Signal V2 — Complete Product Workflow

Map to Mailbox: The Full User Journey

OVERVIEW

Signal V2 decouples research from scoring. Research happens first on the map — building market intelligence that gets stored and visualized. Scoring happens later when a property list is pulled. This means intelligence is always fresh, always available, and never wasted.

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MAP → RESEARCH → VISUALIZE → SELECT → PULL DATA → SCORE → BUILD → MAIL
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PHASE 1: ZIP SELECTION ON MAP

What happens: User opens the Signal coverage map and selects target ZIP codes.

How it works:

- Interactive map with click-to-select ZIPs
- ZIPs highlight as selected (green fill)
- Sidebar shows selected ZIP list with count
- Copy/paste functionality for ZIP lists
- Can select individual ZIPs or draw a region
- No commitment yet — this is exploration mode

User decides: "These are the areas I want to investigate."

Output: Selected ZIP list (e.g., 63136, 63137, 63138, 63033, 63034)

PHASE 2: RESEARCH (Layer 0 → Layer 1 → Layer 2)

What happens: For each selected ZIP, the full V2 research pipeline runs.

Per ZIP:

1. **Layer 0: Strategy Education** — Claude produces a strategy education document based on the user's exit strategy (Fix & Flip, Wholesale, BRRRR, etc.)
2. **Layer 1: 10 Research Agents** — Perplexity agents investigate the ZIP across 10 domains in parallel:
    - Physical Environment & Housing Stock
    - Financial Positions & Transaction Patterns
    - Distress & Legal Activity
    - Ownership Structure & Occupancy
    - Market Dynamics & Demographic Forces
    - Temporal & Seasonal Patterns
    - Economic Stress & Leading Indicators
    - Investor & Competitive Landscape
    - Regulatory & Political Environment
    - Neighborhood & Micro-Location Intelligence
3. **Layer 2: Intelligence Enrichment** — Claude reads across all 10 agents and adds cross-domain tags, conflict identification, mosaic patterns, proxy validations, propensity to sell, and data quality assessment

Output per ZIP: Complete intelligence package — strategy education + raw agent findings + Layer 2 enrichments

All research data is SAVED for scoring later.

PHASE 3: MAP UPDATE WITH RESEARCH

What happens: The map updates to reflect what the research actually found. This is where the user SEES the intelligence visually.

Map shows per ZIP:

- Signal strength tier (Strong Signal / Moderate Signal / Weak Signal)

- Key findings summary on hover/click
- Propensity to sell indicators
- Mosaic confidence level (how many domains converged)
- Distress indicators
- Market trajectory (growing, stable, declining)
- Agent convergence patterns
- Color coding based on strategy fit

What the user learns:

- "63136 is a distress-heavy market with high propensity — strong signal for Fix & Flip"
- "63034 looks stable on the surface but has low seller motivation — weak signal"
- "63137 has interesting patterns but thin data — moderate signal, lower confidence"

The map becomes the decision tool. Not a spreadsheet. Not a report. A visual intelligence layer the user can explore, compare, and learn from.

Research data stays saved — it doesn't expire. If the user comes back in a week, the intelligence is still there.

PHASE 4: FINAL ZIP SELECTIONS FOR MAILING LIST

What happens: Based on the research-powered map, the user makes their FINAL selections — which ZIPs will actually become a mailing campaign.

User narrows down:

- Started with 15 ZIPs of interest
- Research ran on all 15
- Map showed 8 as strong signal, 4 moderate, 3 weak
- User selects the 8 strong + 2 moderate = 10 ZIPs for mailing

This is a different selection than Phase 1. Phase 1 was "investigate these." Phase 4 is "mail these." Research informed the decision.

Output: Final ZIP list for mailing campaign

PHASE 5: PULL RAW PROPERTY DATA

What happens: Raw property list data is pulled for the final selected ZIPs. This could happen same day as research or weeks later.

Data sources: PropStream, BatchLeads, ListSource, SMARTData, or any other provider

Flow:

1. User pulls property records for final ZIPs from their data provider
2. Raw CSV uploaded to Signal
3. List Conversion pipeline normalizes to Signal's 92-column format (handles any source)
4. Clean, standardized property list ready for scoring

Key insight: The property data is FRESH — pulled when the user is ready to mail, not when research was conducted. Research tells you WHERE to pull. The pull itself gets current records.

Output: Standardized property list (50,000+ rows) for the selected ZIPs

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PHASE 6: APPLY SCORING USING SAVED RESEARCH

What happens: The saved research intelligence from Phase 2 is now applied to the actual property list. This is where Layer 3 and Layer 4 come in.

Layer 3: Scoring Translation (Claude)

- Sees the saved intelligence package for the first time alongside column definitions
- Maps research findings to scoring column relevance
- Generates 6 JavaScript scoring functions:
  - `calculateCO(row)` → Base Signal Points
  - `calculateCP(row)` → Final Signal Score (100-1500)
  - `calculateCQ(row)` → Noise Filter (0-100)
  - `calculateCR(row)` → Temporal Urgency (HIGH/MEDIUM/LOW)
  - `calculateCS(row)` → Dynamic Offer Amount ($)
  - `calculateCT(row)` → Offer Percentage (0-100%)

- Produces combination functions (multi-factor multipliers)
- Applies geographic tier multipliers per ZIP
- Weights confidence based on Layer 2's data quality assessment

Layer 4: Execution (Vercel)

- Takes JS functions from Layer 3 + property list CSV
- Executes scoring functions against every row
- Calculates all 6 scores per property
- Sorts by Signal Score descending
- Stores scored results to Base44

Output: Fully scored property list — every property has a Signal Score, Noise Filter, Temporal Urgency, Dynamic Offer Amount, and Offer Percentage

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PHASE 7: CAMPAIGN BUILDER

What happens: User builds their mailing campaign from the scored list using filters and thresholds.

Available filters:

- Signal Score minimum (e.g., only properties scoring 800+)
- Noise Filter threshold (e.g., only high-confidence scores above 60)
- Temporal Urgency (e.g., only HIGH urgency for time-sensitive campaigns)
- Offer range (e.g., only properties where dynamic offer is $50K-$150K)
- Strategy-specific filters (distress type, ownership pattern, etc.)
- Geographic filters (specific ZIPs within the selection)
- Property characteristics (beds, baths, sqft, year built, etc.)

User controls:

- Total mail count target (e.g., "I want to mail 5,000 properties")
- Budget constraints (offer amount ranges)
- Campaign type (first touch, follow-up, high-priority)

- Exclusions (already contacted, under contract, do not mail)

Output: Filtered campaign list with property count, total estimated offers, campaign stats

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PHASE 8: FINAL MAILING LIST — FILTERED & READY TO GO

What happens: The campaign list is finalized, exported, and ready for mail house or direct mail platform.

Final output includes per property:

- Full property details (address, owner, beds/baths/sqft, etc.)
- Signal Score
- Noise Filter confidence
- Temporal Urgency flag
- Dynamic Offer Amount
- Offer Percentage
- Key distress indicators that triggered the score

Export formats:

- CSV for mail house upload
- Direct integration with mailing platforms
- Base44 deal pipeline sync

The cycle completes: ZIP on a map → researched → scored → filtered → in the mailbox.

WORKFLOW SUMMARY

Phase	Action	Status
1. ZIP Selection	User selects ZIPs on interactive map	🟡 ZIP Selector tab discussed, not built
2. Research	Layer 0 → Layer 1 (10 agents) → Layer 2 per ZIP	✅ Built & validated

3. Map Update	Map reflects research findings visually	🟡 V1 map exists, V2 integration needed
4. Final Selection	User narrows ZIPs based on research	🟡 Depends on Phase 3
5. Pull Data	Raw property list pulled for final ZIPs	✅ List Conversion workflow exists
6. Scoring	Layer 3 translates + Layer 4 executes	🔴 Layer 3 & 4 not built
7. Campaign Builder	Filter and build mailing campaign	🟡 Basic filtering in Base44
8. Final List	Export ready-to-mail list	✅ Export functionality exists

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KEY INSIGHT: RESEARCH AND SCORING ARE DECOUPLED

This is the architectural breakthrough of V2. In V1, research and scoring happened in the same pipeline run — research a market, immediately generate scoring functions, immediately score. If you wanted to score again later, you had to re-research.

In V2:

- **Research is an investment.** Run it once, store it, visualize it on the map, reference it anytime.
- **Scoring is an application.** Apply stored research to any property list, anytime, as many times as needed.
- **The map is the interface.** Research isn't a background process — it's a visible, explorable intelligence layer.
- **Time doesn't matter.** Research on Monday, pull data on Thursday, score on Friday. The intelligence persists.

This decoupling means:

1. Users can research speculatively (investigate 50 ZIPs, only mail 10)
2. Research costs are front-loaded but reusable
3. Scoring can be re-run with fresh property data without re-researching
4. The map accumulates intelligence over time — it gets smarter with every run

THE PHILOSOPHY

Signal V2 is map-first, research-driven, score-when-ready.

The map isn’t a visualization of scores. The map IS the product. It’s where the user thinks, explores, compares, and decides. Scores are what happens after the decision is made.

All Signal. No Noise.