MBapp Roadmap vNext — Equestrian Operations Platform

Executive & Technical Master Plan

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Executive & Technical Master Plan • Modern Gold Conference Deck

🔝 Dual Summaries

Executive Overview (Board-Ready)

- **Vision:** One platform to run equestrian events & operations — entries, stabling, inventory, orders, billing, scheduling, scoring, results, and analytics — with mobile-first workflows and AI assistance.
- **Top Initiatives (next 12 months):**
    1. **Sales Order Release & Backorder** (complete the order lifecycle)
    2. **Views & Workspaces** (cross-module dashboards)
    3. **Scanner/RFID** (receive/pick/count with EPC)
    4. **Help Desk & Tutorials** (in-app onboarding & support)
    5. **Management & Projects** (task boards, timelines, automation)
- **Outcomes:** Faster field ops, fewer stockouts, auditable finances, happier exhibitors & staff.

Technical Leadership Summary

- **Stack:** AWS API Gateway/Lambda/DynamoDB • React Native (Expo) • React Query • OpenAPI codegen • EventBridge • Idempotent smokes.
- **Themes:** Type-safe contracts, modular objects, spec-driven codegen, CI smokes, integration hub, AI rail embedded across phases.
- **Now shipping:** SO release/backorder, orgs+events link, stabling v1, scorecards v1 scaffolds, message center v1.

⚙️ Core Platform (Foundation – ✅ Stable)

- AWS serverless, Objects CRUD, RBAC, audit fields, idempotency keys, OCC counters.
- Mobile shell (Expo RN), shared hooks, focus/refetch, offline queue (scanner soon).
- DevOps: GH Actions, PowerShell ops, smoke framework, seeders.

✳️ Core Business Operations (✅ Mostly Complete)

- **Products & Inventory (✅):** defaultItemId, BOM/bundles, counters `{onHand,reserved,available}`, ledger, locations.
- **Purchase Orders (✅):** draft→approved→received→closed; idempotent receive; returns.
- **Sales Orders (⚙️):** commit, reserve, release, fulfill; **backorder rollups**; BOPIS.
- **Reporting (⚙️):** `/reports/so-summary` prototype; CSV/PDF export engine (shared).

🐎 Event & Competition — Phases 1 → 10

Phase 1 — Foundations & Ops (Active)

- **Organizations (🚧):** sanctioning bodies/clubs; contacts, prefs, notes; link to Events.
- **Events v2 (✅):** planned → scheduled → open → closed → archived.
- **Classes/Divisions & Rules (🚧):** reusable catalog (code, fee, rule refs).
- **Scorecards v1 (🚧):** template JSON; judge entry; CSV/PDF export.
- **Stabling v1 (🚧):** stall inventory/assignments; bedding add-ons.
- **Message Center v1 (🚧):** push + SMS segments (event/ring/role).
- **Resources v1 (✅):** rings/equipment availability & reservations.

Phase 2 — Scheduling & Field Ops

- **Venues & Facilities:** arenas, barns, warm-ups; capacity; blackout/maintenance.
- **Scheduling v1:** per-ring grids; ride-time assignment; conflicts (horse/rider/judge).
- **Officials & Judges:** profiles, certifications, availability, scoring permissions.
- **Transportation/Logistics:** trailer slots, arrival windows, dock/gate ops.
- **Work Orders/Maintenance:** issues, assignment, SLA, parts/labor logs.

Phase 3 — Entry, Access & Commerce

- **Ticketing & Badging:** public tickets; exhibitor/coach/owner passes; QR/NFC zones.
- **Food & Beverage Ops (v1):** menus, time windows, pre-orders, runner tickets, routes, comps.
- **Merchandise POS (v1):** items, price lists, taxes, inventory decrement, refunds/exchanges.
- **E-Sign / Forms:** waivers, health certs, Coggins, consents; templated + per-event.
- **Packages & Discounts:** bundles (stall + classes), early-bird, member/org pricing.

Phase 4 — Finance & Admin (Expanded)

- **Billing/Invoicing:** entries, stalls, add-ons, penalties, refunds; split bills.
- **Payments (AR/AP):** Stripe/Square; refunds; vendor/judge payouts; reconciliation.
- **Account Administration Suite:** tenant plans & billing; users & roles; audit center; API keys & webhooks; subscription switch.
- **Compliance & Audit:** RBAC refinements, export logs for sanctioning bodies.

Phase 5 — Results & Publishing (+ Help Desk & Tutorials)

- **Scorecards v2:** multi-judge, tie-breaks, validations, audit trail.
- **Live Results:** leaderboards, splits, corrections with audit, publish controls.
- **Calendars:** long-range + live ops; iCal feeds; conflict overlays.
- **Help Desk & Tutorials (new):** contextual coachmarks & tours; inline help drawer; in-app tickets with logs; release notes panel.

Phase 6 — People & Relationships (+ Bulk Data)

- **Riders/Owners/Trainers (CRM+):** memberships, affiliations, flags.
- **Horses:** passport, medical notes, eligibility, class/stall history.
- **Volunteers & Staffing:** roles, shifts, credentialing, comms.
- **Bulk Data Loading (new):** CSV/Excel importers; field-mapping wizard; dry-run; partial accepts; rollback; presets.

Phase 7 — Maps, Alerts & Safety

- **Maps & Wayfinding:** Mapbox overlays; stalls/rings/vendors; closures; navigation.
- **Message Center v2:** templates, schedules, rate-limits, auto-alerts.
- **Incident & Safety:** reports, triage, restricted visibility, follow-ups.

Phase 8 — Analytics & Integrations

- **Dashboards:** entries, revenue, capacity, no-shows, productivity.
- **Integrations:** Shopify/Woo/Square Online (catalog, orders, inventory, fulfillment); QBO/Xero; Twilio/SendGrid/Firebase; Mapbox; S3/Drive; Vimeo/YouTube.

Phase 9 — Unified Ops (Views, Workspaces & Scanner)

- **Saved Views:** per module filters/columns; user/team/tenant scopes.
- **Workspaces:** drag-and-drop dashboards mixing cards (Inventory, Events, Orders, Horses…).
- **Cross-module filters:** "Horses at Event X with open invoices & feed deliveries today."
- **Scanner/RFID:** EPC registry; contextual actions (receive, pick, count, assign stall, check-in); offline queue; device profiles (Zebra/Socket).

Phase 10 — Management & Projects

- **Task Boards & Projects:** Kanban, Gantt; tasks linked to objects; comments/mentions; attachments; templates; time tracking.

- **Automation Rules:** "When PO received → close task"; "If stall vacated → create cleaning task."
- **Bridges:** Slack/Teams; Calendar; Jira/Trello optional.

🔌 Integrations — E-Commerce Matrix (Shopify/Woo/Square Online)

- **Catalog:** two-way products/variants; metafields for cross-ids; collections/tags.
- **Inventory:** per-location optional; PO receive/count push; webhook pull (`inventory_levels/update`).
- **Orders:** create/paid/fulfilled/refund; BOPIS/pickup; preorders/backorders.
- **Fulfillment:** tracking numbers; partials; multi-shipments.
- **Customers:** CRM merge rules; duplicate detection.
- **Discounts/Taxes:** codes/automatic; venue tax overrides.
- **Returns:** RMAs; restock rules.
- **Subscriptions:** recurring packages → recurring SOs.
- **Ops:** OAuth, HMAC, rate limits, DLQ/replay, observability.

🧠 Cross-Cutting Layers

AI Assistants & Chatbots (embedded rail, not a late phase)

- **In-app assistant:** context-aware help; "explain this field"; open screens; generate drafts.
- **Ops chatbot:** team channels; task integration; Message Center handoff.
- **Client/public bot:** website widget; FAQs; entries; payments; CRM updates.
- **Voice assistant (mobile):** "Check bedding in Barn 3" → counters/alerts.
- **AI supervisor:** daily digests; smoke results; anomaly flags.
- **Infra:** `/ai/assist` , `/ai/summary` , `/ai/chat` ; context broker; knowledge index; redaction & safety.

Document Scanning & OCR

- Mobile/web capture; auto-OCR; classify (vet cert vs contract); auto-tag; link to objects; full-text search; audit bundles.
- **Integrations:** Textract/Vision; embeddings for search.

Developer & Admin Tools

- API playground; CLI ops; tenant sandbox resets; feature flags; migrations toggles; System Admin Console (usage, jobs, smoke rates, webhook DLQ).

📊 Role Fit (Web vs Mobile)

Capability	Web (Back-Office)	Mobile (Field)	Both
Views & Workspaces	✅ build/share	✅ consume	✅
Scanner/RFID	–	✅ primary	–
Help Desk & Tutorials	✅ author KB	✅ coachmarks, tickets	✅
Bulk Data Loading	✅ imports	–	–
Projects/Tasks	✅ manage	✅ execute	✅

🧪 Smokes (Highlights)

- **SO:** over-commit/fulfill guards; **release** round-trip; **commit-backorder** and **reserve-backfill**.
- **PO:** idempotent receive; partials; returns; cancel/close edges.
- **Inventory:** counters integrity; cycle count idempotency.
- **Integrations:** HMAC verify; replay; rate-limit handling.
- **AI:** grounding checks; redaction; safe fallback.

📌 Object & Endpoint Index (New/Updated)

- `View`, `Workspace`, `ScanEvent`, `HelpArticle`, `ImporterJob`, `Task`, `Project`.
- `/sales/so/{id}:release` • `/sales/so/{id}:reserve|fulfill|commit`
- `/inventory/{itemId}/onhand` • `/import/{type}:dryrun|commit`
- `/views`, `/workspaces` • `/scanner/events` • `/help/articles` • `/help/tickets`
- `/ai/assist`, `/ai/summary`, `/ai/chat`

📅 Timeline (High-Level)

- **Q4 2025:** SO release/backorder; Orgs↔Events; Scorecards v1 scaffolds; Stabling v1; Message Center v1.
- **Q1 2026:** Scheduling v1; Officials/Judges; Work Orders; Bulk Import v1.
- **Q2 2026:** Commerce (Tickets, POS, F&B); Finance/Admin suite; Help Desk & Tutorials.
- **Q3 2026:** Live Results; Calendars; Views/Workspaces v1; Scanner v1.
- **Q4 2026:** Management & Projects v1; AI Assistants across modules; Integrations scale-out.

Legend: ✅ *Done* • ⚙️ *Active* • 🚧 *Planned/In Progress* • 🧪 *Smoke/Test*