**ThrivioHR — End-to-End Development Plan (Keep-Forever Version)**

Rule of the road: we **do not** move to the next step until the previous step’s **acceptance checks** are green and stable. Every task ships with a **surgical Agent prompt** and a **Definition of Done (DoD)**.

**Big 0 — Operating Principles (how we work)**

**Technical:** Single repo (pnpm+Nx+TS), strict linting/format, 100% coverage on core domains, ephemeral DB tests, reproducible prompts.

**Plain English:** We build in tiny, testable slices. Each slice has a checklist. We only proceed when green.

**DoD (global):**

* Lint clean, tests green, build passes, CI passes on PR.
* Docs updated (roadmap + any touched READMEs).
* No “TODO later” debt; if deferred, tracked in /docs/adr or /docs/todo.md.

**Surgical Prompt Template (pinned)**

vbnet

CopyEdit

Execute this EXACT task. Do not touch anything beyond what’s listed.

If any command fails, PRINT the error and STOP. Do not “fix” or scaffold.

GOAL

<1–2 lines>

TOUCH ONLY

<explicit files>

CHANGES

<precise edits or full replacements>

RUN & PRINT

<commands + what to print>

STOP.

***Multi-tenant, org-isolated by design. Status labels: DONE, IN PROGRESS, NEXT, PHASE 2.***

**Modules (overview)**

**Identity & Access · Directory · Org Chart · Profiles & Media · Social Feed · Engagement · Recognition · HR Core · Analytics & Reporting · Integrations & SSO · Leave Management (Phase 2) · Performance Management (Phase 2)**

**Big 1 — Infrastructure & Repo**

**Sub-features**

* **Monorepo setup, CI scripts, local dev runners, logging scaffolds.**
* **Environment config, secrets, shared utils.**

**DoD**

* **Repo boots locally with one command; CI green on main.**
* **Linting/formatting/typecheck enforced in CI.**
* **Envs documented; logs visible for all services.**

**Big 2 — Database & Migrations**

**Sub-features**

* **Postgres + Drizzle ORM baseline; migration pipeline.**
* **Core tables: organizations, users, roles, sessions (baseline).**

**DoD**

* **One-shot migration command sets up a clean DB.**
* **Roll forward/backward works; schema doc generated.**

**Big 3 — Identity & JWT Auth (DONE)**

**Sub-features**

* **Login by org/email; sessions persisted.**
* **JWT access/refresh; guard-protected routes.**
* **HS256 signing; 15m access / 7d refresh.**

**DoD**

* **/auth/login, /auth/refresh, /auth/me pass smoke tests.**
* **Guarded endpoints reject anonymous calls.**
* **Tokens scoped to org; sessions recorded.**

**Big 4 — Directory & Org Structure (IN PROGRESS)**

**Sub-features**

* **CSV import pipeline: validate → plan → dry-run → approval session → approve (writes).**
* **User create/update; department creation via org\_units (type department); membership linking via org\_membership.**
* **Location detection/creation via locations (user link planned).**
* **Manager resolution (by managerEmail) validation (NEXT).**
* **3 creation paths for departments & locations: Manage screen · Mass upload · Single employee create.**

**DoD**

* **Protected endpoints for validate/plan/commit/session.**
* **Dry-run returns creates/updates/skips, newDepartments/newLocations, duplicates, manager resolution notes.**
* **Approve creates/updates users; creates departments; links memberships; creates locations.**
* **Idempotent on re-approve (no dupes); counters accurate; audit log entry added.**

**Big 4b — Org Chart (NEXT)**

**Sub-features**

* **Read-only Org Chart built from org\_units + org\_membership.**
* **Search/jump; expand/collapse; lazy rendering for 1k+ users.**
* **Optional manager overlay (from CSV manager resolution; later users.managerId).**
* **Filters (department/location); PNG/PDF export.**

**DoD**

* **Loads 1k+ nodes in <2s with virtualization.**
* **Permissioning: HR full org; managers see their subtree; members see public org view.**
* **Export works; no PII leaks across orgs.**

**Big 5 — Profiles & Media (NEXT)**

**Sub-features**

* **FB-style profile header: avatar + cover.**
* **Defaults: gender-based avatar; org-themed cover.**
* **Uploads from device or mobile camera (presigned PUT).**
* **Private storage; versioned cache-busting; EXIF strip; thumbnails.**
* **Data model: user\_media (one row per user × {avatar|cover}).**

**DoD**

* **New user shows defaults; upload replaces with user media.**
* **Signed URLs (read/write) expire; originals private; thumbs generated.**
* **Multi-tenant isolation in object keys; rate limits & size/type caps enforced.**

**Big 6 — Social Feed (NEXT)**

**Sub-features**

* **Posts: text, photo, video (single media per post v1).**
* **Likes & comments; basic moderation (author delete, admin hide/restore).**
* **In-app notifications for likes/comments; keyset pagination.**
* **Media storage via presigned URLs; poster image for video.**

**DoD**

* **Create/list/delete post; like/unlike; add/delete comment.**
* **Media uploads succeed; playback via signed URLs.**
* **Feed scoped to org; pagination stable; moderation actions audited.**

**Big 7 — Engagement (NEXT)**

**Sub-features**

* **Pulses (1–3 Q check-ins) with scheduler & templates.**
* **Quick polls; instant results.**
* **Announcements pinned to feed; read receipts.**
* **Celebrations (birthdays/anniversaries) surfaced in feed/profile badges.**

**DoD**

* **Pulse send/collect; exports; response rate visible.**
* **Poll create/vote/results; no duplicate votes.**
* **Announcement reach/ack metrics; celebrations auto-generated.**

**Big 8 — Recognition (Peer-to-Peer tied to Company Values) (NEXT)**

**Sub-features**

* **Company-values-tagged kudos (employee → employee).**
* **Points per kudos; monthly leaderboard.**
* **Optional manager approval toggle (per org).**
* **Feed cards for kudos; export/audit.**

**DoD**

* **HR CRUD for Company Values (name/color/weight/order/status).**
* **Kudos create/list; points ledger updates; leaderboard accurate.**
* **Approval flow (if enabled) gates visibility.**
* **Exports available; audit trail complete.**

**Big 9 — HR Core (NEXT)**

**Sub-features**

* **Company Values management (feeds Recognition & onboarding).**
* **Org Settings (media limits, cover theme, approvals).**
* **Policies/handbook repository (uploads/links).**
* **Departments/Teams CRUD; Locations CRUD.**
* **Single employee create (with default avatar/cover, dept, location).**
* **Audit log for sensitive actions and imports.**

**DoD**

* **Values available system-wide; changes reflected in Recognition UI.**
* **Settings enforced on uploads; policy docs accessible with permissions.**
* **Admin can create/edit/delete departments, teams, locations.**
* **Single create writes user, links department/location, assigns defaults.**
* **Audits list who/when/what for org-level changes.**

**Big 10 — Analytics & Reporting (NEXT)**

**Sub-features**

* **Adoption: profile completion, active users, upload rates.**
* **Feed: posts/user, comments/post, like rates.**
* **Engagement: pulse results, eNPS (if enabled), celebrations reach.**
* **Recognition: kudos volume/spread; value distribution; leaderboards.**
* **Exports (CSV); org/department/location breakdowns.**

**DoD**

* **Dashboards load under 2s on 12-month windows.**
* **Key metrics accurate vs sample datasets; CSV export works.**
* **Access restricted by role; no cross-org leakage.**

**Big 11 — Integrations & SSO (NEXT)**

**Sub-features**

* **OIDC + SAML SSO; optional JIT user provision.**
* **Slack/Teams webhooks for kudos/announcements.**
* **Pluggable S3-compatible storage.**

**DoD**

* **At least one OIDC & one SAML provider verified.**
* **Webhook toggle per org; messages post correctly.**
* **Storage adapter passes upload/download/rotate tests.**

**Big 12 — Leave Management (PHASE 2)**

**Sub-features (MVP)**

* **Leave types/policies: accrual, carry-over, proration.**
* **Balances per user/type; opening balances import.**
* **Requests/approvals: employee → manager; HR override.**
* **Holidays by org/location; team calendar; ICS export.**
* **Blackouts & rules; notifications; full audit; CSV export.**

**DoD**

* **Policy engine passes unit tests for common rules.**
* **Request → approve/deny lifecycle works; balances adjust; calendar updates.**
* **Holiday calendars by location; ICS subscribable.**
* **All actions audited; exports correct.**

**Big 13 — Performance Management (PHASE 2)**

**Sub-features (MVP)**

* **Review cycles (e.g., H1/H2); participant scoping; timelines.**
* **Templates (ratings/rubrics/free-text); per-role variants.**
* **Self + manager reviews; confidential manager notes.**
* **Calibration view; lock/freeze; sign-off & PDF record.**

**DoD**

* **Cycle creation & launch works; participants notified.**
* **Reviewer UIs save/submit; rubric scoring consistent.**
* **Calibration changes tracked; sign-off locks packets; PDFs generated.**
* **History retained per employee/cycle.**

**Cross-cutting: Locations Linking (NEXT decision)**

**Sub-features**

* **Model: one primary location per user (users.locationId) for v1. (Multi-location via join table in future.)**
* **CSV approve creates missing locations and links users.**

**DoD**

* **Migration adds users.locationId; approve path links users; UI shows location on profile/org chart.**
* **Idempotent relinking; permissions enforced.**

**Cross-cutting: Manager Resolution (Directory) (NEXT)**

**Sub-features**

* **Resolve managerEmail in CSV to user; detect missing/cyclic relationships.**
* **(Future) add users.managerId and keep in sync with CSV.**

**DoD**

* **Planner flags unresolved managers & cycles; approve rejects unsafe sets (configurable).**
* **When enabled, writes users.managerId; org chart overlay shows manager lines.**

**KPIs (selected)**

* **% profiles with custom avatar/cover in 14 days.**
* **Feed DAU/WAU; posts/user; comments/post; like rate.**
* **Kudos/month; value distribution; leaderboard participation.**
* **Pulse response rate; announcement reach; celebrations engagement.**
* **Import approval throughput; error rates.**

**Notes**

* **Multi-tenant isolation: all data & storage keys scoped by orgId.**
* **3 creation paths for departments/locations: manage screen, CSV, single employee create.**
* **Media: private storage, presigned URLs, EXIF strip, size/type caps.**
* **Video: store originals + poster in v1; background transcode later.**