

TrekMeet – Product Blueprint

Version: 8.2

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Status: Beta Live – Google Play Internal Track

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Key Details

- **Website:** <https://trekmeet.com/> (also <https://trekmeet.com.au> and – <https://trekmeet.app> - all redirects to .com) - currently on Hostinger-Wordpress.
 - **Google Play:** <https://play.google.com/store/apps/details?id=com.trekmeet.trekmeet> (closed beta)
 - **How to access:** Visit <https://trekmeet.com/> and enter your email via the "Join The Community" CTA. You'll receive a welcome email. Complete the beta app Google Form with your device details. Manish will add you to the beta group and you'll receive an invite. Early beta supporters unlock lifetime access to all future premium features.
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Executive Summary

TrekMeet is a **purpose-built, premium mobile platform for organising outdoor experiences**. It brings together everything an explorer needs for a trail day – group events, solo plans, offline maps, in-app chat, and safety tools – all in one quiet, beautifully designed app.

It's built for hikers, trail runners, campers, and anyone who finds peace in the outdoors. Whether you're a group organiser managing weekly hikes, a solo explorer uploading a GPX route, or a parent planning a family bush walk – TrekMeet replaces the patchwork of Meetup, WhatsApp, AllTrails, and PayPal with a single, seamless experience.

The app is live on Google Play (internal beta) and has been built from zero in under three months – by a solo founder leveraging an AI-agentic engineering workflow. Core capabilities already shipped include offline vector maps with 30 founder-walked NSW trails, real-time GPS safety tracking, solo plan creation with GPX import, and a full community stack (groups, events, chat, notifications, reputation, social Trail Bonds).

TrekMeet is not chasing Meetup. It is building the platform that the outdoor community deserves – and has never had.

1. The Problem We're Solving

1.1 The App-Stacking Crisis

Every outdoor enthusiast today – whether they're leading a hiking club, organising a family camping trip, or planning a solo trail run – faces the same fragmented workflow:

- **Meetup or Facebook** to post events and find people
- **WhatsApp or Discord** for real-time communication (because every events platform's chat is broken)
- **PayPal or bank transfer** to collect event fees or split costs
- **AllTrails or Google Maps** to share the actual route
- **SMS** to share safety contacts before heading out

This "app-stacking" creates significant overhead for anyone who takes the lead – whether that's a professional organiser running weekly hikes or a friend pulling together a weekend camping trip. And for participants, it's a disjointed, confusing experience spread across five apps. No one has solved this for the outdoor community – until now.

1.2 Why Existing Platforms Fall Short

The dominant platforms were never built for outdoor logistics:

Platform Failure	TrekMeet Response
Meetup: Organiser fees up to \$660/year, hostile to volunteers and casual leaders	Freemium model – anyone can organise for free
Meetup: Buggy, unreliable, chat often non-functional	Native Flutter app, performance-first, offline-capable
Generic platforms: Zero outdoor features – no difficulty, distance, elevation, trail maps	Purpose-built outdoor intelligence baked into every screen
AllTrails: Great for navigation, but no community, no events, no chat	End-to-end: discovery, maps, safety, community – all in one
Facebook Groups: Free but no outdoor features, no privacy, no ownership	Niche focus, premium design, data sovereignty
Strava: Performance-focused, intimidating for casual groups and families	Welcoming to all skill levels – from beginners to adventurers

1.3 The Competitive Void

Platform	Strength	Why It's Not Enough
AllTrails	Vast trail database, offline maps	A navigation utility – not a community platform
Strava	Social network for athletes	Performance-focused, intimidating for casual outdoor lovers
Facebook Groups	Free, universal	No outdoor features, privacy concerns, no ownership
Meetup	Event discovery at scale	Generic, expensive, broken – see above
Niche regional apps	Local relevance	No unified platform; fragmented by geography

The gap is real and global. No single platform takes an outdoor experience from planning through maps, safety, and community – all in one place. TrekMeet fills it.

2. Our Vision

To become the default platform for organised outdoor experiences – starting with Australia, expanding by community. The place where every trail is navigated, every community is built, every adventure is shared, and every explorer feels at home.

Core Principles (From Day One, Unchanged)

- **Authenticity:** Built by an explorer, for explorers. Every feature addresses a real outdoor pain point.
 - **Community:** Not just a utility – a platform for genuine, lasting outdoor connections.
 - **Quality:** A premium, intuitive experience worthy of App Store and Play Store featuring.
 - **Safety:** Safety is not a feature – it is foundational. SOS, live tracking, and weather are first-class citizens.
 - **Local-First:** Works offline. Your maps, your plans, your data – available on the trail without signal.
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3. What We've Built

TrekMeet launched as a concept in late 2025. By April 2026, the following has been shipped and is live:

3.1 The Platform (Live Today)

Community & Events

- Discovery feed with curated event cards, difficulty grading, weather integration, and personalised sections
- Full event creation wizard – difficulty, distance, elevation, cover photo, trail selection, GPX upload
- Group management – Base Camp hub, member roles, group reputation badge ("% Recommended")
- 5-tab navigation: Discovery, My Events, Groups, Chat, Profile
- In-app chat – global chat, event-specific threads, pinned messages, deep-linked notifications
- Notification centre with live unread badge and history

Outdoor Intelligence

- **30 founder-walked NSW trails** rendered in full vector (OpenStreetMap data, offline-capable)
- Offline tile caching – downloads at z8/z10/z12/z14, 30-day TTL, 3-trail limit
- Elevation profile charts with `fl_chart`
- Standard / Terrain map layer toggle
- GPX import – upload any `.gpx` route, preview it on a live map before publishing
- "Open in Google Maps" navigation handoff

Solo Mode *(Sprint 9.6, enhanced in Sprint 10)*

- Solo plan creation wizard – vibe, location, full details – without needing a group
- GPX route upload and preview for personal treks – with auto-prefill of distance, elevation gain, and location from parsed trail data
- Supabase-backed share link – share your solo plan with friends via a single URL
- Solo plans surface alongside group events in My Events

Safety

- SOS module – one-tap emergency call (000), share live location with emergency contact
- 3-second long-press countdown overlay with haptic feedback
- Live Trek – real-time GPS safety tracking via Firestore (`active_treks/`) with breadcrumb polyline overlay and pulsing leader marker
- Weather cards (OpenMeteo) with severe weather trail banners

Identity & Profile

- 4-screen onboarding wizard – identity, activities, vibe, safety
- Journey Timeline – split past/upcoming adventure history
- Outdoor identity: experience level, activity types (18 supported), intensity level
- Reputation system: Event Ratings (Thumbs Up/Down), Group Reputation Badge
- Ghost Mode: privacy toggles (online status, last seen, precise location)

Design System

- "Quiet Luxury" aesthetic – Forest Green `#2A4032`, Antique Gold `#B8860B`, Cream `#FCFCF9`

- Frosted glass floating navigation bar with animated Lottie nav icons
- Full design token system: `AppColors` , `AppRadius` , `AppIcons`
- `GlassModalWrapper` , `SectionLabel` , `SmartImage` , `TrekMeetToast` , `PlanSummaryCard`

Social Layer & Closed Beta R2 (Sprint 11) (Apr 2026)

- Connections – Follow + Trail Bond mutual-consent state machine; profile pills with live counts
- People search across display-name + mutual-bond filtering
- Privacy controls – `allowMessagesFrom` (Anyone / Trail Bonds / Off) + compose gate + zero-bond nudge
- Group chat auto-create on event publish (organiser-led groups) + welcome pill + location card
- Notification Center inbox – 6 categories × 4 time buckets + 4 settings toggles + swipe-undo
- Push notifications – FCM HTTP v1 + Supabase Edge Function pipeline (dev-only deploy; prod cutover in Sprint 12-PRE)
- Report + Block – 7-reason picker + Supabase RLS-protected reports + chat stream filter
- Share deep link – `trekmeet.com/share/{id}` Invitation Interstitial + Android App Links
- Smart Discovery Search – FTS5 BM25 + 5-filter sheet + applied-chip date-aware sort
- Discover v2 – 3-rail + tail layout (Happening this weekend / From your groups / Trails to explore / All upcoming) with adaptive priority engine

Groups v2 Foundation (Sprint 11-D) (Apr 2026)

- Schema-level group privacy model (`public` / `private` / `invite_only`) + screening questions + applications + audit log + waitlist
- Organiser-led group creation 2-screen wizard
- Organiser-only group event creation surface
- Subscription tier schema (`subscription_tier` , `group_type` , `max_members` , `beta_tester_lifetime`) + `EntitlementService` – schema only, no payment rails until Sprint 12

3.2 The Engineering Achievement

TrekMeet is built mobile-first, offline-first, and production-grade – delivered by a solo founder using an AI-agentic engineering workflow:

- **Architecture:** Flutter + Riverpod 3.0 (CodeGen) + Drift SQLite (local-first) + Firebase Auth + Supabase + PowerSync (bidirectional cloud sync)
- **Offline-first sovereignty:** All user data, events, groups, and maps live locally on the device. Cloud sync (Supabase + PowerSync) enables multi-device support. Firestore is used only for real-time Live Trek GPS.

- **Agentic development:** Every feature is delivered via a precisely scoped MISSION file that Claude Code executes autonomously, producing zero-error builds.
- **Schema discipline:** 31 database schema versions managed with surgical Drift migrations – no data loss across the full development lifecycle.
- **Quality gate:** Every mission requires `dart analyze` zero errors + `flutter build apk --debug --flavor dev` passing before commit.

This methodology has achieved what traditionally requires a full engineering team – compressed into a single founder's timeline.

4. Users & Business Model

Who Uses TrekMeet

Persona	Who They Are	What's Live	What's Coming
Alex – The Organiser	Runs a hiking group (volunteer or professional), frustrated by Meetup's cost and fragmented tools	Event creation wizard, group hub, reputation badge, member roles, chat	AI event creation assistant, analytics dashboard, paid event ticketing
Ben – The Engaged Member	Joins 1-2 outdoor events per month, values reliable information and community	Discovery feed, difficulty filters, event chat, weather cards, RSVP	Connections & friends, personalised recommendations, event history insights
Chloe – The Newcomer	New to the outdoors or new to a city, looking for safe and welcoming groups	Beginner-friendly filters, group reputation badge, safety tools, onboarding wizard	AI-powered "Plan My Weekend" suggestions, newcomer-friendly event tags
David – The Adventurer	Seasoned outdoor athlete, wants hard trails and serious peers	Advanced difficulty/distance filters, elevation profiles, GPX import, Live Trek GPS	AI trail recommendations by fitness and conditions, community trail submissions
Eva – The Solo Explorer	Independent explorer who doesn't always join groups	Solo plan wizard, GPX route upload, share link, offline maps, SOS	AI route planner, connections for finding trail partners, wearable notifications
Fran – The Family Organiser	Plans outdoor trips for family or friends, not part of a formal group	Event creation (no group required), location picker, weather check, safety contact	Family-friendly filters, shared trip albums, coastal intelligence (tides/moon)

Business Model

Freemium Tiers

Tier	Who It's For	Key Capabilities
Free Member	Casual users	Discover events, join groups, RSVP, chat, offline maps for joined events / saved trails
Prime Member	Active explorers	Advanced offline (multi-trail packs, multi-device sync), GPX upload, Solo Plan creation, AI route assistant (<i>when shipped</i>)
Organiser (Free)	Small group leaders, family trip planners	1 group, 2 events/month, basic creation tools
Organiser (Elite)	Serious organisers, professional leaders	Unlimited groups & events, analytics, AI event creation, advanced organiser tools

Revenue Streams


- **Prime & Elite subscriptions** – recurring monthly/annual
- **Optional organiser donations** – members can tip organisers for great experiences, trekmeet does not take commission, only processing fee
- **Future:** Gear partnerships, trail passes, guided experience upsell

Why This Works

The model aligns platform success with user success. **Offline maps and saved-trail caching are free** – a deliberate wedge against AllTrails Pro's \$35.99/year offline paywall. Premium value sits where willingness-to-pay is highest: advanced offline (multi-trail packs + multi-device sync), Solo Mode creation, AI route assistance, and organiser tooling. Anyone can organise for free – from a group leader running weekly hikes to a friend pulling together a weekend trip. Revenue is earned when the platform delivers real value – when events fill, members commit, and groups grow. This is the fundamental inversion of Meetup's hostile pricing strategy.

5. Product Roadmap

Delivery Timeline

Phase	What	Status
Sprints 1-8	Foundation: concept, prototyping, website, MVP (auth, discovery, groups, chat), outdoor identity, safety, reputation, vector maps, offline caching, Live Trek GPS, Google Play internal beta	 Complete (Oct 2025 - Mar 2026)

Phase	What	Status
Sprint 9	UI redesign, Solo Mode, profile revamp, design system ("Quiet Luxury"), floating nav bar, schema v27, 4-screen onboarding wizard, CEO manual test + QA fixes	✅ Complete (Mar-Apr 2026)
Sprint 10	Live sync (Supabase + PowerSync), auth bridge, security hardening, tech debt cleanup, profile polish + premium gate, website sharing infrastructure. All 5 phases shipped (10.1 → 10.5) plus <code>/audit</code> harness self-review dogfood (commit <code>243e29e</code>). 15 missions, ~20% adjusted hotfix ratio (WATCH band).	✅ Complete (Apr 2026)
Sprint 11	Social backbone (connections + Trail Bonds), messaging permissions, group chat, FCM push (dev), Smart Discovery Search, share deep links, subscription tier schema, Groups v2 foundation, Discover v2 rails. Phases 11-A Social Foundation, 11-B Permissions + Group Chat + FCM, 11-C Closed Beta R2 Discovery Polish, 11-D Subscription + Groups v2 Foundation – all ✅ Complete. Phase 11-E Discover Polish + R2 Gate 🔄 in progress. Phase 11-F (Reserve) holds Typography Migration. Full plan: missions/sprint-11/SPRINT_11_PLAN.md	🔄 11-E in progress (Apr-May 2026; R2 invite ship pending)
Sprint 12+	Open Beta planning cycle (triggered by Closed Beta R2 gate passing), Welcome Home – frictionless migration tool for existing organisers (e.g., importing Meetup member lists, event history) , AI planner (5 surfaces), community trail submissions, multi-agent pipeline, wearables (Apple Watch / Garmin), coastal intelligence (tides/moon), cloud photo backup, international expansion	🌐 Horizon

Technical Architecture

Layer	Technology
Mobile Framework	Flutter (Android-first, API 33 target)
State Management	Riverpod 3.0 with CodeGen (<code>@riverpod</code>)
Local Database	Drift SQLite – schema v31, surgical migrations
Maps	flutter_map + MapTiler PBF vector tiles + 29 GeoJSON NSW trails
Offline	DiskFallbackVectorTileProvider, z8-z14 tile cache, 30-day TTL
Auth	Firebase Auth – Google + Apple OAuth
Real-time Sync	Firestore – <code>active_treks/</code> (Live Trek GPS) only
Cloud Sync	Supabase + PowerSync – bidirectional users sync + share tokens
Navigation	GoRouter with <code>StatefulShellRoute</code>
Design	"Quiet Luxury" – AppColors, AppRadius, Applcons token system

Full database and sync reference: [docs/DATABASE_REFERENCE.md](#)

Key Milestones

Milestone	Status	Date
Concept & architecture	✓ Complete	Oct 2025
MVP – auth, discovery, groups, chat	✓ Complete	Dec 2025
Outdoor identity, safety, reputation	✓ Complete	Mar 2026
Vector maps, offline, Live Trek + Google Play beta	✓ Live	Mar 8, 2026
UI redesign, Solo Mode, profile revamp	✓ Complete	Apr 2026
Live sync (Supabase + PowerSync)	✓ Complete	Apr 2026
Subscription tier + Groups v2 foundation (schema v29 → v30 → v31)	✓ Complete	Apr 2026
Social layer foundation + Closed Beta R2 gate	↻ In Progress	Apr-May 2026
Open Beta planning cycle	→ SOON R2	Velocity-driven
Public App Store launch	🎯 Target	2026

6. Why Now. Why Us.

The market moment is right. Meetup is declining. Facebook is distrusted. AllTrails is a navigation utility, not a community. No one has built the unified outdoor platform.

The technology moment is right. Offline-first mobile with vector maps, real-time safety tracking, and AI-assisted development makes it possible for a solo founder to ship what previously required a \$2M engineering team.

The methodology is right. TrekMeet's agentic development workflow – structured MISSION files, AI execution, zero-drift architecture governance – means the product ships faster, cleaner, and more consistently than traditional teams. This is not a workaround. It is a competitive advantage.

The founder is right. Manish built TrekMeet because he organises outdoor experiences and lived the app-stacking problem. This is not a solution in search of a problem. It is a founder who is the customer, building for a community he leads.

7. Agentic Engineering – The TrekMeet Advantage

Audience note: Sections 1-6 are TrekMeet's user-facing story. This section is for technical, investor, and partner readers – the agentic engineering narrative is context-specific and intentionally not surfaced in community or end-user communications.

TrekMeet is built entirely by a solo non-technical founder using an AI-agentic development workflow. This is not incidental – it is a core strategic advantage and a proof-of-concept for a new model of software creation.

The Founder Journey

Manish explored every available path to build TrekMeet – Figma prototyping, UX-Pilot for early design, VS Code with GitHub Copilot for initial code, Windsurf for intelligent editing, and Google's Project Antigravity for multi-agent workflows. Each tool taught something; none delivered the structured, mission-driven pipeline a production app demands. Claude Code was the breakthrough – shifting the paradigm from "AI assists a coder" to "architect directs an engineering team." Along the way, the agents taught their architect context engineering: the discipline of giving AI exactly the right information at the right time. That methodology shipped TrekMeet from zero to Google Play in under three months.

Development Workflow

Component	Tool	Role
Architecture & Planning	Claude Opus (CTO persona)	Senior Solutions Architect – owns all tech decisions, writes mission files
Execution	Claude Code (VS Code CLI)	Implements missions autonomously, commits, reports
UX Design	UX Partner persona + Opus review	UX specs produced, reviewed by Opus, stored in docs/ux-specs/
QA & Bug Triage	Co-Pilot agent + Manish device testing	Structured QA reports > Opus triages > mission files for engineer
Sprint Planning	/sprint command	Full sprint boundary audit, retrospective, next sprint proposal
Phase Planning	/phase command	Within-sprint phase transitions, UX dependency checks
Harness Review	/audit command	Sprint-boundary opt-in review of the agent harness itself (rules, commands, permissions, subagent use, model/cost mix) using the 3-class rule taxonomy. Designed so the harness shrinks as models improve.

Component	Tool	Role
Backend Access	MCP servers (GitHub, Supabase, Firebase, PowerSync)	Agents query live data directly – no manual lookups
Web Infrastructure	Deployable PHP/config in <code>website/deploy/</code>	Share landing pages, deep links, assetlinks – deployed by founder
Version Control	GitHub (<code>main</code> branch)	Always production-ready; push requires founder approval
Quality Gate	<code>dart analyze + flutter build</code>	Zero errors before every commit, every mission

Mission-driven execution: Every feature, fix, and refactor is delivered via a precisely scoped MISSION file. Each mission is a contract: objective, architecture decision, numbered steps with before/after code, "Do Not Touch" list, and verification checklist. Agents execute line-by-line – ambiguity in the mission means bugs in the output.

What's Been Built

- **60+ missions shipped** across 10 sprints – zero to production in under 3 months
- **16-table local database** with bidirectional cloud sync (Drift + Supabase + PowerSync)
- **Structured agent system:** mission files, role personas, golden path rules, automated hooks, state machine
- **4 MCP integrations** giving agents direct backend access
- **Automated planning:** `/sprint`, `/phase`, and `/audit` commands with pre-flight checks, automation cross-checks, and harness self-review
- **Web sharing infrastructure:** `trekmeet.com/share/{id}` live with dynamic OG tags, Supabase-backed plan previews, Android App Links verified
- **UX spec pipeline:** UX team > detailed spec in `docs/ux-specs/` > Opus architecture review > backlog integration – validated for Social Layer v2.0

Automation Roadmap

Level	Description	Status
1-2	AI writes code, manual integration	Past

Level	Description	Status
3.8	Structured agent workflow with hooks, state machine, sprint/phase planning	Achieved Sprint 10
3.9	Harness self-review loop (<code>/audit</code>) – 3-class rule taxonomy, dark-matter discipline, shrinking harness principle	Achieved Sprint 10 close
4.2	Split-window orchestration (CLI window owns architect/engineer; strategy window owns approval gate + UX) + MCP execution default (Claude owns Supabase/Firestore/PowerSync via MCP as mission scope, Manish approves not implements) + post-commit QA pipeline (<code>/qa-review</code> diff helper)	Current (Sprint 11)
4.5	Agents trigger each other, human approves at gates	Sprint 12
5	Full autonomous loop: plan, build, test, deploy	Sprint 13+
6	Solo Founder Operating System – multi-department agent orchestration	Post-launch vision

The automation backlog (BL-AUTO-01 to BL-AUTO-18) runs alongside regular feature work – every sprint and phase transition cross-checks the automation track. The harness and agent definitions are being prepared for extraction as a standalone reusable framework (`trekmeet-agent-framework/`) – a second business built on top of the first, demonstrating that a single founder can operate at the output of a traditional engineering team.

The Solo Founder Operating System (Level 6 Vision)

The endgame is not just automated engineering – it is an **automated organisation**. TrekMeet is designed so that by public launch, the entire operation – engineering, QA, UX, moderation, community management, support, and growth – is managed by a solo founder within approximately two hours per day, with no personal staff and no physical office.

How it works:

- The TrekMeet Command Centre** – A unified web dashboard where Manish starts each day with an overnight briefing generated by agents: community metrics, pending actions (group approvals, content flags, bug reports), engineering status (build health, sprint progress), and business metrics (subscriptions, retention). Each item carries an agent recommendation with a confidence level.
- Virtual Departments** – Specialised agents manage discrete functions:
 - Engineering:** Backlog management, bug triage, sprint execution. Co-Pilot QA agent ingests screenshots and debug logs, prepares structured reports, passes to Opus (architect) for

triage, routes to engineer agents for implementation.

- **Product/UX:** Feature requests from user feedback, UX improvement proposals, A/B test analysis. UX Agent drafts specs for founder approval.
- **Community/Moderation:** Automated content moderation against community guidelines, group approval queue, dispute escalation.
- **Growth & Support:** User acquisition funnels, App Store optimisation, auto-categorised support enquiries with escalation for human judgement.

3. **Action & Delegation** – Manish reviews each department summary (10-15 minutes each), accepts/modifies/defers agent recommendations. Approved actions execute autonomously – agents build, test, deploy, respond. Ad-hoc work flows naturally: Manish tests on his phone, screenshots a bug, Co-Pilot agent ingests it, Opus triages, engineer fixes, QA validates, Manish approves push.

4. **Self-Healing** – Agents monitor production health (crash rates, API errors, sync failures). Auto-generated hotfix proposals queue for founder approval. UX validation agents compare deployed screens against specs. Sprint retrospectives auto-generated from mission metrics.

Why this matters: This model proves that a solo founder can operate at the output of a full organisation – not by working harder, but by orchestrating intelligent agents. TrekMeet becomes both the product **and** the proof-of-concept for this new operating model. The framework itself ([trekmeet-agent-framework/](#)) becomes extractable, licensable IP – a second business built on top of the first.

Blueprint V8.2 – Single source of truth for product vision, market position, and delivery status.