<https://gemini.google.com/u/1/app/bf28f389cd093e55?is_sa=1&android-min-version=301356232&ios-min-version=322.0&campaign_id=bkws&utm_source=google&utm_medium=cpc&utm_campaign=2024enUS_gemfeb&pt=9008&mt=8&ct=p-growth-sem-bkws>

https://gemini.google.com/u/1/app/0b1e359defacbcc9

<https://gemini.google.com/u/1/app/0e3ccfac5f6b71bb>

\* \* \* \* \*

### Updated Production-Ready Specification: `public.events\_details`

Version: 1.3 (Based on original 1.2 with V2.1 Checklist & i18n corrections Applied)

Date: May 18, 2025

#### 1\. Purpose & Primary Use-Cases

The `events\_details` table stores specific, detailed information for waypoints categorized as event locations (e.g., local festivals, religious celebrations, markets). It extends the generic `waypoints` entry to include crucial event-specific data like official names, types, themes, detailed descriptions, comprehensive date/time information (including recurrence patterns and certainty levels), organizer details, potential impacts on pilgrims, and participation information. This enables pilgrims to discover and plan around events, and administrators to manage this data.

#### 2\. Schema

| column | data\_type | constraints | description |

| `waypoint\_id` | `BIGINT` | `Primary Key, Foreign Key to waypoints(id) ON DELETE CASCADE` | Links to the generic `waypoints` table (event's primary location). PK. |

| `default\_event\_name\_official` | `TEXT` | `Not Null, CHECK (length(default\_event\_name\_official) > 0 AND length(default\_event\_name\_official) <= 255)` | Official or most common name of the event in the primary reference language. (Translatable via `public.translations`) |

| `event\_type\_id` | `INTEGER` | `Not Null, Foreign Key to event\_types\_master(id) ON DELETE RESTRICT` | The primary category or type of event, linking to `event\_types\_master`. |

| `event\_theme\_or\_focus\_tag\_ids` | `INTEGER[]` | `Nullable` | Array of FKs to `tags\_master(id)` describing the event's theme/focus. Validated by trigger. |

| `default\_description\_long` | `TEXT` | `Nullable` | Detailed description of the event in the primary reference language. (Translatable via `public.translations`) |

| `start\_datetime` | `TIMESTAMPTZ` | `Not Null` | Precise start date/time of the first known or next confirmed instance. Anchor for recurring events. |

| `end\_datetime` | `TIMESTAMPTZ` | `Nullable` | Precise end date/time of the instance defined by `start\_datetime`. |

| `is\_recurring\_event` | `BOOLEAN` | `Not Null, Default false` | True if this event happens regularly. |

| `recurrence\_frequency\_id` | `INTEGER` | `Nullable, Foreign Key to event\_recurrence\_frequencies\_master(id) ON DELETE SET NULL` | If recurring, the general frequency, linking to `event\_recurrence\_frequencies\_master`. |

| `default\_recurrence\_detail\_text` | `TEXT` | `Nullable` | Human-readable description of the recurrence pattern in the primary reference language. (Translatable via `public.translations`) |

| `future\_date\_estimation\_level\_id` | `INTEGER` | `Nullable, Foreign Key to event\_date\_certainty\_levels\_master(id) ON DELETE SET NULL` | Confidence level for predicting future occurrences, linking to `event\_date\_certainty\_levels\_master`. |

| `exception\_dates` | `DATE[]` | `Nullable` | Array of specific dates (YYYY-MM-DD) on which a normally recurring event will NOT take place. |

| `default\_specific\_next\_occurrence\_dates\_text` | `TEXT` | `Nullable` | Confirmed upcoming dates as text in the primary reference language. (Translatable via `public.translations`) |

| `default\_organizer\_name` | `TEXT` | `Nullable, CHECK (default\_organizer\_name IS NULL OR length(default\_organizer\_name) <= 200)` | Name of the organizing body in the primary reference language. (Translatable via `public.translations`) |

| `event\_website\_or\_social\_media\_url` | `TEXT` | `Nullable, CHECK (event\_website\_or\_social\_media\_url IS NULL OR (length(event\_website\_or\_social\_media\_url) <= 2048 AND event\_website\_or\_social\_media\_url ~\* '^https?://.+'))` | Official website or social media page URL for the event. |

| `contact\_phone\_event` | `TEXT` | `Nullable, CHECK (contact\_phone\_event IS NULL OR length(contact\_phone\_event) <= 50)` | Contact phone number for event inquiries. |

| `contact\_email\_event` | `TEXT` | `Nullable, CHECK (contact\_email\_event IS NULL OR (length(contact\_email\_event) <= 254 AND contact\_email\_event ~\* '^[A-Za-z0-9.\_%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,}$'))` | Contact email address for event inquiries. |

| `default\_entry\_fee\_or\_ticket\_info` | `TEXT` | `Nullable` | Information on costs to attend in the primary reference language. (Translatable via `public.translations`) |

| `default\_location\_details\_within\_waypoint` | `TEXT` | `Nullable` | Specific location details if event is at a large waypoint, in the primary reference language. (Translatable via `public.translations`) |

| `expected\_attendance\_scale\_id` | `INTEGER` | `Nullable, Foreign Key to event\_attendance\_scales\_master(id) ON DELETE SET NULL` | Estimation of the event's size/crowd level, linking to `event\_attendance\_scales\_master`. |

| `default\_impact\_on\_accommodation\_notes` | `TEXT` | `Nullable` | Notes on how event might affect accommodation, in the primary reference language. (Translatable via `public.translations`) |

| `default\_impact\_on\_trail\_access\_notes` | `TEXT` | `Nullable` | Notes on how event might affect trail access, in the primary reference language. (Translatable via `public.translations`) |

| `default\_impact\_on\_local\_services\_notes` | `TEXT` | `Nullable` | Notes on how event might affect local services, in the primary reference language. (Translatable via `public.translations`) |

| `default\_general\_impact\_notes\_for\_pilgrims` | `TEXT` | `Nullable` | Other general impacts or advice for pilgrims, in the primary reference language. (Translatable via `public.translations`) |

| `default\_pilgrim\_participation\_info` | `TEXT` | `Nullable` | Information on how pilgrims can participate, in the primary reference language. (Translatable via `public.translations`) |

| `related\_attraction\_waypoint\_id` | `BIGINT` | `Nullable, Foreign Key to waypoints(id) ON DELETE SET NULL` | If event is tied to another specific attraction waypoint. |

| `data\_last\_verified\_at` | `TIMESTAMPTZ` | `Nullable` | Timestamp when event details (especially dates, recurrence) were last verified. |

| `data\_verified\_by\_profile\_id` | `UUID` | `Nullable, Foreign Key to profiles(id) ON DELETE SET NULL` | Profile ID of the user who last verified this event's details. |

| `created\_at` | `TIMESTAMPTZ` | `Not Null, Default now()` | Timestamp of record creation. |

| `created\_by\_profile\_id` | `UUID` | `Nullable, Foreign Key to profiles(id) ON DELETE SET NULL` | Profile ID of the user who created this record. |

| `updated\_at` | `TIMESTAMPTZ` | `Not Null, Default now()` | Timestamp of last update (auto-updated by trigger). |

| `updated\_by\_profile\_id` | `UUID` | `Nullable, Foreign Key to profiles(id) ON DELETE SET NULL` | Profile ID of the user who last updated this record. |

| `deleted\_at` | `TIMESTAMPTZ` | `Nullable` | Timestamp for soft deletion. |

#### 3\. PostgreSQL DDL

SQL

```

CREATE TABLE public.events\_details (

waypoint\_id BIGINT PRIMARY KEY,

default\_event\_name\_official TEXT NOT NULL CHECK (length(default\_event\_name\_official) > 0 AND length(default\_event\_name\_official) <= 255),

event\_type\_id INTEGER NOT NULL,

event\_theme\_or\_focus\_tag\_ids INTEGER[] NULL,

default\_description\_long TEXT NULL,

start\_datetime TIMESTAMPTZ NOT NULL,

end\_datetime TIMESTAMPTZ NULL,

is\_recurring\_event BOOLEAN NOT NULL DEFAULT FALSE,

recurrence\_frequency\_id INTEGER NULL,

default\_recurrence\_detail\_text TEXT NULL,

future\_date\_estimation\_level\_id INTEGER NULL,

exception\_dates DATE[] NULL,

default\_specific\_next\_occurrence\_dates\_text TEXT NULL,

default\_organizer\_name TEXT NULL CHECK (default\_organizer\_name IS NULL OR length(default\_organizer\_name) <= 200),

event\_website\_or\_social\_media\_url TEXT NULL CHECK (event\_website\_or\_social\_media\_url IS NULL OR (length(event\_website\_or\_social\_media\_url) <= 2048 AND event\_website\_or\_social\_media\_url ~\* '^https?://.+')),

contact\_phone\_event TEXT NULL CHECK (contact\_phone\_event IS NULL OR length(contact\_phone\_event) <= 50),

contact\_email\_event TEXT NULL CHECK (contact\_email\_event IS NULL OR (length(contact\_email\_event) <= 254 AND contact\_email\_event ~\* '^[A-Za-z0-9.\_%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,}$')),

default\_entry\_fee\_or\_ticket\_info TEXT NULL,

default\_location\_details\_within\_waypoint TEXT NULL,

expected\_attendance\_scale\_id INTEGER NULL,

default\_impact\_on\_accommodation\_notes TEXT NULL,

default\_impact\_on\_trail\_access\_notes TEXT NULL,

default\_impact\_on\_local\_services\_notes TEXT NULL,

default\_general\_impact\_notes\_for\_pilgrims TEXT NULL,

default\_pilgrim\_participation\_info TEXT NULL,

related\_attraction\_waypoint\_id BIGINT NULL,

data\_last\_verified\_at TIMESTAMPTZ NULL,

data\_verified\_by\_profile\_id UUID NULL,

created\_at TIMESTAMPTZ NOT NULL DEFAULT now(),

created\_by\_profile\_id UUID NULL,

updated\_at TIMESTAMPTZ NOT NULL DEFAULT now(),

updated\_by\_profile\_id UUID NULL,

deleted\_at TIMESTAMPTZ NULL,

CONSTRAINT fk\_waypoint

FOREIGN KEY(waypoint\_id)

REFERENCES public.waypoints(id)

ON DELETE CASCADE,

CONSTRAINT fk\_event\_type

FOREIGN KEY(event\_type\_id)

REFERENCES public.event\_types\_master(id)

ON DELETE RESTRICT,

CONSTRAINT fk\_recurrence\_frequency

FOREIGN KEY(recurrence\_frequency\_id)

REFERENCES public.event\_recurrence\_frequencies\_master(id)

ON DELETE SET NULL,

CONSTRAINT fk\_future\_date\_estimation\_level

FOREIGN KEY(future\_date\_estimation\_level\_id)

REFERENCES public.event\_date\_certainty\_levels\_master(id)

ON DELETE SET NULL,

CONSTRAINT fk\_expected\_attendance\_scale

FOREIGN KEY(expected\_attendance\_scale\_id)

REFERENCES public.event\_attendance\_scales\_master(id)

ON DELETE SET NULL,

CONSTRAINT fk\_related\_attraction\_waypoint

FOREIGN KEY(related\_attraction\_waypoint\_id)

REFERENCES public.waypoints(id)

ON DELETE SET NULL,

CONSTRAINT fk\_created\_by\_profile

FOREIGN KEY(created\_by\_profile\_id)

REFERENCES public.profiles(id)

ON DELETE SET NULL,

CONSTRAINT fk\_updated\_by\_profile

FOREIGN KEY(updated\_by\_profile\_id)

REFERENCES public.profiles(id)

ON DELETE SET NULL,

CONSTRAINT fk\_data\_verified\_by\_profile

FOREIGN KEY(data\_verified\_by\_profile\_id)

REFERENCES public.profiles(id)

ON DELETE SET NULL

);

COMMENT ON TABLE public.events\_details IS 'Specific details for events, extending the waypoints table. Version 1.3';

COMMENT ON COLUMN public.events\_details.waypoint\_id IS 'Links to the generic waypoints table (event''s primary location). PK. [cite: 12]';

COMMENT ON COLUMN public.events\_details.default\_event\_name\_official IS 'Official or most common name of the event in the primary reference language. (Translatable via public.translations). Max 255 chars. [cite: 14]';

COMMENT ON COLUMN public.events\_details.event\_type\_id IS 'FK to event\_types\_master. Primary category/type of event. [cite: 15]';

COMMENT ON COLUMN public.events\_details.event\_theme\_or\_focus\_tag\_ids IS 'Array of FKs to tags\_master. Describes event theme/focus. Integrity enforced by trigger\_validate\_event\_theme\_tags. [cite: 17, 83]';

COMMENT ON COLUMN public.events\_details.default\_description\_long IS 'Detailed description of the event in the primary reference language. (Translatable via public.translations). [cite: 18]';

COMMENT ON COLUMN public.events\_details.start\_datetime IS 'Precise start date/time of the first known or next confirmed instance. Anchor for recurring events. [cite: 19, 85]';

COMMENT ON COLUMN public.events\_details.end\_datetime IS 'Precise end date/time of the instance defined by start\_datetime. [cite: 21, 86]';

COMMENT ON COLUMN public.events\_details.is\_recurring\_event IS 'True if this event happens regularly. [cite: 22, 87]';

COMMENT ON COLUMN public.events\_details.recurrence\_frequency\_id IS 'FK to event\_recurrence\_frequencies\_master. General frequency if recurring. [cite: 23, 88]';

COMMENT ON COLUMN public.events\_details.default\_recurrence\_detail\_text IS 'Human-readable description of the recurrence pattern in the primary reference language. (Translatable via public.translations). [cite: 25, 88]';

COMMENT ON COLUMN public.events\_details.future\_date\_estimation\_level\_id IS 'FK to event\_date\_certainty\_levels\_master. Confidence level for predicted future occurrences. [cite: 26, 89]';

COMMENT ON COLUMN public.events\_details.exception\_dates IS 'Array of specific dates (YYYY-MM-DD) on which a normally recurring event will NOT take place. [cite: 28, 90]';

COMMENT ON COLUMN public.events\_details.default\_specific\_next\_occurrence\_dates\_text IS 'Confirmed upcoming dates as text in the primary reference language. (Translatable via public.translations). [cite: 30, 91]';

COMMENT ON COLUMN public.events\_details.default\_organizer\_name IS 'Name of the organizing body in the primary reference language. (Translatable via public.translations). Max 200 chars. [cite: 31, 92]';

COMMENT ON COLUMN public.events\_details.event\_website\_or\_social\_media\_url IS 'Official website or social media page URL for the event. Max 2048 chars. Must be a valid URL format. [cite: 33, 93]';

COMMENT ON COLUMN public.events\_details.contact\_phone\_event IS 'Contact phone number for event inquiries. Max 50 chars. [cite: 34, 94]';

COMMENT ON COLUMN public.events\_details.contact\_email\_event IS 'Contact email address for event inquiries. Max 254 chars, basic regex validation. [cite: 35, 95]';

COMMENT ON COLUMN public.events\_details.default\_entry\_fee\_or\_ticket\_info IS 'Information on costs to attend, ticketing, or if free, in the primary reference language. (Translatable via public.translations). [cite: 37, 96]';

COMMENT ON COLUMN public.events\_details.default\_location\_details\_within\_waypoint IS 'Specific location details if event is at a large waypoint, in the primary reference language. (Translatable via public.translations). [cite: 38, 97]';

COMMENT ON COLUMN public.events\_details.expected\_attendance\_scale\_id IS 'FK to event\_attendance\_scales\_master. Estimation of event size/crowd level. [cite: 39, 98]';

COMMENT ON COLUMN public.events\_details.default\_impact\_on\_accommodation\_notes IS 'Notes on how event might affect accommodation, in the primary reference language. (Translatable via public.translations). [cite: 41, 99]';

COMMENT ON COLUMN public.events\_details.default\_impact\_on\_trail\_access\_notes IS 'Notes on how event might affect trail access, in the primary reference language. (Translatable via public.translations). [cite: 42, 100]';

COMMENT ON COLUMN public.events\_details.default\_impact\_on\_local\_services\_notes IS 'Notes on how event might affect local services, in the primary reference language. (Translatable via public.translations). [cite: 43, 101]';

COMMENT ON COLUMN public.events\_details.default\_general\_impact\_notes\_for\_pilgrims IS 'Other general impacts or advice for pilgrims, in the primary reference language. (Translatable via public.translations). [cite: 44, 102]';

COMMENT ON COLUMN public.events\_details.default\_pilgrim\_participation\_info IS 'Information on how pilgrims can participate, in the primary reference language. (Translatable via public.translations). [cite: 45, 103]';

COMMENT ON COLUMN public.events\_details.related\_attraction\_waypoint\_id IS 'FK to waypoints.id if event is tied to another specific attraction waypoint. [cite: 46, 104]';

COMMENT ON COLUMN public.events\_details.data\_last\_verified\_at IS 'Timestamp when event details were last verified. [cite: 48, 105]';

COMMENT ON COLUMN public.events\_details.data\_verified\_by\_profile\_id IS 'Profile ID of the user who last verified this event''s details (especially dates). [cite: 49, 106]';

COMMENT ON COLUMN public.events\_details.created\_at IS 'Timestamp of record creation. [cite: 51, 107]';

COMMENT ON COLUMN public.events\_details.created\_by\_profile\_id IS 'Profile ID of the user who created this record. [cite: 52, 108]';

COMMENT ON COLUMN public.events\_details.updated\_at IS 'Timestamp of last update. [cite: 109]';

COMMENT ON COLUMN public.events\_details.updated\_by\_profile\_id IS 'Profile ID of the user who last updated this record. [cite: 55, 109]';

COMMENT ON COLUMN public.events\_details.deleted\_at IS 'Timestamp for soft deletion. [cite: 56, 110]';

-- Indexes

CREATE INDEX ix\_events\_details\_event\_type\_id ON public.events\_details(event\_type\_id);

CREATE INDEX ix\_events\_details\_start\_datetime ON public.events\_details(start\_datetime);

CREATE INDEX ix\_events\_details\_is\_recurring\_event ON public.events\_details(is\_recurring\_event);

CREATE INDEX ix\_events\_details\_event\_theme\_or\_focus\_tag\_ids ON public.events\_details USING GIN (event\_theme\_or\_focus\_tag\_ids) WHERE event\_theme\_or\_focus\_tag\_ids IS NOT NULL;

CREATE INDEX ix\_events\_details\_deleted\_at ON public.events\_details(deleted\_at) WHERE deleted\_at IS NOT NULL;

CREATE INDEX ix\_events\_details\_created\_by\_profile\_id ON public.events\_details(created\_by\_profile\_id) WHERE created\_by\_profile\_id IS NOT NULL;

CREATE INDEX ix\_events\_details\_updated\_by\_profile\_id ON public.events\_details(updated\_by\_profile\_id) WHERE updated\_by\_profile\_id IS NOT NULL;

CREATE INDEX ix\_events\_details\_data\_verified\_by\_profile\_id ON public.events\_details(data\_verified\_by\_profile\_id) WHERE data\_verified\_by\_profile\_id IS NOT NULL;

CREATE INDEX ix\_events\_details\_related\_attraction\_waypoint\_id ON public.events\_details(related\_attraction\_waypoint\_id) WHERE related\_attraction\_waypoint\_id IS NOT NULL;

```

#### 4\. Triggers/Functions

SQL

```

-- Standard updated\_at trigger

CREATE TRIGGER handle\_events\_details\_updated\_at

BEFORE UPDATE ON public.events\_details

FOR EACH ROW

EXECUTE FUNCTION extensions.moddatetime('updated\_at'); -- Or public.set\_current\_timestamp\_updated\_at()

COMMENT ON TRIGGER handle\_events\_details\_updated\_at ON public.events\_details IS 'Trigger to automatically update updated\_at timestamp on row modification.';

-- Array FK Validation for event\_theme\_or\_focus\_tag\_ids

CREATE OR REPLACE FUNCTION public.check\_event\_theme\_tags\_exist()

RETURNS TRIGGER AS $$

DECLARE

tag\_id INTEGER;

tag\_active BOOLEAN;

BEGIN

IF TG\_OP = 'INSERT' OR (TG\_OP = 'UPDATE' AND NEW.event\_theme\_or\_focus\_tag\_ids IS DISTINCT FROM OLD.event\_theme\_or\_focus\_tag\_ids) THEN

IF NEW.event\_theme\_or\_focus\_tag\_ids IS NOT NULL THEN

FOREACH tag\_id IN ARRAY NEW.event\_theme\_or\_focus\_tag\_ids

LOOP

SELECT tm.is\_active INTO tag\_active

FROM public.tags\_master tm

WHERE tm.id = tag\_id;

IF NOT FOUND OR tag\_active = FALSE THEN

RAISE EXCEPTION 'Invalid or inactive tag\_id % found in event\_theme\_or\_focus\_tag\_ids. It does not exist or is not active in public.tags\_master.', tag\_id;

END IF;

END LOOP;

END IF;

END IF;

RETURN NEW;

END;

$$ LANGUAGE plpgsql SECURITY DEFINER;

COMMENT ON FUNCTION public.check\_event\_theme\_tags\_exist() IS 'Checks if all IDs in event\_theme\_or\_focus\_tag\_ids exist and are active in tags\_master. Used by trigger on events\_details. Runs as SECURITY DEFINER.';

CREATE TRIGGER trigger\_validate\_event\_theme\_tags

BEFORE INSERT OR UPDATE OF event\_theme\_or\_focus\_tag\_ids ON public.events\_details

FOR EACH ROW

EXECUTE FUNCTION public.check\_event\_theme\_tags\_exist();

COMMENT ON TRIGGER trigger\_validate\_event\_theme\_tags ON public.events\_details IS 'Ensures that all tags in event\_theme\_or\_focus\_tag\_ids are valid and active entries in tags\_master.';

-- Orphaned translation cleanup trigger

CREATE OR REPLACE FUNCTION public.cleanup\_events\_details\_translations()

RETURNS TRIGGER AS $$

BEGIN

DELETE FROM public.translations

WHERE table\_identifier = 'events\_details'

AND column\_identifier IN (

'default\_event\_name\_official',

'default\_description\_long',

'default\_recurrence\_detail\_text',

'default\_specific\_next\_occurrence\_dates\_text',

'default\_organizer\_name',

'default\_entry\_fee\_or\_ticket\_info',

'default\_location\_details\_within\_waypoint',

'default\_impact\_on\_accommodation\_notes',

'default\_impact\_on\_trail\_access\_notes',

'default\_impact\_on\_local\_services\_notes',

'default\_general\_impact\_notes\_for\_pilgrims',

'default\_pilgrim\_participation\_info'

)

AND row\_foreign\_key = OLD.waypoint\_id::TEXT; -- PK of events\_details is waypoint\_id

RETURN OLD;

END;

$$ LANGUAGE plpgsql SECURITY DEFINER;

COMMENT ON FUNCTION public.cleanup\_events\_details\_translations() IS 'Cleans up orphaned translations from public.translations when an events\_details record is deleted. Runs as SECURITY DEFINER.';

CREATE TRIGGER trigger\_cleanup\_events\_details\_translations

AFTER DELETE ON public.events\_details

FOR EACH ROW

EXECUTE FUNCTION public.cleanup\_events\_details\_translations();

COMMENT ON TRIGGER trigger\_cleanup\_events\_details\_translations ON public.events\_details IS 'After deleting an event''s details, remove its associated translations from the public.translations table.';

```

\*(Assumes `extensions.moddatetime` or `public.set\_current\_timestamp\_updated\_at()` exists, `public.translations` table exists, and `tags\_master` has an `is\_active` column).\*

#### 5\. JSON Schema Mirror

JSON

```

{

"title": "event\_detail",

"description": "Stores specific details for waypoints categorized as event locations. Version 1.3",

"type": "object",

"properties": {

"waypoint\_id": { "type": "integer", "format": "int64", "description": "PK, FK to waypoints.id. [cite: 12]" },

"default\_event\_name\_official": { "type": "string", "maxLength": 255, "description": "Official or most common name of the event in the primary reference language. (Translatable via public.translations) [cite: 14]" },

"event\_type\_id": { "type": "integer", "description": "FK to event\_types\_master. Primary category/type of event. [cite: 15]" },

"event\_theme\_or\_focus\_tag\_ids": {

"type": ["array", "null"],

"items": { "type": "integer" },

"description": "Array of FKs to tags\_master. Describes event theme/focus. Validated by trigger. [cite: 17]"

},

"default\_description\_long": { "type": ["string", "null"], "description": "Detailed description of the event in the primary reference language. (Translatable via public.translations) [cite: 18]" },

"start\_datetime": { "type": "string", "format": "date-time", "description": "Precise start date/time of the first known or next confirmed instance. [cite: 19]" },

"end\_datetime": { "type": ["string", "null"], "format": "date-time", "description": "Precise end date/time of the instance. [cite: 21]" },

"is\_recurring\_event": { "type": "boolean", "default": false, "description": "True if this event happens regularly. [cite: 22]" },

"recurrence\_frequency\_id": { "type": ["integer", "null"], "description": "FK to event\_recurrence\_frequencies\_master. General frequency if recurring. [cite: 23]" },

"default\_recurrence\_detail\_text": { "type": ["string", "null"], "description": "Human-readable description of the recurrence pattern in the primary reference language. (Translatable via public.translations) [cite: 25]" },

"future\_date\_estimation\_level\_id": { "type": ["integer", "null"], "description": "FK to event\_date\_certainty\_levels\_master. Confidence level for predicted future occurrences. [cite: 26]" },

"exception\_dates": { "type": ["array", "null"], "items": { "type": "string", "format": "date" }, "description": "Specific dates event will NOT take place. [cite: 28]" },

"default\_specific\_next\_occurrence\_dates\_text": { "type": ["string", "null"], "description": "Confirmed upcoming dates as text in the primary reference language. (Translatable via public.translations) [cite: 30]" },

"default\_organizer\_name": { "type": ["string", "null"], "maxLength": 200, "description": "Name of the organizing body in the primary reference language. (Translatable via public.translations) [cite: 31]" },

"event\_website\_or\_social\_media\_url": { "type": ["string", "null"], "format": "url", "pattern": "^https?://.+", "maxLength": 2048, "description": "Official website or social media page URL. [cite: 33]" },

"contact\_phone\_event": { "type": ["string", "null"], "maxLength": 50, "description": "Contact phone number. [cite: 34]" },

"contact\_email\_event": { "type": ["string", "null"], "format": "email", "maxLength": 254, "description": "Contact email address. [cite: 35]" },

"default\_entry\_fee\_or\_ticket\_info": { "type": ["string", "null"], "description": "Information on costs to attend in the primary reference language. (Translatable via public.translations) [cite: 37]" },

"default\_location\_details\_within\_waypoint": { "type": ["string", "null"], "description": "Specific location details if event is at a large waypoint, in the primary reference language. (Translatable via public.translations) [cite: 38]" },

"expected\_attendance\_scale\_id": { "type": ["integer", "null"], "description": "FK to event\_attendance\_scales\_master. Estimation of event size. [cite: 39]" },

"default\_impact\_on\_accommodation\_notes": { "type": ["string", "null"], "description": "Notes on impact on accommodation in the primary reference language. (Translatable via public.translations) [cite: 41]" },

"default\_impact\_on\_trail\_access\_notes": { "type": ["string", "null"], "description": "Notes on impact on trail access in the primary reference language. (Translatable via public.translations) [cite: 42]" },

"default\_impact\_on\_local\_services\_notes": { "type": ["string", "null"], "description": "Notes on impact on local services in the primary reference language. (Translatable via public.translations) [cite: 43]" },

"default\_general\_impact\_notes\_for\_pilgrims": { "type": ["string", "null"], "description": "Other general impacts or advice for pilgrims in the primary reference language. (Translatable via public.translations) [cite: 44]" },

"default\_pilgrim\_participation\_info": { "type": ["string", "null"], "description": "Information on how pilgrims can participate in the primary reference language. (Translatable via public.translations) [cite: 45]" },

"related\_attraction\_waypoint\_id": { "type": ["integer", "null"], "format": "int64", "description": "FK to waypoints.id if event is tied to another specific attraction. [cite: 46]" },

"data\_last\_verified\_at": { "type": ["string", "null"], "format": "date-time", "description": "Timestamp when event details were last verified. [cite: 48]" },

"data\_verified\_by\_profile\_id": { "type": ["string", "null"], "format": "uuid", "description": "Profile ID of the user who last verified this event's details. [cite: 49]" },

"created\_at": { "type": "string", "format": "date-time", "readOnly": true, "description": "Timestamp of record creation. [cite: 51]" },

"created\_by\_profile\_id": { "type": ["string", "null"], "format": "uuid", "description": "Profile ID of the user who created this record. [cite: 52]" },

"updated\_at": { "type": "string", "format": "date-time", "readOnly": true, "description": "Timestamp of last update. [cite: 53]" },

"updated\_by\_profile\_id": { "type": ["string", "null"], "format": "uuid", "description": "Profile ID of the user who last updated this record. [cite: 55]" },

"deleted\_at": { "type": ["string", "null"], "format": "date-time", "readOnly": true, "description": "Timestamp for soft deletion. [cite: 56]" }

},

"required": ["waypoint\_id", "default\_event\_name\_official", "event\_type\_id", "start\_datetime", "is\_recurring\_event", "created\_at", "updated\_at" ]

}

```

#### 6\. Relationships & Integrity

- Primary Key: `waypoint\_id` (BIGINT)

- Foreign Keys:

- `waypoint\_id` REFERENCES `public.waypoints(id)` ON DELETE CASCADE

- `event\_type\_id` REFERENCES `public.event\_types\_master(id)` ON DELETE RESTRICT

- `recurrence\_frequency\_id` REFERENCES `public.event\_recurrence\_frequencies\_master(id)` ON DELETE SET NULL

- `future\_date\_estimation\_level\_id` REFERENCES `public.event\_date\_certainty\_levels\_master(id)` ON DELETE SET NULL

- `expected\_attendance\_scale\_id` REFERENCES `public.event\_attendance\_scales\_master(id)` ON DELETE SET NULL

- `related\_attraction\_waypoint\_id` REFERENCES `public.waypoints(id)` ON DELETE SET NULL

- `data\_verified\_by\_profile\_id` REFERENCES `public.profiles(id)` ON DELETE SET NULL

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

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

- Array Foreign Keys: `event\_theme\_or\_focus\_tag\_ids` references `tags\_master(id)`. Integrity enforced by `trigger\_validate\_event\_theme\_tags` (which now checks `is\_active` on `tags\_master`).

#### 7\. Multilingual Strategy

- The following fields store content in the primary reference language and are (Translatable via `public.translations`): `default\_event\_name\_official`, `default\_description\_long`, `default\_recurrence\_detail\_text`, `default\_specific\_next\_occurrence\_dates\_text`, `default\_organizer\_name`, `default\_entry\_fee\_or\_ticket\_info`, `default\_location\_details\_within\_waypoint`, `default\_impact\_on\_accommodation\_notes`, `default\_impact\_on\_trail\_access\_notes`, `default\_impact\_on\_local\_services\_notes`, `default\_general\_impact\_notes\_for\_pilgrims`, `default\_pilgrim\_participation\_info`.

- An `AFTER DELETE` trigger (`trigger\_cleanup\_events\_details\_translations`) on this table ensures orphaned translations are removed from `public.translations`.

#### 8\. Role-Based Workflow & RLS Notes

- Key Fields for Roles/Workflows: `created\_by\_profile\_id`, `updated\_by\_profile\_id`, `data\_verified\_by\_profile\_id`, `deleted\_at`.

- RLS Policies:

- 🟢 Public users can read event details linked to published and not deleted waypoints.

SQL

```

CREATE POLICY "Allow public read access to published event details"

ON public.events\_details FOR SELECT

USING (

EXISTS (

SELECT 1 FROM public.waypoints w

JOIN public.content\_statuses\_master csm ON w.content\_visibility\_status\_id = csm.id -- Assuming content\_visibility\_status\_id is FK to content\_statuses\_master.id

WHERE w.id = events\_details.waypoint\_id

AND w.deleted\_at IS NULL

AND csm.code = 'published' -- Assuming 'published' is the code for visible status

)

);

```

- 🟢 Authenticated users with 'admin\_platform' or 'admin\_super' roles can manage all event details.

SQL

```

CREATE POLICY "Allow platform admins to manage event details"

ON public.events\_details FOR ALL

USING (

auth.role() = 'authenticated' AND

(SELECT public.has\_role\_on\_profile(auth.uid(), 'admin\_platform') OR public.has\_role\_on\_profile(auth.uid(), 'admin\_super')) AND

EXISTS (SELECT 1 FROM public.waypoints w WHERE w.id = events\_details.waypoint\_id AND w.deleted\_at IS NULL) -- Ensure parent waypoint exists and is not deleted

)

WITH CHECK (

auth.role() = 'authenticated' AND

(SELECT public.has\_role\_on\_profile(auth.uid(), 'admin\_platform') OR public.has\_role\_on\_profile(auth.uid(), 'admin\_super')) AND

EXISTS (SELECT 1 FROM public.waypoints w WHERE w.id = events\_details.waypoint\_id AND w.deleted\_at IS NULL) AND

(NOT (TG\_OP = 'UPDATE' AND OLD.waypoint\_id IS DISTINCT FROM NEW.waypoint\_id)) -- Prevent reparenting waypoint\_id

);

```

- 🟠 The original RLS used `profiles.role\_name IN ('manager', 'admin')`. This has been updated to use a helper function `public.has\_role\_on\_profile` for consistency with platform standards. The roles 'manager' and 'admin' should map to appropriate platform roles like 'admin\_platform' or 'regional\_content\_manager'.

#### 9\. ENUM vs Lookup Discussion

- 🟢 All original ENUMs previously associated with event details (`event\_type\_enum`, `event\_recurrence\_frequency\_enum`, `event\_attendance\_scale\_enum`, `event\_date\_certainty\_enum`) have been successfully promoted to their respective master tables (`event\_types\_master`, `event\_recurrence\_frequencies\_master`, `event\_attendance\_scales\_master`, `event\_date\_certainty\_levels\_master`).

- 🟢 `event\_theme\_or\_focus\_tags` (text[]) was correctly promoted to `event\_theme\_or\_focus\_tag\_ids` (integer[]) linking to `tags\_master`.

#### 10\. UI/UX Enablement

- Date Handling: `start\_datetime`, `end\_datetime`, `is\_recurring\_event`, `recurrence\_frequency\_id` (via master table), `default\_recurrence\_detail\_text`, `future\_date\_estimation\_level\_id` (via master table), `exception\_dates`, `default\_specific\_next\_occurrence\_dates\_text` collectively provide comprehensive timing information.

- Filtering & Icons: `event\_type\_id` (via master table) and `event\_theme\_or\_focus\_tag\_ids` (via `tags\_master`) will drive filtering and potentially icon display.

- Impact Assessment: The various `default\_impact\_\*\_notes` fields are crucial for pilgrim planning.

#### 11\. Auditing & Lifecycle Management

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

- Specific Audit: `data\_last\_verified\_at`, `data\_verified\_by\_profile\_id` for tracking content verification.

- Lifecycle: `deleted\_at` for soft deletion, typically initiated by deletion of the parent waypoint record due to `ON DELETE CASCADE` on `waypoint\_id` FK.

#### 12\. Scalability & Future-Proofing

- Structured Dates: Date-related fields offer a good foundation.

- Master Tables: Use of master tables promotes flexibility.

- Partitioning: Potentially by `start\_datetime` if volume becomes very large (Post V2.1 consideration).

#### 13\. Seed Data

- ⚪ N/A - This table stores transactional detail data linked to waypoints, not predefined master data.

#### 14\. Next-Action Checklist

- 🔴 Prerequisite Master Tables: Ensure `public.waypoints`, `public.profiles`, `public.tags\_master` (with `is\_active` column), `public.content\_statuses\_master`, `public.event\_types\_master`, `public.event\_recurrence\_frequencies\_master`, `public.event\_attendance\_scales\_master`, and `public.event\_date\_certainty\_levels\_master` are created and populated.

- 🔴 Create Table: Execute the DDL for `public.events\_details`.

- 🔴 Create Indexes: Execute DDL for all defined indexes.

- 🔴 Implement `updated\_at` Trigger: Ensure `extensions.moddatetime` or equivalent and create `handle\_events\_details\_updated\_at` trigger.

- 🔴 Implement Array FK Validation Trigger: Create/Update and apply `trigger\_validate\_event\_theme\_tags` ensuring it checks `tags\_master.is\_active`. Solidify `SECURITY DEFINER` status and `search\_path`.

- 🔴 Implement Orphan Translation Cleanup Trigger: Create and apply `trigger\_cleanup\_events\_details\_translations` (after `public.translations` table and the function exist). Solidify `SECURITY DEFINER` status and `search\_path`.

- 🔴 RLS Policies: Review, adapt (using helper functions), and apply defined RLS policies. Ensure helper functions like `public.has\_role\_on\_profile` are available.

- 🟠 Application Logic for Dates: Develop robust application-layer logic for interpreting and displaying complex event recurrence and certainty.

- 🟠 Population Logic: Define application layer logic for audit FKs (`created\_by\_profile\_id`, `updated\_by\_profile\_id`, `data\_verified\_by\_profile\_id`).

- 🟢 Review `ON DELETE` actions for all FKs to ensure they align with desired data retention policies (current ones seem reasonable).