\_master ||--o{ user\_waypoint\_short\_tips : "categorizes"

tip\_categories\_master }o--o| profiles : "created\_by"

tip\_categories\_master }o--o| profiles : "updated\_by"

tip\_categories\_master ..> translations : "default\_name translated\_in"

tip\_categories\_master ..> translations : "default\_description translated\_in"

```

6\. Multilingual Strategy

- The `default\_name` and `default\_description` columns store the category's name and description in the primary reference language (e.g., English).

- These fields are translatable via the `public.translations` table.

- The `trigger\_cleanup\_translations\_on\_tip\_category\_delete` ensures that when a category is deleted, its associated translations are also removed from `public.translations`.

7\. Role-Based Workflow & RLS Notes

- Key Fields for Roles/Workflows: `is\_active` (managed by Admins to control visibility/usability). Audit columns `created\_by\_profile\_id` and `updated\_by\_profile\_id` track administrative changes.

- RLS Policies:

- Admins (e.g., users with `admin\_platform` role) have full CRUD access.

- All users (including anonymous) can read active (`is\_active = true`) categories. This is essential for populating category filters and displaying category information in the UI.

8\. ENUM vs Lookup Discussion

- This table \*is\* a lookup table, which is appropriate for managing categories that require i18n, icons, sort order, an active status, and auditability. It replaces the previous `tip\_category\_enum`.

9\. UI/UX Enablement

- Columns powering UI: `default\_name` (translated via `public.translations`), `default\_description` (translated), `icon\_identifier`, `is\_active`, `sort\_order`.

- Indexed Fields for UX Performance: `ix\_tip\_categories\_master\_active\_order` supports efficient fetching of active categories in the desired display order. The Primary Key on `category\_code` ensures fast lookups.

10\. Auditing & Lifecycle Management

- Audit Columns: `created\_at`, `updated\_at` (auto-updated by `public.handle\_updated\_at` trigger), `created\_by\_profile\_id`, `updated\_by\_profile\_id`.

- Lifecycle: Managed by the `is\_active` boolean. Admins can deactivate categories to retire them without deleting, preserving historical data integrity for tips already using those categories (though `ON DELETE SET NULL` is on `user\_waypoint\_short\_tips.tip\_category\_code`).

11\. Scalability & Future-Proofing

- Scalability: The table is expected to remain small and performant.

- Future-Proofing: The structure with `icon\_identifier`, `sort\_order`, and robust auditing and i18n support is well-suited for future enhancements.

12\. Seed Data (Example)

It's recommended to seed this table with initial categories. created\_by\_profile\_id and updated\_by\_profile\_id should be set to an admin user's UUID.

SQL

```

-- Example Seed Data (replace [ADMIN\_UUID] with an actual admin profile\_id)

INSERT INTO public.tip\_categories\_master

(category\_code, default\_name, default\_description, icon\_identifier, is\_active, sort\_order, created\_by\_profile\_id, updated\_by\_profile\_id)

VALUES

('practical\_advice', 'Practical Advice', 'General tips related to practicality, gear, or general information.', 'icon-lightbulb', true, 10, '[ADMIN\_UUID]', '[ADMIN\_UUID]'),

('safety\_observation', 'Safety Observation', 'Tips related to safety, warnings, or potential hazards.', 'icon-warning', true, 20, '[ADMIN\_UUID]', '[ADMIN\_UUID]'),

('hidden\_gem', 'Hidden Gem', 'Tips about lesser-known spots or positive experiences.', 'icon-star', true, 30, '[ADMIN\_UUID]', '[ADMIN\_UUID]'),

('poi\_correction', 'POI Correction', 'Tips suggesting corrections to Point of Interest information.', 'icon-edit', true, 40, '[ADMIN\_UUID]', '[ADMIN\_UUID]');

-- Corresponding example entries in public.translations would be needed for 'it', etc.

-- E.g., for 'practical\_advice' name in Italian:

-- INSERT INTO public.translations (table\_identifier, column\_identifier, row\_foreign\_key, language\_code, translated\_text, created\_by\_profile\_id, updated\_by\_profile\_id)

-- VALUES ('tip\_categories\_master', 'default\_name', 'practical\_advice', 'it', 'Consigli Pratici', '[ADMIN\_UUID]', '[ADMIN\_UUID]');

```

13\. Next-Action Checklist

- 🔴 Create Table & Indexes: Execute the DDL for `public.tip\_categories\_master`, including audit columns and new indexes.

- 🔴 Implement `updated\_at` Trigger: Ensure `public.handle\_updated\_at()` function exists and create the `on\_tip\_categories\_master\_updated\_at` trigger.

- 🔴 Implement Orphaned Translation Cleanup Trigger: Create the `public.cleanup\_tip\_categories\_master\_translations()` function and the `trigger\_cleanup\_translations\_on\_tip\_category\_delete` trigger.

- 🔴 Implement RLS Policies: Apply the defined RLS policies for admin management and public read access.

- 🔴 Seed Data: Populate with initial categories and ensure corresponding primary language entries are set. Plan for adding translations into the `public.translations` table.

- 🟢 Define `icon\_identifier` Convention: Establish a clear convention for `icon\_identifier` values (e.g., CSS class names, SVG file names/IDs) and ensure frontend components can interpret them.

- 🟢 Verify Foreign Key in `user\_waypoint\_short\_tips`: Confirm that `user\_waypoint\_short\_tips.tip\_category\_code` is updated to correctly reference `tip\_categories\_master.category\_code` with `ON DELETE SET NULL` and `ON UPDATE CASCADE`.