

THE BEE TEAM . PRODUCT CANON

As-Built Spec

What is live today

The current-state map of Pollinator Oasis - the shipped screens, the auth reality, the routes, and the design system - reconciled against the running code, never speculative.

VERSION	DOCUMENT	BRAND
v1.0.10	Product Canon	Crown Bees

Shipped-skin coordinates: btt-server v61 . client EAS build 24 . main 69ed4b5

Contents

- Section 1 - Version and deploy state
- Section 2 - Authentication (the corrected record)
- Section 3 - What ships today (the shipped app)
- Section 3a - Per-screen code pointers (at product `main` `69ed4b5`)
- Section 4 - Design system (the live skin)
- Section 5 - Provenance

Durable document (designated Session 310, 2026-07-05). One of the three canonical project documents per the Hub methodology **[[10-Three-Documents-Product-Canon]]** (`~/Documents/Claude/Vaults/The Hub/25 Methodology/10-Three-Documents-Product-Canon.md`). This is the **As-Built** - it answers "what is live right now?" and is the **first document a session reads** to establish product state, before the git log. **Version: v1.0.10** (v1.0 MVP + BT-094 security response headers + the S322 GDD-chart cache-invalidation fix + the BT-062 in-app "Ask" / AI BeeBot feature + BT-106 native guest sign-in + v1.0.5 login/nav polish + v1.0.6 forecast-day pollen & GDD/Ask UI + v1.0.7 evening-pollen fix + v1.0.8 server-hardening fixes + v1.0.9 cache-log coordinate redaction + v1.0.10 weather setup-form disabled-button visual; current production). **Production coordinates: btt-server v61, client EAS build 24, product main 69ed4b5** . Living copy: this file. Dated, version-stamped snapshots under `documents/snapshots/` . Companions (the canon is **four documents**): **UX Flow Atlas** (`ux-flow-atlas.md` - the desired experience, persona-by-flow), **To Build Spec** (`next-build-spec.md` - what we build next + the plan: roadmap, LOE, prioritization), and **Design System** (`design-system.md` - the look-and-feel basis, referenced from Section 4). Fidelity: **the built product = production truth**, reconciled against the running code - never speculative.

Fidelity note. This v1.0 captures the **current-state map** (what ships, the auth reality, the routes, the design system) at a trustworthy summary fidelity, reconciled against the code. The **per-screen pixel-grade As-Built detail** (every shipped screen's exact layout, tokens, and components) is deepened from the design-system reference and per-screen recon in a later pass; the summary below is authoritative for "what is live" today.

v1.0 / MVP gate met (2026-07-05, Session 314). v0.9 + the in-flight auth work shipped to production at **btt-server v50**: the email-OTP flow is now **wired into the app UI** (welcome-hero- first, email-step-first) and the login captcha carries the canonical circle-less bee icon. The deploy is **machine-verified** - the v50 bundle served from `app.mybeeccloud.com` has the prod Supabase host, the real Turnstile site key (not the test-key), and the same-origin `/trpc` base all baked; the active machine's health check passes; root serves HTTP 200. The **interactive on-device e2e** (Turnstile renders + Guest anonymous sign-in + email-OTP all complete on the real host) is Scott's confirmation step, pending at the time of this fold - not asserted here.

SECTION

Section 1 - Version and deploy state

Fact	Value
Version	v1.0.10 (v1.0 MVP + BT-094 security response headers + S322 GDD-chart cache-invalidation fix + BT-062 in-app "Ask" / AI BeeBot + BT-106 native guest sign-in + v1.0.5 login/nav polish + v1.0.6 forecast-day pollen & GDD/Ask UI + v1.0.7 evening-pollen fix + v1.0.8 server-hardening fixes + v1.0.9 cache-log coordinate redaction + v1.0.10 weather setup-form disabled-button visual)
Production server	Fly.io app <code>btt-server</code> , v61 (deployed 2026-07-12, Session 364 - BT-023/E2 cache-log coordinate redaction; v60 = v1.0.8 server-hardening fixes from the S359 full-build review, 2026-07-12, Session 363; v59 = BT-115 evening-pollen fix, 2026-07-11, Session 357; v58 = BT-115 forecast-day pollen, 2026-07-11, Session 355; v57 = BT-106 native guest sign-in, 2026-07-10, Session 349; v56 = BT-113 fail-closed rate limiters, 2026-07-10, Session 346; v55 = BT-101 native email-OTP server-mediated send, 2026-07-09; v54 = BT-062 in-app "Ask" / AI BeeBot, Session 325; v53 = the S322 GDD-chart fix; v52 = BT-094 headers, Session 317; v50 = the v1.0 MVP, Session 314)
Product repo	<code>~/projects/the-bee-team/</code> , main @ <code>69ed4b5</code>
Production host	<code>app.mybeecloud.com</code>
v1.0 (MVP) gate	MET - the in-flight auth work (email-OTP wired into the app UI) shipped at v50
v1.0.1 delta	BT-094 security response headers at the Fly origin - enforcing CSP (<code>@fastify/helmet</code> , config-derived source lists) + HSTS 1yr/includeSubDomains (no preload) + X-Frame-Options DENY + nosniff + Referrer-Policy strict-origin-when-cross-origin + Permissions-Policy (geolocation=self, rest disabled). Shipped Report-Only (v51) -> walked to zero live prod violations -> flipped enforcing (v52). Server suite 370/370.
v1.0.2 delta	GDD-chart cache-invalidation fix (btt-server v53, Session 322): <code>addPlant</code> / <code>removePlant</code> now invalidate <code>garden.yardAwareness</code> so the My Yard chart refreshes without a remount.
v1.0.3 delta	BT-062 in-app "Ask" / AI BeeBot (btt-server v54, Session 325): the center orange "Ask" FAB opens <code>/(app)/ask</code> . Native (iOS/Android) embeds the Crown Bees / Rep "AI BeeBot" assistant in a WebView (device-smoked green, S322). Web renders a graceful <code>ask.web.tsx</code> state (the canonical <code>BeeIcon</code> + "AI BeeBot", framed by the app chrome) - an app-owned <code>.web.tsx</code> split that keeps native-only <code>react-native-webview</code> (which has no web build) out of the web bundle, so <code>/ask</code> on web shows the badge, not rnw's "does not support this platform" error. Merge integrated cleanly with v53; QA green (typecheck 0 / eslint 0 / client jest 143 / server 370 / build:web ok); the deployed <code>/ask</code> web render machine-verified (Beelcon "AI BeeBot" state, no red error, 0 page errors). Rep boundary: BT-037 (no hosted AI - Rep is a partner-provided webview assistant), BT-056 (single-click-out), BT-061 (revenue separability).

Fact	Value
v1.0.4 delta	BT-106 native guest sign-in (btt-server v57, Session 349): the native "Guest" button now works. Previously <code>supabase.auth.signInAnonymously()</code> hit Supabase's project-wide captcha gate (Turnstile is web-only), so native Guest always returned "Could not start a guest session". Fixed the BT-101 way - a server-mediated <code>auth.guestSignIn</code> tRPC mutation authenticated as service-role (bypasses captcha to GoTrue source), guarded by a new fail-closed per-IP guest limiter (<code>btt:rl:guest-ip</code> , 5/hr, via the BT-113 <code>withFallback</code> composition); native calls it then <code>supabase.auth.setSession(...)</code> . Web unchanged (Turnstile still gates it). A wire-transport defect caught at delivery (the <code>z.void()</code> mutation over <code>httpLink</code> sent an empty body Fastify 400'd before the resolver ran) was fixed by moving the native auth client to <code>httpBatchLink</code> + a new SP-7 HTTP wire test (<code>auth-guest.http.test.ts</code>). QA green (server 424/424, client 159/159, typecheck 0 / eslint 0 / ASCII clean); on-device verified on iOS TestFlight build 17 (Guest AND email OTP both work).
v1.0.5 delta	Login send-feedback + first-tap fix + bottom-nav sizing (client EAS build 20; server unchanged at v57). The login send button shows a "Sending ..." in-flight label and <code>keyboardShouldPersistTaps="handled"</code> fixes the swallowed first tap (<code>b38666e</code> , Session 351); bottom-nav icons + labels enlarged 24->28 / 10.5->12 with the center AI FAB frozen, RED-first test guarding the sizes (<code>7c20794</code> , Session 353). Client-only, no server deploy.
v1.0.6 delta	BT-115 forecast-day pollen + GDD off the Weather daily card + Ask label spacing (btt-server v58; client EAS build 22, superseding 21). Weather forecast pollen is now per-date Google Pollen (<code>days=5</code>) aligned to the selected forecast day by ISO date (<code>79fe2c3</code> , Session 355, server v58); GDD removed from the Weather daily card (GDD is the Yard's readout; plants/detail untouched) and all five nav labels aligned to 0.1 letterSpacing (<code>f61c7a0</code> , Session 355, build 22). RED-first tests both.
v1.0.7 delta	BT-115 evening-pollen fix (btt-server v59; build 22 unchanged). <code>pollen-service.ts</code> rebuilt as a rolling per-location day-union cache that survives Google's 00:00-UTC forecast rollover, plus a Redis persistence tier (<code>pollen:days:<coord></code> , 48h TTL, best-effort). RED-first 9 new tests; server 439/439, client 168/168, tsc + eslint clean (<code>ab829c7</code> , Session 357, server v59). SHIPPED - awaiting Scott's evening-window verification (2026-07-12).
v1.0.8 delta	Server-hardening fixes from the S359 full-build review (btt-server v60, Session 363; client build 22 unchanged). Nine server-side fixes, each RED-first: coordinate-free weather error surface (svc-2, a live BT-023 fix - errors no longer leak raw lat/long), graceful SIGTERM/SIGINT shutdown so deploys stop cutting in-flight work (dat-2), postgres <code>prepare:false</code> for the Supabase transaction pooler (dat-3), an AbortSignal timeout on the LocationIQ geocoder (svc-1), a fire-and-forget best-effort pollen Redis write (svc-4), <code>SUPABASE_SERVICE_ROLE_KEY</code> shape validation at config load (BT-103), and a <code>UNIQUE (user_id, plant_key)</code> constraint on <code>garden_plant</code> with an idempotent <code>onConflictDoNothing addPlant</code> so a double-tap no longer creates duplicate cards (rtr-1). Migration 0023 (dedupe-before-constrain) applied to prod: 0 rows deleted (no existing dupes), constraint validated/enforcing . Gates: server 467/467 , typecheck + lint clean. Pre-deploy key gate passed (the live prod service-role key passes the new shape guard). Fast-forward merge <code>fa95cce</code> .. <code>7019363</code> ; folds the non-deployed dat-1 dev-seed guard (<code>fa95cce</code>).
v1.0.9 delta	Cache-log coordinate redaction (btt-server v61, Session 364; client build 22 unchanged). The weather (<code>service.ts</code> , DEBUG) and pollen (<code>pollen-service.ts</code> , WARN) best-effort Redis cache helpers logged the raw cache key - which embeds a 2dp (~1.1 km) coordinate (<code>wx:forecast:<lat>,<lon></code> / <code>pollen:days:<lat>,<lon></code>) - and the cache-op timeout embedded that key in its <code>Error</code> message, so the coordinate also rode out inside the logged <code>err</code> . A shared <code>redactCoordKey</code> (in <code>coords.ts</code>) now replaces the coordinate tail with <code><coord></code> across all 6 log/error vectors (both services: timeout message + get log + set log), keeping the useful key namespace. Defense-in-depth extending BT-023 (whose letter is user surfaces) to operator logs (E2). Zero end-user impact - the real cache key is unchanged, so cache behaviour, forecast data, and API responses are byte-for-byte identical; only what is logged is redacted. No migration, no client change. RED-first (10 tests failed for the right reason -> GREEN); gates server 475/475 , typecheck + lint clean. Commit <code>bd8e102</code> (pushed, deployed); reversible to v60 (<code>deployment-01KXC6PH...</code>).

Fact	Value
v1.0.10 delta	Weather setup-form disabled-button visual (client EAS build 24, Session 368; btt-server v61 unchanged). Both Weather location-setup action buttons (<code>set-address-button</code> + <code>use-device-location-button</code> in <code>apps/client/app/(app)/weather.tsx</code>) now apply an inline <code>style={{ opacity: 0.5 }}</code> when disabled, matching the shared <code>LocationSetup</code> component's <code>styles.btnDisabled</code> - previously they rendered solid <code>bg-cb-green</code> while inert, so an empty-address / mid-mutation button looked tappable (the S366 A2 Phase 2 native-verify defect, BT-117/wx-1). Inline style, not a <code>NativeWind opacity-50</code> class (which does not resolve to an inspectable style on raw RN components). RED-first (3 tests); client 177/177 , typecheck + eslint clean. Commit <code>69ed4b5</code> , client EAS build 24 . Client-only, no server deploy. Shipped to TestFlight via the alttool direct-upload bypass - the EAS submission queue stalled undischatched ~16 min and was cancelled (CANCELED, no double-upload), then the binary uploaded to App Store Connect in 5.8 s (Delivery UUID <code>e12e8959...</code>), <code>processingState</code> VALID.

SECTION

Section 2 - Authentication (the corrected record)

Shipped auth = email one-time-code (OTP) / magic-link via Supabase, delivered via Resend.

- The auth flow is a **Supabase email magic-link / OTP** flow, **proven in production** across

Sessions 299-301. **Resend** is the transactional email service (decision D3, S161) and the likely SMTP delivery path for the auth emails (delivery detail to confirm).

- **Shopify OIDC was scaffolded** (Plan 4) **but never shipped**. Any impression from the git

history that production auth is Shopify is wrong - it is email-OTP. Consult this document, not the git log, for the auth reality.

- Login itself was **verified working at v47** (S290 cw end-to-end; S291 Scott on device - "login

works and the banner is gone"). Production is now **v50**.

- **Email-OTP is now WIRED into the app UI and deployed (v50, Session 314)**. The entry flow opens

welcome-hero-first, then email-step-first (`37e4caa`); the login captcha carries the canonical circle-less bee icon

(`f293004` + `69e7b18`). This wiring + deploy is exactly the **v1.0 / MVP** work that closed the gate. The v50 bundle is

machine-verified (prod Supabase host + real Turnstile key + same-origin `/trpc` all baked; health passing). The

interactive on-device e2e - Turnstile renders, Guest completes the anonymous sign-in, email-OTP completes end-to-end on the real host - is Scott's confirmation step, pending at fold time (the plain preview cannot exercise it: test-key Turnstile tokens are server-rejected by Supabase and the static preview has no backend - an environmental artifact proven in S312/S313, not a product defect).

- The auth sender identity renders as **"Pollinator Oasis"** (the app's name; MVP ships Crown Bees

visual branding - independent branding is BT-095, post-MVP).

SECTION

Section 3 - What ships today (the shipped app)

INFORMATION ARCHITECTURE

The shipped screen map

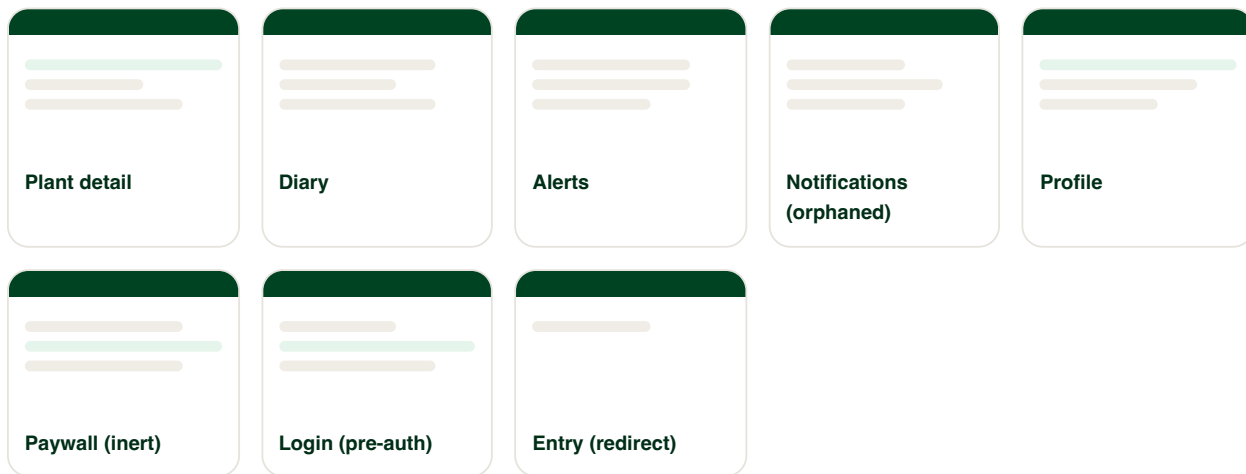
SCHEMATIC - NOT PRODUCTION PIXELS

The 13 screens live in production today (As-Built Section 3a), grouped by the Bottom Tab Bar. The pixel-perfect production capture gallery is the gated BT-102 Unit 2c work - these are wireframe schematics, never fabricated screenshots.

PRIMARY NAVIGATION - THE BOTTOM TAB BAR



SECONDARY SCREENS + PRE-AUTH



The shipped app is the **post-login product** the onboarding funnel (Atlas) will feed into.

Pre-auth: a login / Welcome screen (`login.tsx`) with the wired email-OTP entry (welcome-hero- first -> email-step-first) and a web captcha (Turnstile) captioned with the canonical circle-less bee icon. Guest (anonymous sign-in) and email-OTP are the two entry paths.

Authenticated app (routes):

Screen	Route / note
Home	<code>/ (app) / welcome</code> - weather box, a GO/WAIT/HOLD release-decision banner, top alert, this-week's-advice, yard-awareness, Shop. This is the post-login Home, not the pre-auth welcome (that lives in <code>login.tsx</code>) - keep the two straight.
Weather	forecast + pollen + location setup
Ask	<code>/ (app) / ask</code> - the center orange "Ask" FAB. Native: embeds the Crown Bees / Rep "AI BeeBot" assistant in a WebView (device-smoked green, BT-062). Web: a graceful <code>ask.web.tsx</code> state (canonical <code>BeeIcon</code> + "AI BeeBot"), the <code>.web.tsx</code> split keeping native-only <code>react-native-webview</code> out of the web bundle. Partner-assistant boundary: BT-037 / BT-056 / BT-061.
My Yard	release decision, seasonal GDD / bloom chart, plant cards, add/remove
Advice	species to-dos
Plant detail	per-plant detail
Diary	seasonal diary
Alerts	alert feed
Notifications	currently orphaned (no in-app way to reach it)
Profile	account / profile
Paywall	present but inert / unreachable in-app

Facts that shape the next builds:

- **Notifications** is orphaned (BT-117) and **Paywall** is unreachable (BT-024) - the funnel must

wire their entry points. v1.0 / MVP shipped **auth-only**; wiring these entry points is deferred to a later version (BT-117 notifications entry; BT-024 paywall / subscription).

- **Native captcha is deferred** (web-only Turnstile today) - the native auth path uses the server-mediated captcha bypass instead (BT-113 owns the abuse-control question).

- The app boots **mock-backed, zero backend** in the iOS / Android sims (``cd apps/client && pnpm dev , press i / a``).

SECTION

Section 3a - Per-screen code pointers (at product `main` `69ed4b5`)

Per BT-102 Section 1a #2 / the Hub SOP: the route file, key `@btt/ui` components, and backing server procedures per screen, at the shipped commit. tRPC namespaces map to `apps/server/src/routers/<namespace>.ts` (barrel: `apps/server/src/router.ts`); `@btt/ui` components live in `packages/ui/src/components/` + `charts/` (see the Design System doc, Section 5).

Screen	Route file (<code>apps/client/</code>)	Key <code>@btt/ui</code>	Backing procedures
Home	<code>app/(app)/welcome.tsx</code> -> <code>components/WelcomeScreen.tsx</code>	DecisionBanner, AlertCard, YardAwarenessCard, WeeklyTipSheet, Card, Button, Typography	<code>garden.getReleaseDecision</code> , <code>garden.yardAwareness</code> , <code>weather.forecast</code> , <code>weather.myLocation</code> , <code>alerts.list</code> , <code>tip.current</code> / <code>markSeen</code> / <code>maybeLater</code> , <code>subscription.status</code>
Weather	<code>app/(app)/weather.tsx</code>	Card, PollenGauge, Typography	<code>weather.forecast</code> , <code>weather.myLocation</code> , <code>weather.pollen</code> , <code>weather.setLocation</code>
Ask	<code>app/(app)/ask.tsx</code> (+ <code>ask.web.tsx</code>)	colors (WebView-based; <code>Ionicons</code>)	none - embeds the Rep "AI BeeBot" WebView (BT-062); web = <code>ask.web.tsx</code> graceful state
My Yard	<code>app/(app)/plants.tsx</code>	PlantCard, AddPlantCard, BloomConfirmRow, DecisionBanner, GddYearChart, Pill, Card, Button	<code>garden.listGardenPlants</code> / <code>addPlant</code> / <code>removePlant</code> / <code>getProfile</code> / <code>upsertProfile</code> / <code>getReleaseDecision</code> / <code>yardAwareness</code> / <code>confirmBloom</code> / <code>deferBloom</code> , <code>weather.gddYear</code> / <code>myLocation</code>
Advice	<code>app/(app)/advice.tsx</code>	SpeciesAccordion, ActionDetailSheet, Typography	<code>garden.adviceFeed</code> , <code>garden.markAdviceDone</code> , <code>weather.myLocation</code>
Plant detail	<code>app/plant/[key].tsx</code>	DetailHero, GddBar, KvList, Card, Button, Typography	<code>garden.getProfile</code> , <code>garden.getReleaseDecision</code> , <code>weather.myLocation</code>
Diary	<code>app/(app)/diary.tsx</code>	Card, Pill, Button, Typography	<code>diary.list</code> , <code>diary.create</code> , <code>diary.remove</code>
Alerts	<code>app/(app)/alerts.tsx</code>	AlertFeedRow, Card, Typography	<code>alerts.list</code> , <code>weather.myLocation</code>
Notifications (orphaned)	<code>app/(app)/notifications.tsx</code>	Card, Button, Typography	<code>notification.list</code> / <code>markRead</code> / <code>markAllRead</code>
Profile	<code>app/(app)/profile.tsx</code>	DetailHero, KvList, Card, Button, Typography	<code>user.me</code> , <code>garden.listGardenPlants</code> , <code>notification.getPreferences</code> / <code>setPreference</code> , <code>weather.myLocation</code>
Paywall (inert)	<code>app/(app)/paywall.tsx</code> -> <code>components/PaywallScreen.tsx</code>	Card, Pill, Button, Typography	none wired
Login (pre- auth)	<code>app/login.tsx</code>	Hero, StepCard, Card, Button, Typography	<code>session.authStatus</code> ; auth itself = Supabase email-OTP + <code>auth.guestSignIn</code> (native guest, server- mediated; Section 2 + <code>routers/auth.ts</code>)
Entry	<code>app/index.tsx</code>	(Redirect)	-

Chrome (every signed-in screen): `SiteHeader` + `BottomTabBar` in `apps/client/components/`, wrapped by `app/(app)/_layout.tsx`. See the Design System doc Section 5.

Note - captures pending. The pixel-perfect production screen captures (BT-102 Section 1a #1 -> `documents/as-built-screens/`) are the remaining half of Unit 2c; they need an iOS Simulator pass (Scott drives - `simctl` cannot tap) and are deferred to a live session. This code-pointer map is the authored half.

SECTION

Section 4 - Design system (the live skin)

The app's live skin **is** the shipped Crown Bees Design System - Inter throughout, the exact green / orange tokens, `@btt/ui` components. Building new screens is compose-from-the-kit, not a reskin.

- **Color - two brand colors only.** Green `#004322` = frame / heading / structure; orange

`#e69100` = the ONLY call-to-action color, used sparingly. Status (GO / WAIT / HOLD) `#28a745` / `#eb9247` / `#e95050`. Warm neutrals only (never cold grey).

- **Type - Inter only** (400-800). Hero 36, h1 30/800, h2 22/700, h3 16/700, body 15/400.
- **Chrome:** `SiteHeader` (green app bar, orange-bee CROWNBEEES wordmark, notifications bell,

avatar, orange `TopProgressBar` underline) + `BottomTabBar` (Home / Weather / center orange "Ask" FAB / Yard / Advice; the FAB is the Rep-AI entry point - **live at v54**, BT-062).

- **Canonical DS reference:** the design system is the **4th canon document**,

`documents/design-system.md` (v1.0) - the reference-hub over the brand authority (`~/ .claude/skills/crown-bees-design/colors_and_type.css`) and the implemented tokens (`packages/ui/src/tokens/*.ts`), with the full narrative skin write-up at `outputs/s305/THE-BUILD-SPEC.md` Appendix A. Read the DS doc for the token/component vocabulary.

SECTION

Section 5 - Provenance

Reconciled against the code (`apps/server/src/lib/email.ts` , the expo-router tree) and the Session 305 build spec (`outputs/s305/THE-BUILD-SPEC.md` Part 2), not asserted from memory or the git history. This document supersedes any product-state inference from git.

*As-Built Spec v1.0.10 - The Bee Team. v1.0 (MVP): Session 314 - the in-flight auth work (email-OTP wired into the app UI + the canonical bee captcha icon) deployed to production at btt-server v50 on 2026-07-05, closing the MVP gate (v0.9 -> v1.0). v1.0.1: Session 317 (2026-07-05) - the BT-094 security response headers at the Fly origin (v51 Report-Only, walked to zero live prod violations, then v52 enforcing). v1.0.2: Session 322 (2026-07-06) - the GDD-chart cache-invalidation fix (btt-server v53). v1.0.3: Session 325 (2026-07-07) - the BT-062 in-app "Ask" / AI BeeBot feature (btt-server v54). v1.0.4: Session 349 (2026-07-10) - BT-106 native guest sign-in (btt-server v57). v1.0.5: Sessions 351/353 (2026-07-10) - login send-feedback + first-tap fix + bottom-nav sizing (client EAS build 20). v1.0.6: Session 355 (2026-07-11) - BT-115 forecast-day pollen (btt-server v58) + GDD off the Weather daily card + Ask label spacing (build 22). v1.0.7: Session 357 (2026-07-11) - BT-115 evening-pollen fix (btt-server v59). v1.0.8: Session 363 (2026-07-12) - nine server-hardening

fixes from the S359 full-build review, migration 0023 applied to prod (0 rows deleted) (btt-server v60). v1.0.9: Session 364 (2026-07-12) - BT-023/E2 cache-log coordinate redaction across the weather + pollen Redis cache helpers (btt-server v61). v1.0.10: Session 368 (2026-07-13) - the weather setup-form disabled-button visual (BT-117/wx-1; client EAS build 24, shipped to TestFlight via the altool bypass); product `main` @ `69ed4b5`. Production truth for "what is live"; machine-verified at deploy. Change history lives in git + the LMA records + the dated snapshots, never this footer.*