

drop-monorepo-refactor-plan

Plan: Drop Monorepo Refactor (src/ ? apps/+packages/)

MC: #10051 **Owner:** John (orchestrator) + CodeCraft + Proveo + Skillforge **Estimated total:** ~15h CodeCraft + 2h validation + 1h docs = ~**18h fleet time** **Strategy:** 4-PR staged migration (NOT atomic) per Petter's research **Research:** `/tmp/drop-monorepo-research-10051.md` (347 lines, Petter Graff)

Research Summary

Drop monorepo currently uses npm workspaces under `src/` (3 registered: `src/shared`, `src/drop-api`, `src/drop-app`; `src/drop-mobile` is on separate release cycle, NOT in workspace config but referenced in 3 mobile workflows). Migrating to `apps/` + `packages/` requires touching **80+ hardcoded paths** across 8 GitHub Actions workflows, 2 root Dockerfiles, `buildspec.yml` (just merged in PR #3), 2 docker-compose files, and root `package.json` lint-staged.

Top 3 production risks

- `Dockerfile.drop-app:59,67` — `WORKDIR /app/src/drop-app` baked into Next.js standalone runner stage. Silent build success / runtime fail on App Runner cold start.
- `ci.yml:49-53` `paths-filter` must update atomically with rename. Wrong order = silent CI skip = unreviewed code reaches main.
- `Dockerfile.api` uses raw source-copy to `/shared/` (not workspace symlinks) — structurally inconsistent with `Dockerfile.drop-app`. Audit separately.

Why multi-PR (NOT atomic)

- Each PR is reviewable, revertable, testable independently
 - CI workflow update (PR 3) is highest-risk single change → its own PR
 - Pre-Finanstilsynet: every CI/security-gate change deserves explicit review
 - 4 conflict-able PRs > 1 monster PR with 80+ touched paths
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Objective

Restructure Drop monorepo to industry-standard Turborepo/pnpm convention (`apps/` for deployables, `packages/` for shared libs) WITHOUT introducing behavior changes, downtime, or production deploys breaking. Land in 4 staged PRs over 2-3 days, with staging validation before prod merge.

Team Orchestration

Team Members

ID	Name	Role	Agent Type
B1	codecraft-pkg	PR 1: workspace config + packages/ rename	codecraft
B2	codecraft-apps	PR 2: apps/ rename + Dockerfiles + buildspec	codecraft
B3	codecraft-ci	PR 3: 8 GitHub workflow files update	codecraft
B4	codecraft-cleanup	PR 4: delete old src/ + final validation	codecraft
V1	proveo-staging	Staging validation pre-PR-4 merge	proveo
V2	proveo-prod	Production validation post-PR-4 merge	proveo
V3	securion-fintech	Pre-Finanstilsynet security audit	securion
D1	skillforge-docs	BookStack page + memory entries	skillforge
R1	gemini-reviewer	Review every PR before merge	gemini-reviewer

Step-by-Step Tasks

Phase 1 — Internal packages rename (low risk, isolated)

Task 1: PR 1 — Rename `src/shared` → `packages/shared`

- Owner: B1 (codecraft)

- BlockedBy: none (research deliverable already done)
- Branch: `feat/monorepo-pr1-packages-shared`
- Scope:
 - `git mv src/shared packages/shared` (preserves history)
 - Root `package.json` workspaces array: `"src/shared"` → `"packages/shared"`
 - `npm install` regenerate lockfile (in Linux container per ZAKON LOCKFILE PORTABILITY)
 - Verify `apps/drop-app/node_modules/@drop/shared` symlink resolves (post-PR-2; for PR 1 verify root `node_modules/@drop/shared` resolves)
 - Update lint-staged glob if `src/shared/` referenced
- Acceptance:
 - `npm install --ignore-scripts --no-audit` exit 0
 - `cd src/drop-app && npx tsc --noEmit` exit 0 (shared resolves via root workspace)
 - `cd src/drop-api && npx tsc --noEmit` exit 0
 - CI Quality Gate REQUIRED green on PR
 - No file outside `packages/shared/` and `package.json` + `package-lock.json` modified

Task 2: Gemini review PR 1

- Owner: R1
- BlockedBy: 1
- Acceptance: VERDICT: APPROVE

Task 3: Squash merge PR 1 to main

- Owner: John
- BlockedBy: 2
- Post-merge: verify main CI green

Phase 2 — Apps rename + Docker (highest production risk)

Task 4: PR 2 — Rename `src/drop-*` → `apps/drop-*` + Dockerfile + buildspec updates

- Owner: B2 (codecraft)
- BlockedBy: 3 (PR 1 merged)
- Branch: `feat/monorepo-pr2-apps-docker`
- Scope:
 - `git mv src/drop-app apps/drop-app`, `src/drop-api apps/drop-api`, `src/drop-mobile apps/drop-mobile`
 - Update root `package.json` workspaces: `"src/drop-api"` → `"apps/drop-api"`, `"src/drop-app"` → `"apps/drop-app"`
 - Update lint-staged globs (3 patterns) + `cd src/drop-*` commands
 - Update `Dockerfile.drop-app`: ALL `src/drop-app` → `apps/drop-app`, `src/shared` → `packages/shared`. **CRITICAL: both** `WORKDIR /app/src/drop-app` **lines (59 + 67)** →

`/app/apps/drop-app`

- Update `Dockerfile.api`: `src/drop-api` → `apps/drop-api`, `src/shared` → `packages/shared` AND `/monorepo/src/shared/` → `/monorepo/packages/shared/` (the absolute-path hack)
- Update `buildspec.yml`: 7 occurrences of `src/drop-app` → `apps/drop-app`, `src/shared` → `packages/shared`
- Update `docker-compose.yml` + `docker-compose.dev.yml` build contexts + bind mounts
- Verify `next.config.ts` `outputFileTracingRoot: ../../` still resolves to repo root from `apps/drop-app/` (it does — same depth)
- Local Docker build MANDATORY (ZAKON LOCAL DOCKER BUILD): `docker buildx build --platform linux/amd64 -f Dockerfile.drop-app .` exit 0
- Acceptance:
 - `npm install --ignore-scripts --no-audit` exit 0
 - `cd apps/drop-app && npx eslint .` 0 errors
 - `cd apps/drop-app && npx tsc --noEmit` exit 0
 - `docker buildx build --platform linux/amd64 -f Dockerfile.drop-app .` exit 0 (LOCAL evidence required)
 - `docker buildx build --platform linux/amd64 -f Dockerfile.api .` exit 0
 - CI Quality Gate REQUIRED green on PR
 - No CI workflow file modified in this PR (saved for PR 3)
 - No `src/` directory deleted yet (saved for PR 4)

Task 5: Gemini review PR 2

- Owner: R1
- BlockedBy: 4
- Acceptance: VERDICT: APPROVE
- Special review focus: Dockerfile WORKDIR lines, Dockerfile.api absolute path, lockfile linux-x64 variants

Task 6: Squash merge PR 2 to main — CAUTION

- Owner: John
- BlockedBy: 5
- Note: This DOES trigger `deploy.yml` auto-deploy. Production App Runner will build with new paths. Monitor `aws apprunner describe-service` until RUNNING status. If deploy fails, immediate rollback via CF CNAME flip + previous SHA redeploy per DEPLOY-MAP.md.
- Pre-merge mandatory: external `curl -sI https://app.getdrop.no` shows current production health
- Post-merge mandatory: external `curl -sI https://app.getdrop.no` shows healthy within 10min of CF CNAME flip

Phase 3 — CI workflows update (silent skip risk)

Task 7: PR 3 — Update 8 GitHub Actions workflows

- Owner: B3 (codecraft)
- BlockedBy: 6 (PR 2 merged + production verified RUNNING)
- Branch: `feat/monorepo-pr3-ci-workflows`
- Scope:
 - `ci.yml`: paths-filter (5 lines), working-directory, cache-dependency-path, cd commands, artifact paths
 - `deploy.yml`: docker build context path
 - `deploy-staging.yml`: paths, working-directory, cache-dependency-path, playwright report path
 - `hotfix.yml`: working-directory x2, cache-dependency-path
 - `deploy-aws.yml`: working-directory, docker build context
 - `mobile-ci.yml`: paths-filter, working-directory x3, cache-dependency-path, artifact path
 - `mobile-deploy.yml`: paths-filter, working-directory, git add path
 - `mobile-release.yml`: working-directory, cache-dependency-path, VERSION_FILE path, git add path
- Acceptance:
 - All 8 workflow files modified, no other code changes
 - CI Quality Gate REQUIRED green on PR
 - `gh workflow view "CI – Quality Gate"` runs against new paths
 - `mobile-ci.yml` triggers on `apps/drop-mobile/**` paths-filter when mobile code changed (test by including 1-line mobile change in PR)

Task 8: Gemini review PR 3

- Owner: R1
- BlockedBy: 7
- Acceptance: VERDICT: APPROVE
- Special review focus: paths-filter glob accuracy (silent CI skip is the danger)

Task 9: Squash merge PR 3

- Owner: John
- BlockedBy: 8
- Note: `deploy-staging.yml` manual `workflow_dispatch` test BEFORE merge, against PR HEAD SHA, to confirm staging path resolution

Phase 4 — Cleanup + production validation

Task 10: PR 4 — Delete legacy `src/` directory + ALAI memory updates

- Owner: B4 (codecraft)
- BlockedBy: 9 (PR 3 merged + main CI green)

- Branch: `feat/monorepo-pr4-cleanup`
- Scope:
 - `git rm -r src/` (now empty after PR 1 + PR 2 moves)
 - Update `BUILD-BLUEPRINT.md` repo structure section + build commands
 - Update `DEPLOY-MAP.md` paths
 - Update `RUNBOOK.md` if any path references
 - Update `project/architecture/*.md` references
 - Update `~/.claude/projects/-Users-makinja/memory/MEMORY-products.md` Drop entry
 - Update any `~/.claude/projects/-Users-makinja/memory/project_drop_*.md` referring to old paths
- Acceptance:
 - `find . -path "./src" -type d` empty
 - `grep -r "src/drop-" --include="*.md" --include="*.yml" --include="*.json"` 0 hits in repo (excluding old git history)
 - CI Quality Gate REQUIRED green on PR

Task 11: Proveo validation — STAGING (pre-merge)

- Owner: V1 (proveo)
- BlockedBy: 10 (PR 4 ready, but NOT merged yet)
- Action: trigger `deploy-staging.yml` workflow_dispatch against PR 4 head SHA
- Acceptance:
 - Staging App Runner reaches RUNNING state within 15min
 - `curl -s https://staging.getdrop.no/api/health | jq .status` == "ok"
 - Playwright smoke test (login + dashboard + send-money flow) passes
 - No new Sentry errors in staging post-deploy
 - Evidence written to `/tmp/proveo-monorepo-staging-10051.json`

Task 12: Gemini review PR 4

- Owner: R1
- BlockedBy: 11
- Acceptance: VERDICT: APPROVE

Task 13: Securion fintech security audit (pre-prod merge)

- Owner: V3 (securion / Parisa Tabriz)
- BlockedBy: 11
- Scope: monorepo path rename security implications — secrets accidentally exposed via different paths, .gitignore coverage, JWT/auth boundary integrity, OWASP Top 10 quick check
- Acceptance:
 - No secret leaks introduced by path changes

- Auth middleware paths still correct
- No new attack surface introduced
- Report at `/tmp/securion-monorepo-10051.md`

Task 14: Squash merge PR 4 to main

- Owner: John
- BlockedBy: 12, 13
- Triggers: `deploy.yml` auto-deploy to production
- Pre-merge mandatory: external curl baseline, gh run list main shows green
- Post-merge mandatory: monitor App Runner deploy

Task 15: Proveo validation — PRODUCTION

- Owner: V2 (proveo)
- BlockedBy: 14
- Action: post-deploy verification per DEPLOY-MAP.md ZAKON PI2 protocol
- Acceptance:
 - `curl -s https://app.getdrop.no/api/health | jq .status == "ok"`
 - Playwright screenshot of dashboard (live data load)
 - No CI deploy.yml errors
 - No Sentry error spike in 30min post-deploy
 - App Runner blue/green flip verified
 - Evidence at `/tmp/proveo-monorepo-prod-10051.json` + screenshot

Task 16: Skillforge documentation

- Owner: D1 (skillforge)
 - BlockedBy: 15
 - Scope:
 - BookStack page "Drop Monorepo Architecture" — apps/+packages/ structure, deploy paths, conventions
 - Memory entry `project_drop_monorepo_refactor_2026-XX-XX.md` with lessons learned + path migration patterns
 - Update `~/system/rules/zakon-local-docker-build.md` if monorepo-specific gotchas surfaced
 - Acceptance:
 - BookStack page exists and synced
 - Memory entry created
 - MEMORY.md index updated
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Risk Register

Risk	Probability	Impact	Mitigation
Dockerfile WORKDIR baked path miss (E1)	MED	HIGH (prod cold start fail)	Mandatory local Docker build in PR 2
paths-filter wrong = silent CI skip (E4)	LOW	CRITICAL (unreviewed code in main)	PR 3 has explicit paths-filter glob review by R1
Lockfile platform variants missing (E6)	MED	MED (CodeBuild fail)	Regenerate in Linux container per ZAKON LOCKFILE PORTABILITY
@drop/shared symlink resolution fails (E5)	MED	HIGH (build fail)	PR 1 isolated test before PR 2 starts
Sentry source maps un-symbolicate (E8)	LOW	LOW (debug noise only)	Verify post-deploy Sentry dashboard
Dockerfile.api absolute path break (E3)	MED	HIGH (drop-api fail)	Local docker build evidence MANDATORY in PR 2
AWS App Runner deploy fails post-merge	LOW	CRITICAL (prod outage)	CF CNAME rollback < 10s + previous SHA redeploy
backend/ legacy dir confusion (E9)	LOW	LOW	Document as legacy, do not rename in this MC
Mobile workflow paths-filter coupling (E7)	LOW	MED	Tested in PR 3 with 1-line mobile change

Rollback Plan (per PR)

PR	Rollback action
PR 1	<code>git revert <merge-commit></code> — pure rename, no behavior change. < 5min recovery.
PR 2	<code>git revert <merge-commit></code> + ECR previous-SHA redeploy via <code>apprunner start-deployment</code> + CF CNAME flip. < 15min recovery.
PR 3	<code>git revert <merge-commit></code> — workflows revert. CI may briefly run against wrong paths during revert window (acceptable). < 5min.
PR 4	<code>git revert <merge-commit></code> — restores src/ from history. Same as PR 2 if production-affecting deploy triggers.

Validation Checkpoints (cumulative across phases)

After EACH PR merge to main:

1. `gh run list --branch main --limit 1` last run = SUCCESS for "CI — Quality Gate"
2. `curl -sI https://app.getdrop.no` returns HTTP 200
3. `aws apprunner describe-service --service-arn <drop-web-arn>` Status: RUNNING
4. No new Sentry errors in 15min after deploy
5. `git log --oneline main` shows clean linear history (squash merges)

After PR 4 (final cleanup): 6. `find /Users/makinja/ALAI/products/Drop -type d -name "src"` returns 0 results 7. Repo size reduced (lockfile + node_modules can re-regenerate in fresh clone) 8. Skillforge BookStack page accessible at <https://docs.alai.no>

Estimate of Total Time

Phase	CodeCraft hours	Calendar days
PR 1 (packages/)	1.5h	Day 1
PR 2 (apps/ + Docker)	5h	Day 1-2
PR 3 (CI workflows)	2.5h	Day 2
PR 4 (cleanup)	2h	Day 2-3
Proveo + Securion validation	2h	Day 2-3
Skillforge docs	1h	Day 3
Total	~14h	3 days

Add 30% buffer for failure recovery iterations = **~18h fleet, 3 calendar days.**

Required Follow-ups

1. `backend/` legacy directory at repo root — confirm dead code in separate MC, then either rename or delete. NOT in scope of this MC.
2. `mobile-release.yml` cross-references `src/drop-app/src/config/app-versions.json` from within mobile workflow — clarify ownership boundary in followup.
3. Migration to true Turborepo (`turbo.json`) or pnpm — separate MC. This refactor only renames paths, does NOT change tooling.

4. Sentry post-deploy verification — if source maps un-symbolicate, separate MC for Sentry config update.
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Per ZAKON PLAN compliance

- Validation task** — Tasks 11 (Proveo staging) + 15 (Proveo prod) — end-to-end Playwright + curl + Sentry monitoring (NOT dry-run)
 - Documentation task** — Task 16 (Skillforge) — BookStack page + memory entry
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Approval

Plan ready for CEO review. To execute:

```
/build-plan ~/system/specs/drop-monorepo-refactor-plan.md
```

Or dispatch first phase manually:

```
/mehanic "Drop monorepo PR 1: packages/shared rename + workspace config"  
/Users/makinja/ALAI/products/Drop <new_MC_id>
```

Revision #3

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