

QuickBooks → Supabase Financial Analytics Pipeline

Developer Project Plan (with Reasons)

Phase 0 — System Overview

Reason for this phase: Developers need a clear mental model before touching code. This prevents rework, misalignment, and architecture drift.

You will build four connected pieces: 1. **Supabase (Database Only)** — our source of truth; avoids early backend complexity. 2. **QuickBooks Developer Config** — required to authenticate and fetch data. 3. **Pipedream Workflows** — acts as the glue; faster and cheaper than building custom APIs. 4. **Optional v0 Dashboard** — validates that data is stored correctly.

Phase 1 — Supabase Schema (Migrations)

Reason: We want a clean, analytics-friendly schema that scales to multi-tenant SaaS later. A solid schema now prevents painful refactors.

Tables to create:

- companies
- qbo_connections
- accounts
- categories (lookup table)
- monthly_pl
- monthly_cash_flow
- raw_transactions
- projections_12m

Why this structure: - Separates concerns cleanly (companies, accounts, monthly summaries). - Allows multi-company onboarding with zero schema changes. - Monthly tables ensure all analytics run fast—no heavy runtime grouping. - categories table ensures consistent reporting despite QBO account type chaos.

Phase 2 — Views (Analytics Logic on the DB)

Reason: Frontend should stay simple. DB views allow consistent metrics and eliminate duplicate logic across workflows.

Views:

- v_monthly_pl
- v_monthly_cash_flow
- v_kpis (optional but recommended)

Why views: - Centralized logic → easier updates later. - Faster frontend dev since views expose ready-to-use data. - Reduces chance of developer miscalculations in multiple places.

Phase 3 — QuickBooks + Pipedream Integration

Reason: Pipedream drastically reduces development time. Instead of building OAuth, schedulers, retry logic, and API clients, we use battle-tested workflows.

Workflow A: Register Company / Connect QBO

Why: Establishes a controlled onboarding flow for internal or future end-users.

Workflow B: Backfill 24 Months

Why: We need an accurate historical baseline for trends, margins, projections, and KPIs.

Workflow C: Daily Incremental Sync

Why: QBO data changes—late adjustments, corrected categorization, added bills. We keep everything up to date automatically.

Workflow D: Webhook Handler (Optional)

Why: Reduces unnecessary polling, improves freshness.

Overall reasons: - This design keeps the Supabase DB as the source of truth. - Pipedream handles all authentication + rate limits + retries. - Idempotent upserts guarantee safe re-runs without duplication.

Phase 4 — Projections Function

Reason: Moving projections into SQL keeps forecasting logic consistent and fast. Frontend and workflows just call a function.

fn_generate_projection(company_id)

Why: - Encapsulates forecasting into a single location. - Allows scheduled daily updates. - Prevents frontend bloat.

Phase 5 — Minimal Next.js Dashboard

Reason: We need a simple UI to validate the pipeline before investing in full SaaS functionality.

Pages:

- Overview
- P&L
- Cash Flow

Why Next.js: - Fast development. - Supabase client integrates seamlessly. - Easy future expansion.

Why no auth yet: - Removes distraction. - Internal use only.

Phase 6 — Deliverables Checklist

Reason: Ensures the developer understands “done” clearly and avoids scope confusion.

Schema & Migrations

- All tables created
- categories seeded
- Views validated
- Projection function deployed

Pipedream

- OAuth client works
- All workflows functional
- Idempotent logic confirmed

Data Validation

- Historical data correct
- Incremental sync accurate
- No duplicate rows

Dashboard

- Charts render cleanly
- Values match Supabase
- Edge cases tested

Summary of Why This Plan Works

- **Fast to build** (Pipedream + SQL-first architecture)
- **Highly stable** (Supabase source of truth)
- **Easy to extend** (multiple companies, marketing KPIs, CRM connections)
- **Clear developer boundaries** (each phase isolated)
- **Minimal moving parts** (no custom backend until needed)

This structure sets us up to deliver value immediately—then scale into a polished, multi-company SaaS dashboard without needing to rewrite anything.