

# AI Lead Intelligence & Sales Operations System

2-Page Architecture & Future Roadmap | Modular Zapier lead operations architecture with AI qualification, deterministic scoring, sales routing, nurture, recovery, and external CRM/API synchronization.

**Architecture Principle**  
Zapier Tables acts as the central operational record. Each workflow owns a focused stage of the lead lifecycle and updates shared state fields. Filters prevent duplicate processing, timestamps create traceability, and downstream modules react only when a lead becomes eligible for the next stage. This keeps the system modular, explainable, testable, and easier to extend than one giant automation.

## End-to-End System Flow

|                                                       |                                                               |                                                     |                                                     |                                                   |                                                             |                                                              |
|-------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|
| <b>01 Intake</b><br>Capture + normalize + deduplicate | <b>02 AI Qualification</b><br>Need + intent + fit + readiness | <b>03 Scoring</b><br>Score + Hot/Warm/Cold priority | <b>04 Routing</b><br>Sales handoff or nurture queue | <b>05 Follow-Up</b><br>Timed personalized nurture | <b>06 Recovery</b><br>Human escalation or long-term nurture | <b>07 CRM/API Sync</b><br>Structured payload + external sync |
|-------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|

## Module Architecture

### WF01. Multi-Source Lead Intake

Captures the lead from Google Forms, normalizes email/domain values, validates required data, searches the central table for an existing record, and routes new vs. existing leads. New records receive a unique business Lead ID; existing records are updated rather than duplicated.

**Core components:** Google Forms, Formatter, Filter, Zapier Tables, Paths, Code by Zapier

### WF03. Lead Scoring & Priority

Applies deterministic scoring after AI qualification. The score combines qualification, intent, fit, readiness, budget, and implementation timeline, then assigns a Hot, Warm, or Cold priority with a human-readable scoring reason.

**Core components:** Zapier Tables, Filter, Code by Zapier

### WF05. Personalized Follow-Up & Nurture

Waits until follow-up is due, rechecks current lead state after each delay, confirms the lead still requires outreach, generates personalized follow-up content, sends Gmail messages, updates timestamps, and increments follow-up count before a second controlled follow-up cycle.

**Core components:** Zapier Tables, Filter, Delay by Zapier, AI by Zapier, Gmail, Formatter

### WF07. External CRM Sync & API Integration

Detects CRM-sync-ready leads, validates sync eligibility, builds a structured JSON payload, sends it through a POST request to an external API test endpoint, and marks the lead as Synced with timestamp and external reference.

**Core components:** Zapier Tables, Filter, Code by Zapier, Webhooks by Zapier / REST API

### WF02. AI Lead Qualification

Processes only leads that have not yet been qualified. AI converts unstructured lead context into structured sales intelligence: qualification, business need, intent level, service fit, buying readiness, AI summary, and recommended action.

**Core components:** Zapier Tables, Filter, AI by Zapier

### WF04. Lead Routing & Sales Handoff

Routes scored leads by priority. Hot leads create an immediate Slack sales alert and are marked for sales handoff; Warm leads are queued for follow-up; Cold leads are queued for nurture. Routed At prevents repeated routing.

**Core components:** Zapier Tables, Filter, Paths, Slack

### WF06. No-Response Recovery & Lead Disposition

After the final wait, the workflow rechecks the record and confirms that no response has occurred. High-value leads are escalated in Slack and moved to Human Recovery; lower-priority leads are moved into Long-Term Nurture.

**Core components:** Zapier Tables, Filter, Delay, Paths, Slack

**Shared State / System of Record**  
Lead ID, contact/company data, Lead Status, AI qualification outputs, score, priority, scoring reason, Follow-Up Count, CRM Sync Status, CRM Synced At, and External CRM ID. These fields form the

# Production Evolution & Expansion Roadmap

The current portfolio build proves the complete operating model. The roadmap below shows how the same architecture can evolve into a client-ready revenue operations system without replacing the modular core.

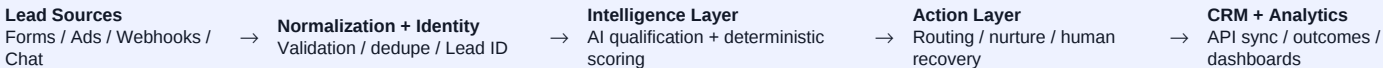
## Recommended Evolution Path

| Phase 1 - Production Hardening             | Replace test assumptions with production controls: authenticated CRM endpoints, secrets management, retry/error paths, failed-sync logging, duplicate protection, schema validation, alerting, rate-limit handling, consent/opt-out checks, and operational audit fields.                                      | Priority: Highest   |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Phase 2 - Real CRM Integration             | Connect WF07 to a real CRM such as HubSpot, Salesforce, Pipedrive, or GoHighLevel. Map lifecycle stages, owner assignment, opportunity/deal creation, custom properties, campaign source, and external CRM IDs. Add update/upsert logic instead of create-only synchronization.                                | Priority: High      |
| Phase 3 - Two-Way CRM Synchronization      | Allow CRM activity to update Zapier Tables: salesperson contact, meeting booked, reply received, opportunity stage, Won/Lost outcome, and disqualification reason. These signals can automatically stop nurture sequences and prevent conflicting outreach.                                                    | Priority: High      |
| Phase 4 - Multi-Channel Lead Capture       | Expand intake beyond Google Forms to website forms, Meta Lead Ads, LinkedIn lead sources, Typeform, landing pages, chat, inbound webhooks, or partner referrals while preserving one normalized lead schema and duplicate-control layer.                                                                       | Priority: Medium    |
| Phase 5 - Smarter Sales Intelligence       | Add company enrichment, firmographic data, lead-source quality, engagement history, behavioral signals, and historical conversion data. Keep AI responsible for interpretation while deterministic rules remain responsible for critical scoring and routing decisions.                                        | Priority: Medium    |
| Phase 6 - Human-in-the-Loop Sales Controls | Introduce approval checkpoints for sensitive/high-value outreach, owner reassignment, discount requests, or AI-generated sales messages. Add Slack buttons or CRM tasks so sales staff can approve, reject, edit, or take ownership without leaving their normal workspace.                                    | Priority: Medium    |
| Phase 7 - Analytics & Optimization         | Create dashboards for lead volume, qualification rate, Hot/Warm/Cold distribution, response rate, follow-up conversion, time-to-first-contact, human recovery success, source performance, CRM sync failures, pipeline value, and Won/Lost outcomes. Use results to tune scoring weights and nurture timing.   | Priority: Medium    |
| Phase 8 - Reusable Client Template         | Convert the system into a configurable deployment blueprint: client-specific intake fields, scoring weights, routing rules, SLA windows, email templates, CRM mappings, team channels, and environment variables. This turns Project 046 from a single automation into a repeatable sales-operations solution. | Priority: Strategic |

## Production Architecture Guardrails

- **Idempotency:** use Lead ID / external CRM ID and upsert logic so retries do not create duplicate contacts or deals.
- **State-aware automation:** recheck lead status after every delay; stop outreach when a reply, booking, disqualification, or sales takeover occurs.
- **AI boundaries:** use AI for interpretation and personalization, but keep eligibility, scoring thresholds, routing, and irreversible actions rule-based or approval-gated.
- **Observability:** record timestamps, failure reasons, retry counts, sync status, and ownership so operators can understand what happened to every lead.
- **Data governance:** minimize personal data, apply retention policies, protect credentials, and align outreach with applicable consent and privacy requirements.

## Target Production Architecture



**Portfolio Positioning**  
Project 046 demonstrates more than a sequence of Zaps. It shows an end-to-end sales operations architecture: normalized intake, identity/deduplication, AI-assisted interpretation, explainable scoring, priority-based routing, timed lifecycle automation, human recovery, persistent operational state, and REST API integration. The architecture is intentionally modular so individual capabilities can be deployed, replaced, or upsold independently for different client needs.