

ENRICHMENT PHASE

IMPLEMENTATION GUIDE

From Raw Contacts to Qualified, Enriched Leads

B2B SaaS Automated Growth Stack
February 2026

1. Overview and Strategy

This guide covers Phase 2 (Intelligence) of the Automated Growth Stack: adding enrichment to transform raw contact data into qualified, actionable leads before any outreach begins. Enrichment is the quality gate between data collection and engagement. Without it, outreach is generic, bounce rates are high, and sender reputation suffers.

1.1 Where You Are Today

- **Phase 1 complete:** Apollo → Attio pipeline running daily (25+ contacts tested)
- **563 contacts imported:** 497 Beehiiv subscribers + 66 landing page leads in Attio
- **Missing data:** Most contacts lack verified emails, phone numbers, company details, and ICP qualification signals
- **No enrichment layer:** Contacts go straight from source to CRM without quality checks

1.2 Two-Phase Enrichment Strategy

The enrichment phase is split into two stages, aligned with budget and volume:

	Phase 2A: Clay Free	Phase 2B: FullEnrich
Cost	\$0/month	\$29/month (Starter)
Credits	100/month (rollover 2x cap)	500/month (3-month rollover)
Providers	100+ via Clay-managed accounts	15+ waterfall providers
Email enrichment	Yes (waterfall, 2-4 credits/find)	Yes (1 credit per found email)
Phone enrichment	No (free plan exclusion)	Yes (10 credits per found phone)
AI personalization	Yes (Claygent included)	No
n8n integration	HTTP webhooks (manual setup)	Native n8n node (community)
Best for	Learning Clay, testing small batches	Scaling enrichment, production use

2. Prerequisite: Fix the Attio Update Function

Before any enrichment workflow can write data back to your CRM, you need the ability to update existing contacts, not just create new ones. Your current workflow uses POST (create only), which means enriched data has nowhere to go.

CRITICAL BLOCKER

Your context doc notes that POST `/v2/objects/people/records/query` returns 500 errors and GET `/v2/objects/people/records` is not found.

This is NOT actually a blocker. There is a different endpoint specifically designed for this: the Assert endpoint (PUT), which does upsert by email.

2.1 The Assert Endpoint (Upsert)

Attio provides a PUT endpoint that matches on a unique attribute (like email) and either updates the existing record or creates a new one. This is the standard method used by Segment, Customer.io, and other integration platforms to sync data into Attio.

Endpoint Details

Method: PUT

URL: `https://api.attio.com/v2/objects/people/records?matching_attribute=email_addresses`

Auth: Bearer token (same API key you already have)

Behavior: If email exists → update record. If email not found → create new record.

2.2 Request Body Format

The JSON body follows the same structure as your existing POST create calls, wrapped in a `data.values` object:

```
{
  "data": {
    "values": {
      "email_addresses": [
        "[email protected]"
      ],
      "name": [
        {
          "first_name": "John",
          "last_name": "Smith",
          "full_name": "John Smith"
        }
      ],
      "job_title": "VP of Engineering",
      "industry": "SaaS",
      "company_size": "51-200",
      "phone_numbers": [
        {
          "original_phone_number": "+15558675309",

```

```

    "country_code": "US"
  }
]
}
}
}

```

2.3 Step-by-Step: Add Assert Node to n8n

1. **Open your n8n workspace** at medex.app.n8n.cloud
2. **Create a new workflow** called "Test Attio Assert (Upsert)"
3. **Add a Manual Trigger** node (to test on demand)
4. **Add an HTTP Request** node with these settings:

Setting	Value
Method	PUT
URL	https://api.attio.com/v2/objects/people/records?matching_attribute=email_addresses
Authentication	Multiple Headers Auth (your existing Attio credential)
Body Content Type	JSON
Specify Body	Using JSON

5. **Set the JSON body** to the format shown in 2.2, using a test contact email that already exists in your Attio
6. **Execute the workflow.** Check the response:
 - If status 200 and the response contains "record_id": the assert worked
 - Open Attio and verify the contact was updated (not duplicated)
7. **Test both scenarios:** (a) Update an existing contact by using a known email, (b) Create a new contact by using an email not in Attio

Key Behavior Notes

email_addresses has a uniqueness constraint in Attio — perfect for matching.

For multiselect matching attributes (like email), new values are ADDED, existing values are NOT deleted.

For other attributes, values are replaced with what you send.

The company field is a record-reference type — you cannot send plain text. Skip it for now or create Company records first.

2.4 Verify with Your Existing Contacts

Once the test works, run a quick verification against your imported data:

8. **Pick 3 Beehiiv contacts** that you know are in Attio

9. **Send a PUT assert** with their email + a new job_title value (e.g., "Test Enrichment")
10. **Check Attio:** the job_title should be updated without creating duplicate contacts
11. **Clean up:** remove the test job_title values manually or run another assert with the correct data

3. Phase 2A: Clay Free Plan Enrichment

3.1 Clay Free Plan: What You Get

- **100 credits/month** (unused credits roll over, capped at 2x = 200 max)
- **100+ enrichment providers** via Clay-managed accounts
- **Waterfall email enrichment:** sequential multi-provider search (2–4 credits per found email)
- **Claygent AI:** AI agent for prospect research (company news, LinkedIn, custom prompts)
- **Chrome extension:** 1-click enrichment from LinkedIn profiles
- **No phone enrichment** on the free plan
- **No native CRM sync** (CRM integrations require Starter plan or above)
- **14-day Pro trial available:** 1,000 credits to test advanced features

Credit Budget Reality Check

With waterfall email enrichment costing 2–4 credits per found email, your 100 credits/month gives you roughly 25–50 email enrichments per month.

This is enough for testing and learning, but not for enriching your full 563-contact database.

Strategy: Be surgical. Prioritize your highest-value segments first.

3.2 Set Up Clay Account

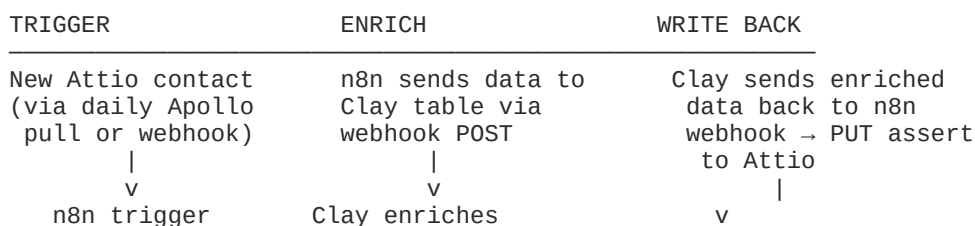
12. Go to clay.com and sign up for the free plan (no credit card required)
13. Complete onboarding (skip the team invite for now)
14. **Optional but recommended:** Start the 14-day Pro trial to get 1,000 credits for initial bulk enrichment of your existing contacts
15. Familiarize yourself with the interface: Tables, Enrichments, and the Chrome Extension

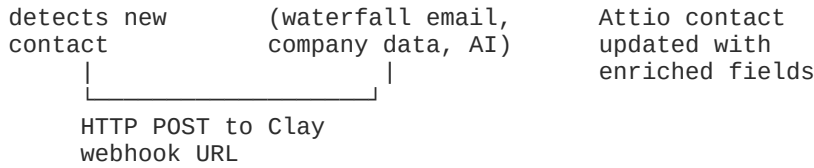
3.3 Architecture: Clay + n8n + Attio

Since Clay free plan has no native CRM integration, n8n acts as the bridge. There are two integration patterns:

Pattern A: n8n → Clay → n8n → Attio (Webhook Round-Trip)

Best for: automated, hands-off enrichment of new contacts as they arrive.





Pattern B: Clay Table + Manual Export (Simpler Start)

Best for: learning Clay, enriching existing contacts in batches.

1. Export contacts from Attio as CSV
2. Import CSV into a Clay table
3. Run enrichments in Clay (waterfall email, company data)
4. Export enriched data as CSV from Clay
5. Import enriched CSV back via n8n → PUT assert to Attio

3.4 Step-by-Step: Pattern B (Batch Enrichment)

Step 1: Export Contacts from Attio

16. Open Attio, go to the People view
17. Select all contacts (or filter to your priority segment)
18. Export as CSV (Attio has a built-in export function)
19. The CSV should include: email, first_name, last_name, job_title

Step 2: Import into Clay Table

20. In Clay, click New Table → Import from CSV
21. Upload your Attio export CSV
22. Map columns: ensure email, first_name, last_name are correctly identified
23. Clay will create a row for each contact

Step 3: Add Enrichment Columns

Add these enrichments to your Clay table (click “Add Enrichment” for each):

Enrichment	Credits	What it returns	Priority
Find Work Email (Waterfall)	2–4/find	Verified work email from multiple providers	HIGH
Enrich Company	1–2/lookup	Company size, industry, revenue, tech stack	HIGH
Enrich Person	1–2/lookup	Job title, seniority, LinkedIn URL	MEDIUM

Claygent AI Research	2–5/ prompt	Custom AI research (recent news, posts)	LOW (save for top prospects)
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Credit Management Strategy (100 credits/month)

Priority 1: Enrich Company on your 66 landing page leads first (highest intent). ~66-132 credits.

Priority 2: Find Work Email on those same 66 leads. ~132-264 credits.

Total for landing page leads: ~200-400 credits. This exceeds 1 month of free credits.

Solution: Use the 14-day Pro trial (1,000 credits) to batch-enrich your priority contacts.

After trial: Use 100 free credits/month for new contacts only (roughly 25-50 per month).

Step 4: Run Enrichments

24. Click “Run All” on each enrichment column (Clay processes rows sequentially)
25. Monitor credit consumption in Settings → Usage
26. Review results: check for found emails, company data quality
27. **Enable auto-dedupe:** Bottom-right of table → select email as unique identifier

Step 5: Export Enriched Data

28. Once enrichments complete, click Export → CSV
29. The export will include all original columns plus enrichment results
30. Save the file (e.g., enriched-landing-page-leads.csv)

Step 6: Write Back to Attio via n8n

31. In n8n, create a new workflow: “Clay Enrichment → Attio Update”
32. Add a Manual Trigger node
33. Add a Code (JavaScript) node to load the CSV:

```
// Load the enriched CSV data
// Upload the CSV to n8n (or use a Read File node)
const csvData = [
  {
    email: "[email protected]",
    job_title: "VP Engineering",
    industry: "SaaS",
    company_size: "51-200",
    linkedin: "https://linkedin.com/in/johndoe"
  },
  // ... more contacts from CSV
];

return csvData.map(contact => ({ json: contact }));
```

34. Add a Split Out node (to process one contact at a time)
35. Add a Loop Over Items node (batch size: 1, Reset: ON)

36. Add an HTTP Request node (the Attio Assert call):

Setting	Value
Method	PUT
URL	https://api.attio.com/v2/objects/people/records?matching_attribute=email_addresses
Authentication	Multiple Headers Auth (Attio credential)
Body Content Type	JSON
JSON Body	See template below

```
// JSON body template (use n8n expressions):
{
  "data": {
    "values": {
      "email_addresses": ["{{ $json.email }}"],
      "job_title": "{{ $json.job_title }}",
      "industry": "{{ $json.industry }}",
      "company_size": "{{ $json.company_size }}",
      "linkedin": "{{ $json.linkedin }}"
    }
  }
}
```

37. Add a Wait node (2 seconds) after the HTTP Request

38. Connect Wait back to Loop Over Items

39. Set HTTP Request node → Settings → On Error: Continue

40. Execute and verify: check Attio to confirm contacts are updated, not duplicated

3.5 Step-by-Step: Pattern A (Automated Webhook)

Once you are comfortable with Clay, build this for automated enrichment of new contacts:

Step 1: Create a Clay Webhook Table

41. In Clay, click New Table → Import from Webhook
42. Clay generates a unique webhook URL (e.g.,
https://api.clay.com/v1/sources/webhook/xxx)
43. Copy this URL — you will paste it into n8n
44. Define columns: email, first_name, last_name, source

Step 2: Set Up Enrichments on the Clay Table

45. Add the same enrichment columns as Pattern B (Find Work Email, Enrich Company, etc.)
46. These will run automatically on each new row added via webhook
47. Add an HTTP API enrichment as the LAST column (this sends data back to n8n):

Setting	Value
Enrichment type	HTTP API
Method	POST
URL	Your n8n webhook URL (from Step 3 below)
Body	Include all enriched fields as JSON
Required to Run	Enable — require email enrichment column to have data

Step 3: Build the n8n Workflows

Schedule Trigger (or webhook from Apollo/Beehiiv)

↓
 HTTP Request: POST to Clay webhook URL
 Body: { email, first_name, last_name, source }

Webhook Trigger (receives POST from Clay HTTP API enrichment)

↓
 Code Node: Extract and map enriched fields
 ↓
 HTTP Request: PUT assert to Attio
 URL: /v2/objects/people/records?matching_attribute=email_addresses
 Body: { data: { values: { enriched fields } } }
 ↓
 IF Node: Check ICP qualification
 ↓ YES: Tag in Attio + add to Lemlist sequence (future)
 ↓ NO: Keep in Attio, nurture via Beehiiv

Webhook URL Limit

Clay webhook sources are limited to 50,000 submissions. After that, you need a new webhook URL. At your current volume this will not be an issue for a very long time.

3.6 ICP Qualification Logic (in n8n)

After enrichment data comes back, add qualification scoring in your n8n workflow:

Signal	Source	Score	Logic
Company size 11-500	Clay → Enrich Company	+30	Sweet spot for B2B SaaS
Decision-maker title	Clay → Enrich Person	+25	VP, Director, Head of, C-level
SaaS/Tech industry	Clay → Enrich Company	+20	Vertical match
Has verified email	Clay → Find Work	+15	Contactable

	Email		
Demo request source	Source field	+10	High intent

Routing based on score:

- **Score 70+:** High priority → Attio deal created + Lemlist multichannel sequence
- **Score 40-69:** Medium → Lemlist email-only sequence
- **Score below 40:** Low → Stay in Attio, nurture via Beehiiv newsletter

4. Phase 2B: FullEnrich (Production Enrichment)

When your Clay free credits become insufficient (likely within 1-2 months of active prospecting), switch to FullEnrich for production-grade enrichment. Keep Clay as an optional deep-research tool for your top prospects.

4.1 Why FullEnrich for Production

- **Better credit economics:** 1 credit = 1 found email (vs Clay's 2-4). 500 credits/month = 500 email enrichments
- **Phone numbers included:** 10 credits per found phone (not available on Clay free)
- **Native n8n node:** Install `n8n-nodes-fullenrich` — no webhook plumbing needed
- **Triple email verification:** Syntax check + domain validation + mailbox verification = sub-1% bounce
- **Async webhook delivery:** Start enrichment, get results via webhook when done (no polling)
- **3-month credit rollover:** Unused credits survive longer than Clay's 2x cap

Metric	Clay Free	FullEnrich Starter
Monthly cost	\$0	\$29
Credits/month	100	500
Emails enriched/month	~25-50	~500
Phone enrichment	No	Yes (10 credits each)
n8n integration	HTTP webhooks	Native node
Email verification	Via 3rd party (credits)	Built-in triple verification
AI personalization	Yes (Claygent)	No
Credit rollover	2x cap	3-month rollover

4.2 Set Up FullEnrich

48. Sign up at fullenrich.com (50 free trial credits, no card required)
49. Choose the Starter plan (\$29/month) when ready for production
50. Go to Settings → API → copy your API key
51. Note your webhook URL for receiving results

4.3 Install the n8n Node

FullEnrich has a native community node for n8n. This is significantly simpler than Clay's webhook approach.

Installation (self-hosted n8n only — after Hetzner migration)

Go to n8n Settings → Community Nodes → Install
 Enter: n8n-nodes-fullenrich
 Click Install
 The node appears in your node palette as "FullEnrich"

n8n Cloud Limitation

Community nodes have limited availability on n8n Cloud. You may only have access to ~25 community nodes.

If n8n-nodes-fullenrich is not available on Cloud, use the HTTP Request node approach (same as Clay Pattern A).

This is another reason to prioritize the Hetzner migration — self-hosted gives you access to all 2,000+ community nodes.

4.4 Workflow Architecture with FullEnrich

The FullEnrich n8n node uses an async pattern: start enrichment, then receive results via webhook.

WORKFLOW A: Start Enrichment

```

Trigger (schedule or new Attio contact)
  ↓
FullEnrich Node: Start Enrichment
  Input: first_name, last_name, company_domain (or linkedin_url)
  webhook_url: your n8n Workflow B webhook URL
  ↓
(FullEnrich processes asynchronously)
  
```

WORKFLOW B: Receive Results

```

Webhook Trigger (receives enriched data from FullEnrich)
  ↓
Code Node: Map enriched fields
  ↓
HTTP Request: PUT assert to Attio
  ↓
IF Node: ICP qualification
  ↓ Qualified: Tag + route to Lemlist
  ↓ Not qualified: Beehiiv nurture
  
```

4.5 Step-by-Step: Build the FullEnrich Workflows

Workflow A: Start Enrichment

52. Create a new workflow: "FullEnrich → Start Enrichment"
53. Add a Schedule Trigger (e.g., daily at 10 AM) or Webhook Trigger (fired when a new Attio contact is created)
54. Add a FullEnrich node (or HTTP Request if on Cloud). Operation: **Start Enrichment**
55. Configure the input fields:

Field	Value (n8n expression)	Notes
first_name	{{ \$json.first_name }}	From Attio or Apollo data
last_name	{{ \$json.last_name }}	From Attio or Apollo data
company_domain	{{ \$json.company_domain }}	If available from Apollo
linkedin_url	{{ \$json.linkedin_url }}	Alternative to company_domain
webhook_url	https://your-n8n.com/webhook/fullenrich-results	Your Workflow B URL

56. If using HTTP Request node instead of native node:

```
Method: POST
URL: https://api.fullenrich.com/api/v1/contact/enrich
Headers: Authorization: Bearer YOUR_API_KEY
Body (JSON):
{
  "first_name": "{{ $json.first_name }}",
  "last_name": "{{ $json.last_name }}",
  "company_domain": "{{ $json.company_domain }}",
  "webhook_url": "https://your-n8n.com/webhook/fullenrich-results"
}
```

Workflow B: Receive and Write to Attio

57. Create a new workflow: “FullEnrich → Attio Update”

58. Add a Webhook node as trigger (path: /webhook/fullenrich-results)

59. Add a Code node to map the enriched data:

```
// Map FullEnrich response to Attio assert format
const enriched = $input.all()[0].json;

return [{
  json: {
    data: {
      values: {
        email_addresses: enriched.email ? [enriched.email] : [],
        phone_numbers: enriched.phone ? [{
          original_phone_number: enriched.phone
        }] : [],
        job_title: enriched.job_title || "",
        industry: enriched.industry || "",
        company_size: enriched.company_size || "",
        linkedin: enriched.linkedin_url || ""
      }
    }
  }
}];
```

60. Add an HTTP Request node (Attio Assert):

- Method: PUT

- URL: https://api.attio.com/v2/objects/people/records?matching_attribute=email_addresses
- Body: `{{ $json }}` (pass the mapped data directly)

61. Add an IF node for ICP qualification (same scoring as Section 3.6)

62. Activate both workflows

5. Migration: Clay Free → FullEnrich

When to switch:

- You are consistently running out of Clay free credits before the month ends
- You need phone numbers (Clay free cannot provide these)
- You are ready to scale outreach beyond 25-50 contacts/month
- You have migrated to Hetzner (to use the native FullEnrich n8n node)

The migration is straightforward because both tools feed into the same n8n → Attio assert pipeline. Only the enrichment source changes:

Component	Clay Setup	FullEnrich Setup	Change needed
Enrichment trigger	n8n → Clay webhook POST	n8n → FullEnrich node/API	Swap enrichment node
Result delivery	Clay HTTP API → n8n webhook	FullEnrich webhook → n8n	Update webhook URL
Attio write-back	PUT assert (same)	PUT assert (same)	No change
ICP qualification	n8n IF node (same)	n8n IF node (same)	No change
Field mapping	Clay field names	FullEnrich field names	Update Code node

5.1 Keeping Clay for Deep Personalization

Even after switching to FullEnrich for volume enrichment, Clay remains valuable for a specific use case: deep personalization of high-value prospects before outreach.

The workflow becomes:

63. **FullEnrich:** Enriches ALL new contacts (email, phone, company basics) → writes to Attio
64. **n8n ICP scoring:** Qualifies contacts, assigns scores
65. **Clay (selective):** For score 70+ contacts only, send to Clay for Claygent AI research
66. **Clay returns:** Recent company news, LinkedIn post analysis, personalized talking points
67. **Lemlist:** Uses Clay's personalization data in email sequences

This uses ~2-5 Clay credits per high-value prospect. With 100 free credits, that is 20-50 deeply personalized outreach messages per month — more than enough for targeted, high-conversion sequences.

6. Implementation Timeline

Week	Task	Est. Time	Depends On
Week 1	Test Attio PUT assert endpoint (Section 2)	1-2 hours	Nothing
Week 1	Sign up for Clay free (+ start Pro trial)	30 min	Nothing
Week 1	Batch enrich landing page leads in Clay (Pattern B)	2-3 hours	Clay account + assert working
Week 1	Write enriched data back to Attio via n8n	2-3 hours	Assert endpoint verified
Week 2	Build automated Clay webhook workflow (Pattern A)	3-4 hours	Pattern B working
Week 2	Add ICP qualification logic in n8n	1-2 hours	Pattern A working
Week 3-4	Migrate to Hetzner (per existing guide)	1.5 hours	Cloud trial ending
Week 3-4	Install FullEnrich n8n node on self-hosted	30 min	Hetzner migration done
Week 4+	Build FullEnrich automated workflows	2-3 hours	FullEnrich node installed
Week 4+	Switch production enrichment to FullEnrich	1-2 hours	FullEnrich workflows tested

7. Quick Reference Checklist

Prerequisites

- Attio PUT assert endpoint tested and working
- n8n workflow pattern for assert (upsert) confirmed
- Split Out + Loop Over Items pattern documented (from CSV import experience)

Phase 2A: Clay Free

- Clay account created (free plan)
- Pro trial activated (optional, for 1,000 credits)
- Landing page leads batch-enriched in Clay
- Enriched data written back to Attio via n8n assert
- Automated webhook workflow built (Pattern A)
- ICP qualification logic added to n8n

Phase 2B: FullEnrich

- Hetzner migration completed
- n8n-nodes-fullenrich installed
- FullEnrich account created + API key

- Start Enrichment workflow built
- Receive Results + Attio Assert workflow built
- Production enrichment switched from Clay to FullEnrich
- Clay kept for selective deep personalization (top prospects only)

Key API Endpoints Reference

Endpoint	Method	Purpose
api.attio.com/v2/objects/people/records?matching_attribute=email_addresses	PUT	Assert (upsert) contact by email
api.attio.com/v2/objects/people/attributes	GET	List all contact field schemas
api.clay.com/v1/sources/webhook/[ID]	POST	Send data to Clay table
api.fullenrich.com/api/v1/contact/enrich	POST	Start FullEnrich enrichment