



Helio

The open-source growth platform — unify customer data, segment anyone, orchestrate journeys across every channel, and let AI do the heavy lifting. Self-hosted, on your own servers.

[Product guide](#) • [June 15, 2026](#)

Achref Soua · github.com/achref-soua/helio

What's inside

This guide follows one story: why Helio exists, what it does, how to get it running for your organization in an afternoon, how to move in from your current tool, and how to get the most out of it — whether you write code or write campaigns.

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01 · MOTIVATION

Why Helio exists

Marketing teams today are forced into a bad trade: rent a polished platform and surrender your customer data and your budget to per-contact pricing — or self-host an open tool and give up automation, speed, or both.

The rented suites (HubSpot, Klaviyo, ActiveCampaign, Customer.io) are excellent — and closed. Real automation sits behind premium tiers that start around \$800+/month, the bill grows with every contact you add, and your customer data lives in someone else's cloud, on someone else's terms.

The open-source options haven't kept up. Mautic is powerful but heavy and slowing. Listmonk is delightfully fast but stops at newsletters — no journeys, no automation. And none of them were designed for a world where AI drafts your segments, your emails, and your customer journeys.

Helio is the missing option: Listmonk's speed, Mautic's automation depth, the polish of a commercial suite, and 2026-grade AI — open source, self-hosted, with zero per-contact pricing. Your data never leaves your servers.

Own the data

Every profile, event, and click lives in your PostgreSQL and ClickHouse. GDPR export and delete are built in, not a support ticket.

Own the bill

AGPL-3.0, free to run, and the cost of a contact is the disk space it occupies. Growth shouldn't be a pricing penalty.

AI-native, not bolted on

Plain English becomes a segment, a journey, or an on-brand email — grounded in your own workspace data, never another tenant's.

Durable by design

Journeys execute on a workflow engine that survives crashes, restarts, and week-long waits — no lost state, no double-sends.

What Helio is — for every seat in the room

One platform that unifies the tools a growth team usually rents separately: a customer data platform, a segmentation engine, an email and multi-channel sender, a visual journey builder, behavioral analytics, a lightweight CRM, and an AI copilot — behind one login, one consistent design, one deployment.

If you run marketing

Import your audience, slice it with live segments, design on-brand emails in a block editor, and launch automations on a drag-and-drop canvas — email, SMS, WhatsApp, web push, in-app, with quiet hours, frequency caps, and A/B splits. Watch opens, clicks, funnels, and revenue attribution in real time. Ask the copilot to draft any of it from a sentence.

If you run the company

Helio converts a five-figure annual SaaS line item into infrastructure you already pay for. No per-contact tax, no data processor in the middle, no feature ransom. White-label it, put it on your domain, and the platform is yours — audit log, SSO, and compliance included.

If you run engineering

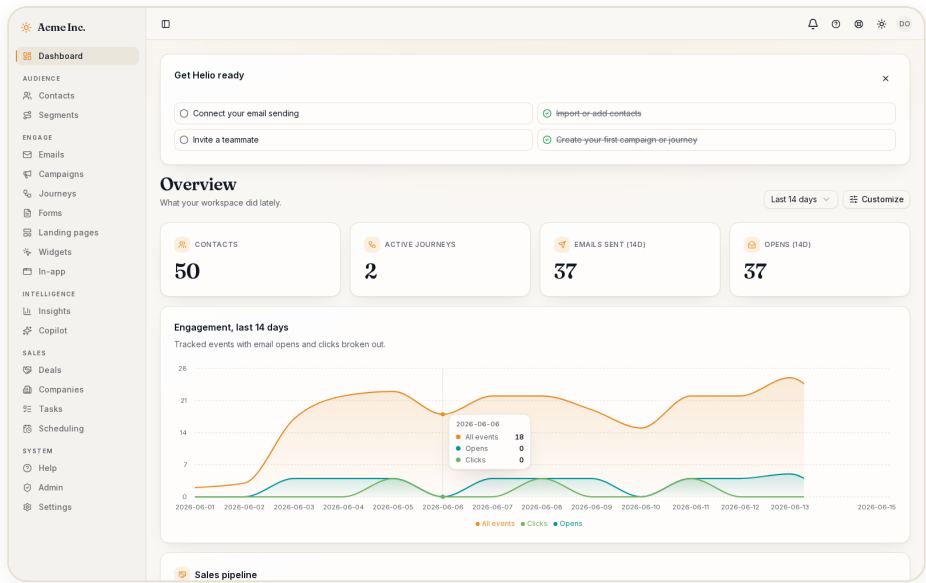
A modern, typed monorepo: Next.js dashboard, REST gateway with OpenAPI and generated JS/Python SDKs, Kafka-compatible event backbone, Temporal-backed workers, Postgres with row-level-security tenant isolation, ClickHouse analytics, and an MCP server so your own AI agents can drive campaigns programmatically. One docker compose up brings the whole thing to life.

If you're an agency or consultant

Multi-tenant organizations and workspaces, role-based access, white-labeling per client, and migration importers mean you can move a client off their per-contact bill in a day — and keep them on infrastructure you control.

One dashboard for the whole funnel

Contacts, live journeys, sends, and engagement, streamed from your own event store — the pulse of the workspace at a glance, in light and dark.



The overview: KPIs and a 14-day engagement timeline.

A real customer data platform

Every person is one profile: traits, lead score, AI churn and conversion predictions, lists, and a full activity timeline. CSV import and export, identity by email, GDPR data bundles, and a suppression list that every send path respects.

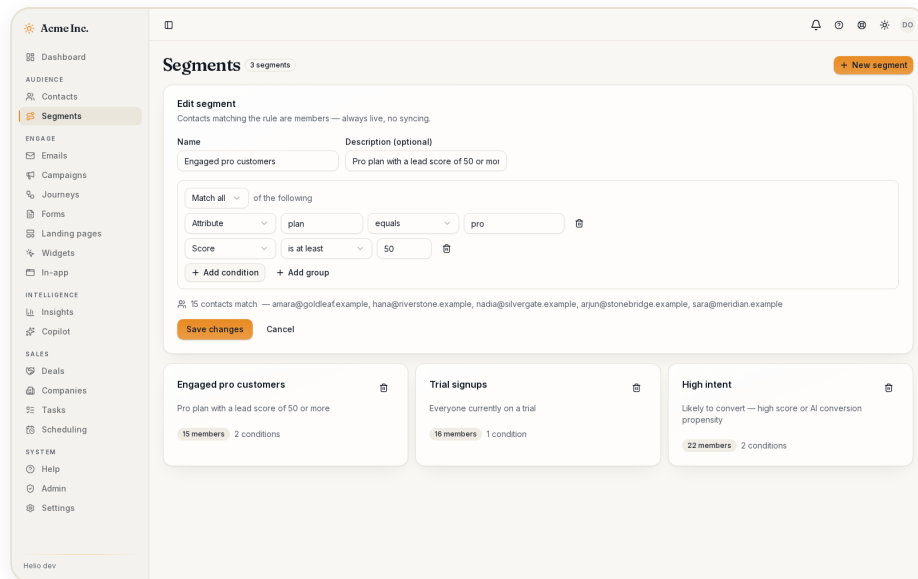
The screenshot shows the Helio dashboard contacts table. The table has columns: EMAIL, NAME, SCORE, CHURN RISK, STATUS, and ADDED. The table contains 15 rows of contact data. The first row is Jonas Visser with a score of 24 and a churn risk of 56%. The second row is Amara Okafor with a score of 68 and a churn risk of 12%. The third row is Pavel Novak with a score of 42 and a churn risk of 38%. The fourth row is Hana Kim with a score of 63 and a churn risk of 17%. The fifth row is Lucas Moreau with a score of 18 and a churn risk of 82%. The sixth row is Nadia Karimi with a score of 79 and a churn risk of 4%. The seventh row is Felix Wagner with a score of 36 and a churn risk of 44%. The eighth row is Emma Larsen with a score of 12 and a churn risk of 88%. The ninth row is Arjun Mehta with a score of 71 and a churn risk of 9%. The tenth row is Chloe Dubois with a score of 44 and a churn risk of 35%. The eleventh row is Diego Vargas with a score of 21 and a churn risk of 59%. The twelfth row is Sara Lindqvist with a score of 66 and a churn risk of 14%. The thirteenth row is Tom Becker with a score of 31 and a churn risk of 49%. The fourteenth row is Priya Sharma with a score of 74 and a churn risk of 8%. The fifteenth row is Noah Bern with a score of 15 and a churn risk of 65%.

EMAIL	NAME	SCORE	CHURN RISK	STATUS	ADDED
jonas@windmill.example	Jonas Visser	24	56%	Active	6/5/2026
amara@goldleaf.example	Amara Okafor	68	12%	Active	6/5/2026
pavel@borealis.example	Pavel Novak	42	38%	Active	6/5/2026
hana@riverstone.example	Hana Kim	63	17%	Active	6/5/2026
lucas@greenfield.example	Lucas Moreau	18	82%	Active	6/5/2026
nadia@silvergate.example	Nadia Karimi	79	4%	Active	6/5/2026
felix@copperline.example	Felix Wagner	36	44%	Active	6/5/2026
emma@northwind.example	Emma Larsen	12	88%	Active	6/5/2026
arjun@stonebridge.example	Arjun Mehta	71	9%	Active	6/5/2026
chloe@fermway.example	Chloe Dubois	44	35%	Active	6/5/2026
diego@altamar.example	Diego Vargas	21	59%	Active	6/5/2026
sara@meridian.example	Sara Lindqvist	66	14%	Active	6/5/2026
tom@anchorpoint.example	Tom Becker	31	49%	Active	6/5/2026
priya@lumenlabs.example	Priya Sharma	74	8%	Active	6/5/2026
noah@driftwood.example	Noah Bern	15	65%	Active	6/5/2026

Unified profiles with scores and AI predictions on every row.

Segments that compute live

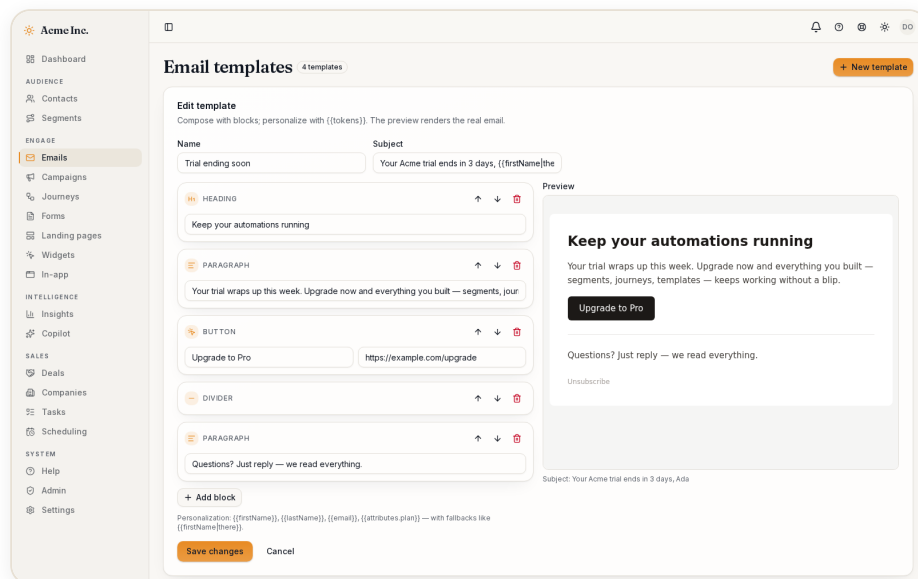
Nest AND/OR groups over traits, behavior ("did event X at least N times in the last 30 days"), scores, and AI predictions. Membership counts update as you edit, and stay continuously up to date afterwards.



The segment editor: nested rules with a live membership preview.

Email that looks like you

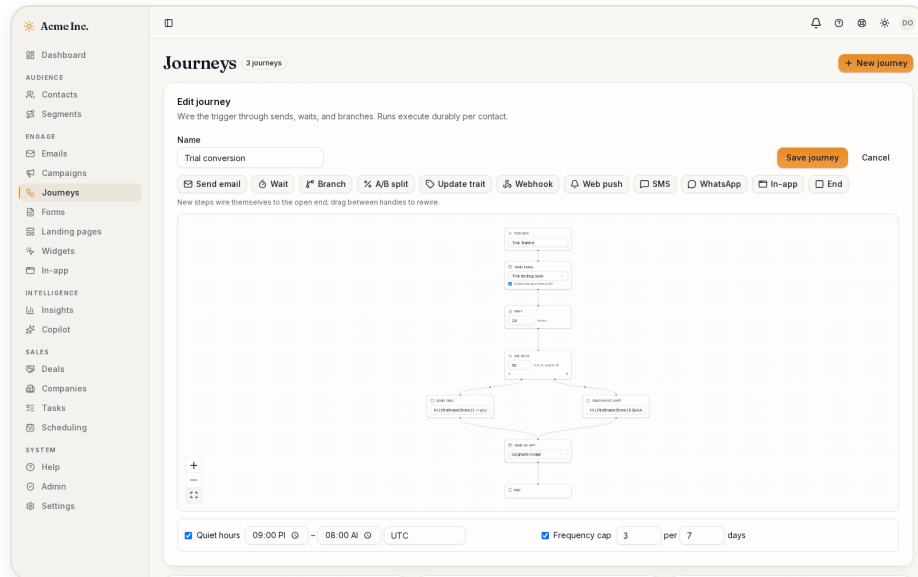
Compose with blocks, personalize with tokens and fallbacks, and preview exactly what each contact receives. Campaigns add subject-line A/B tests with per-variant open and click rates; one-click unsubscribe and a preference center are wired into every send.



The block-based email builder with a true-to-send preview.

Journeys are the centerpiece

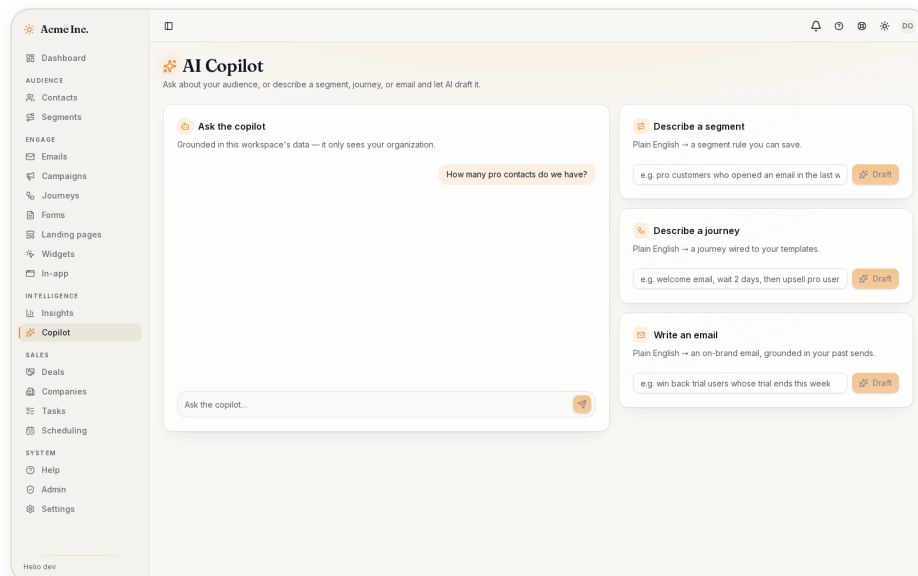
Drag any channel onto the canvas — email, SMS, WhatsApp, web push, in-app — and wire it with waits, branches, A/B splits, trait updates, and webhooks. Quiet hours and frequency caps protect your audience. Under the hood every run is a durable workflow: kill a worker mid-journey and it resumes exactly where it paused, without double-sending.



The journey canvas: email → durable wait → A/B split into SMS and WhatsApp → in-app.

The copilot is grounded, not generic

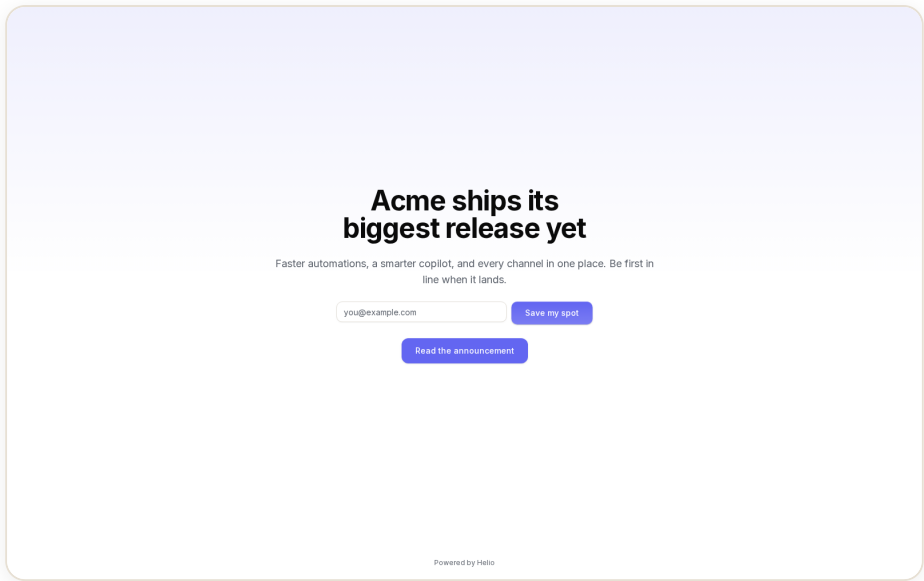
It answers questions from tenant-scoped, read-only tools over your own workspace, and turns plain English into a saved segment, a validated journey wired to your real templates, or an on-brand email draft — always editable before anything runs. Bring your own model: Groq, OpenAI, Anthropic, or a local server.



The AI copilot: grounded answers and one-click drafts of segments, journeys, and emails.

Growth surfaces

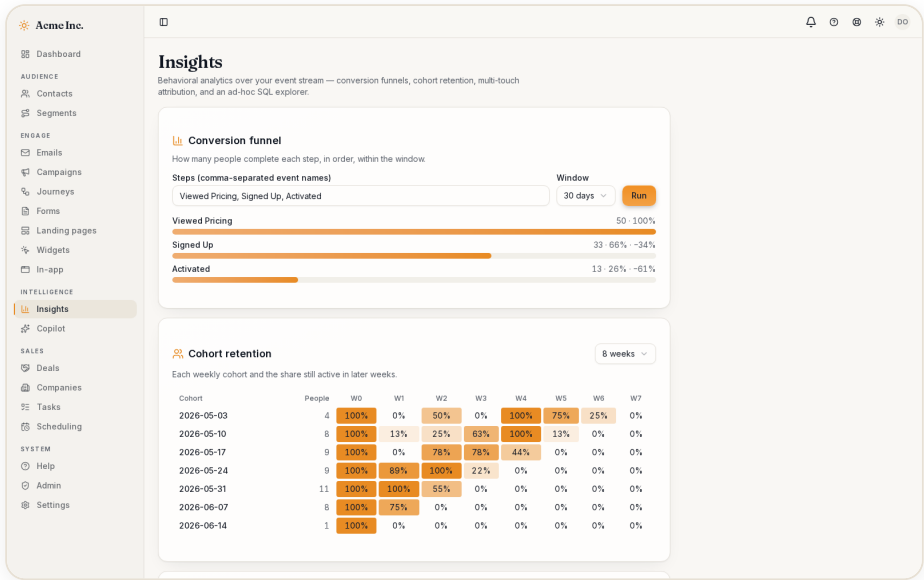
Hosted forms, landing pages, on-site widgets, and in-app messages feed new contacts straight into segments and journeys — no third-party form vendor, white-labeled per workspace.



A hosted landing page — block-built, brand-aware, capture-ready.

Proof, not vibes

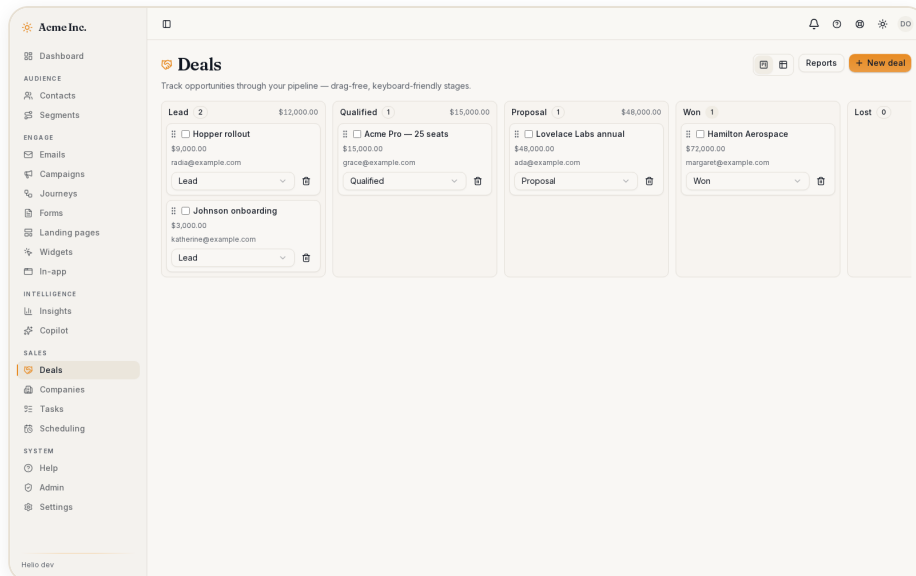
Insights answers the harder questions: conversion funnels over the event stream, weekly cohort retention, multi-touch revenue attribution, and a guard-railed read-only SQL explorer for everything else.



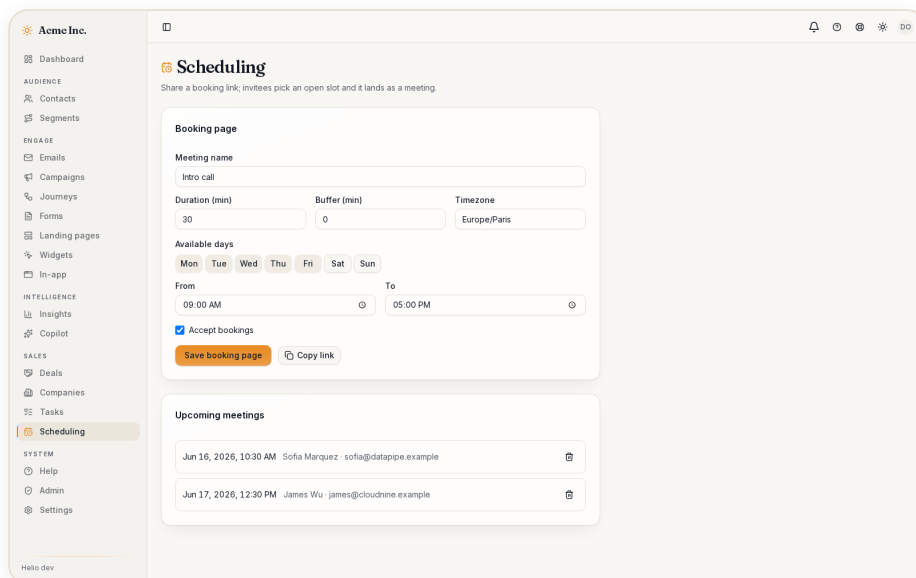
Insights: ordered funnels, with cohorts, attribution, and SQL below.

Close the loop

A lightweight CRM tracks deals through stages with tasks grouped by due date, and a booking page turns meetings into contacts automatically — double-booking is structurally impossible. Settings round it out: team roles, two-factor auth, SSO/SCIM, scoped API keys, outbound webhooks, white-labeling, sending-domain authentication, and a built-in support inbox.



CRM-lite: deals through pipeline stages, keyboard-accessible.



Scheduling: a public booking link; invitees land as meetings and contacts.

One command to a full stack

Helio ships as a Docker Compose stack with two profiles: **core** (app, PostgreSQL, Redis, Mailpit) for a quick start, and **full** (adds ClickHouse analytics, Redpanda event bus, Temporal workflows, MinIO storage) for everything in this guide.

```
# macOS & Linux
curl -fsSL https://github.com/achref-soua/helio/releases/latest/download/install.sh | bash
# Windows (PowerShell)
irm https://github.com/achref-soua/helio/releases/latest/download/install.ps1 | iex
```

That installs the helio command, which checks Docker, downloads the pinned release bundle (checksum-verified), generates every secret, starts the stack, runs the database migrations, and opens your browser on the first-run setup screen. One minute later you are inside your own Helio.

```
helio status      # every service, with versions
helio update      # new release — with an automatic pre-update backup
helio backup      # a checksummed local dump, on demand (nightly is automatic)
helio restore <file> # typed confirmation; rolls schema forward after restore
helio doctor      # when something feels off
helio uninstall   # remove the stack, keep your data (--purge-data erases it all)
```

Development email is captured by Mailpit (no real mail leaves your machine), and the demo seed gives you contacts, segments, templates, journeys, deals, and analytics history to click through immediately.

Hosting it for your organization

1 Pick a home.

A single 4 GB VM runs the core profile comfortably; the full profile is happy on 8 GB. Kubernetes users deploy the included Helm chart instead.

2 Set the environment.

The installer wrote `~/.helio/.env` with every secret generated; set `APP_URL` to your domain and restart. (Building from source? `cp .env.example .env` — every variable is documented inline.)

3 Put TLS in front.

Any reverse proxy works — Caddy and Traefik are one-liners; the deployment guide in the docs walks through both, plus a managed-cloud setup.

4 Connect a real mail relay.

SMTP works out of the box; first-class adapters exist for AWS SES, Postmark, Resend, and Mailgun. Transactional and marketing streams are kept separate, and bounce/complaint webhooks feed the suppression list automatically.

5 Back it up — already done.

Every install ships a backup service: nightly checksummed dumps under `~/.helio/backups`, run-now from Settings → Backups, optional passphrase encryption, and `helio restore` when you need it.

Where to go deeper: the docs site that ships in the repo covers self-hosting, configuration reference, production hardening, Kubernetes, and a managed-cloud walkthrough — `apps/docs`, or the README's deployment section.

Set up your organization, step by step

- 1 Meet the setup screen.**
 A fresh install opens on one form: your name, email, password (with a live strength meter), and the organization. One click creates everything and signs you in — no email round-trip on first run. After that, the instance is invite-only: teammates join through emailed invitations.
- 2 Create the organization and workspace.**
 Name the org (this is what your team and your hosted pages show). A default workspace is created with it — use workspaces to separate brands or environments.
- 3 Invite your team.**
 Settings → Members. Owners administer everything; members work day to day. Enterprise teams can wire SSO (OIDC) and SCIM provisioning in the same panel.
- 4 Secure it.**
 Enable two-factor from Settings → Security —
any authenticator app works
 (Google Authenticator, Authy, 1Password, Microsoft Authenticator...); backup codes cover a lost phone. Admins can require 2FA for every member, and set a password rotation policy (every N days, with a forced change at sign-in) in the same settings.
- 5 Connect your real providers.**
 Settings → Provider credentials: your SMTP/ Postmark/Resend/Mailgun email account, Twilio for SMS, WhatsApp Cloud — every secret is sealed in an encrypted vault, shown only masked, and every send leaves through *your* account with *your* From address. A test-send button proves each one.
- 6 Bring your own AI.**
 In the same panel, paste an OpenAI / Anthropic / Groq key — or point Helio at a local model server (Ollama works). The copilot, predictions, and generators run on *your* key, never a vendor lock-in.
- 7 Authenticate your sending domain.**
 The deliverability wizard generates your SPF, DKIM, and DMARC records and verifies them live, so your mail lands in inboxes, not spam.
- 8 Make it yours.**
 Settings → Branding: display name, accent color, and logo apply to the dashboard and every hosted form, landing page, and booking page. White-labeled orgs drop the Helio footer entirely.
- 9 Install the tracking snippet.**
 Copy the write-key snippet onto your site; page views and events start flowing into the timeline, segments, and analytics.
- 10 Bring your audience.**
 Contacts → Import CSV (see the migration chapter), or let forms, landing pages, and the API create contacts as they come.
- 11 Ship your first campaign.**
 Build a segment, pick a template, A/B the subject if you like, and send. Then automate it: a welcome journey on the canvas takes minutes — or one sentence to the copilot.

12 Mint API keys when you need them.

Settings → API keys for the REST gateway and SDKs; outbound webhooks notify your systems on contact, deal, and task events.

06 • SWITCHING

Migrating from HubSpot, Mailchimp, or Klaviyo

Moving to Helio must not mean re-subscribing people who already opted out. The importer detects which tool a CSV came from and maps each vendor's consent fields to the right Helio status — suppression carries over from day one.

The one-click way: connect the platform

1 Paste a token.

Settings → Provider credentials → HubSpot (a private-app token), Mailchimp (an API key), or Klaviyo (a private key). Vault-sealed, shown once.

2 Pull.

Contacts → Import CSV → *Or pull straight from a platform*. Helio pages through the vendor's API — contacts, names, companies, and consent — and imports in the background with live progress.

The CSV way: a guided wizard

1 Export and drop the file.

Helio detects which tool it came from.

2 Map the columns.

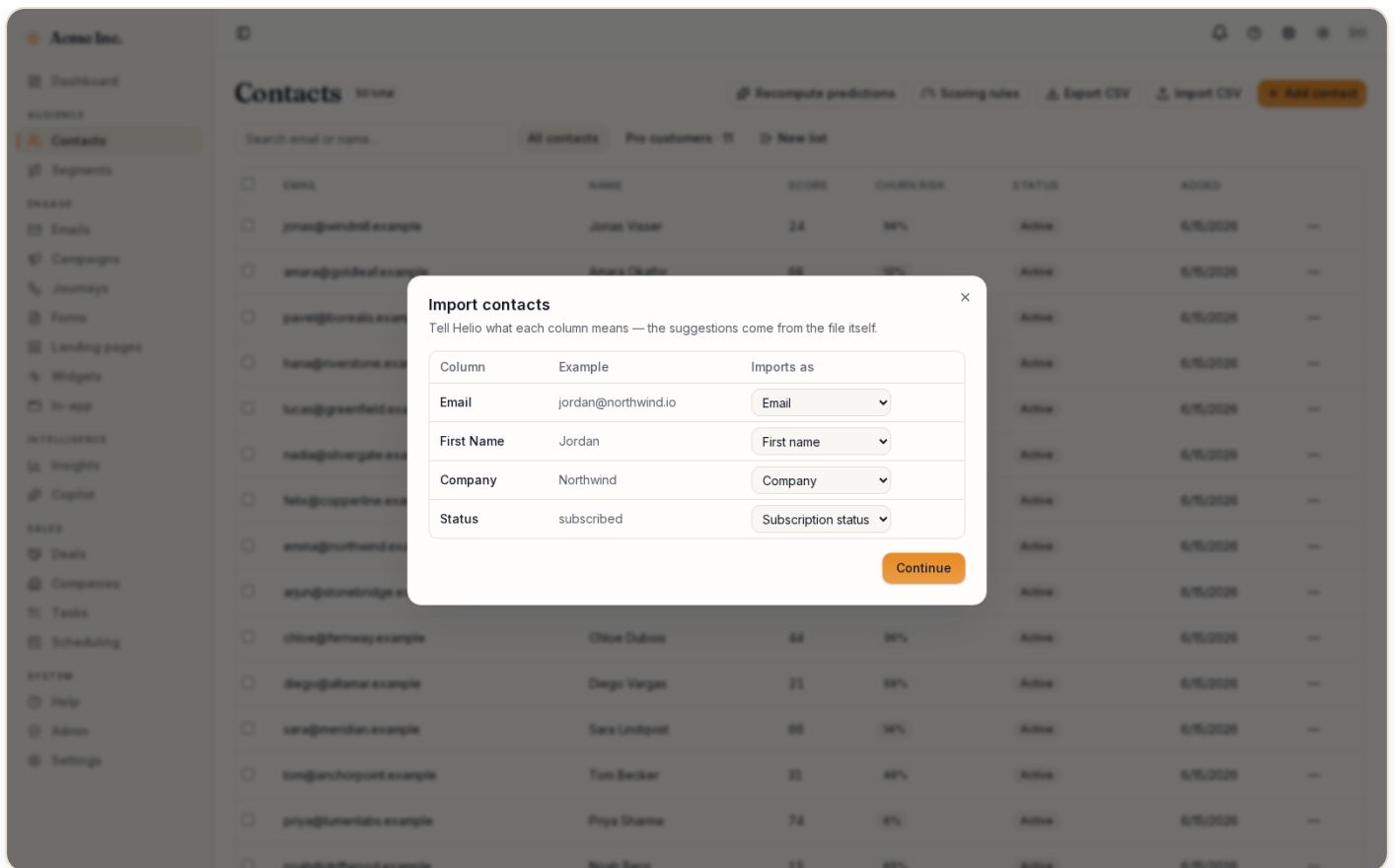
Every column gets a destination — email, names, subscription status, **company**, a kept attribute, or skip — pre-filled from the file's own headers and fully overridable.

3 Preview.

The first rows exactly as they will land, with counts of valid, invalid, and duplicate rows, and how many import as unsubscribed. Nothing is written yet.

4 Import in the background.

Live progress; existing contacts update (unsubscribes always stick — an import can never re-subscribe anyone); rejected rows download as a CSV with row numbers and reasons. Companies are matched by name or created on the spot.



The mapping step: every column, its example value, and where it lands.

What carries over

In Helio	Set when the vendor marks a contact as...
ACTIVE	subscribed / opted in
UNSUBSCRIBED + suppression	opted out, unsubscribed, or suppressed — Helio will never email them, on any path
Attributes	every other column imports as a segmentable attribute (plan, company, custom properties...)

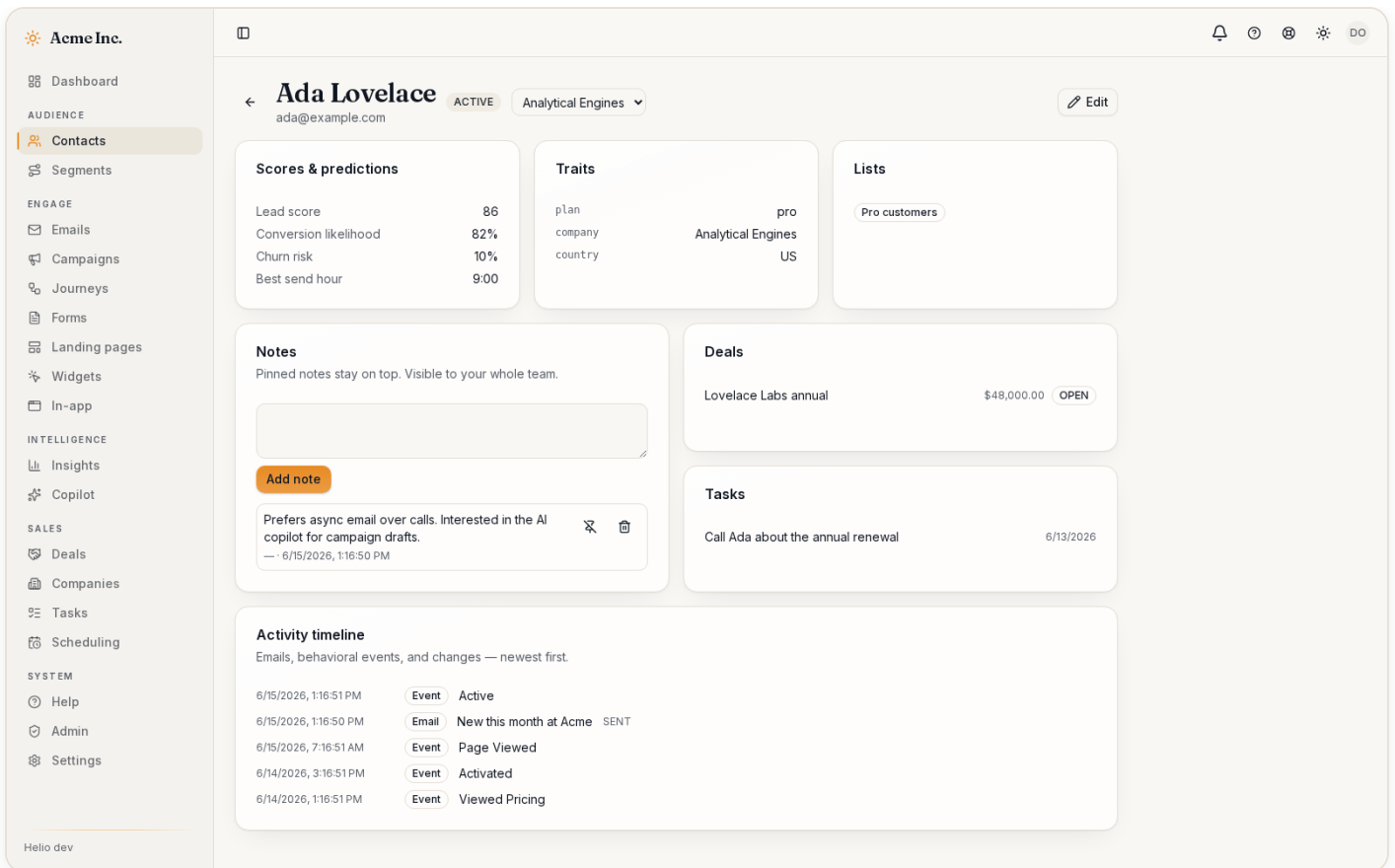
Once contacts are in: rebuild your key segments (minutes in the editor — or describe them to the copilot), recreate your templates in the block editor, and replace your old automations with journeys. Most teams run both tools in parallel for one billing cycle, then switch DNS for forms and tracking and close the old account.

Per-vendor walkthroughs with screenshots live in the docs: docs/migrate — From HubSpot, From Mailchimp, From Klaviyo.

07 • SALES

A CRM that closes the loop

Every contact and every deal now opens a full page — and the pipeline turns into numbers a sales lead can run a meeting on.



A contact: traits, predictions, lists, notes, deals, tasks, and the unified activity timeline.

Contact & deal pages

Team notes (pinned float up), owner assignment, won/lost with a reason the history keeps, linked companies, and a merged timeline of emails, behavioral events, and recorded changes.

Companies

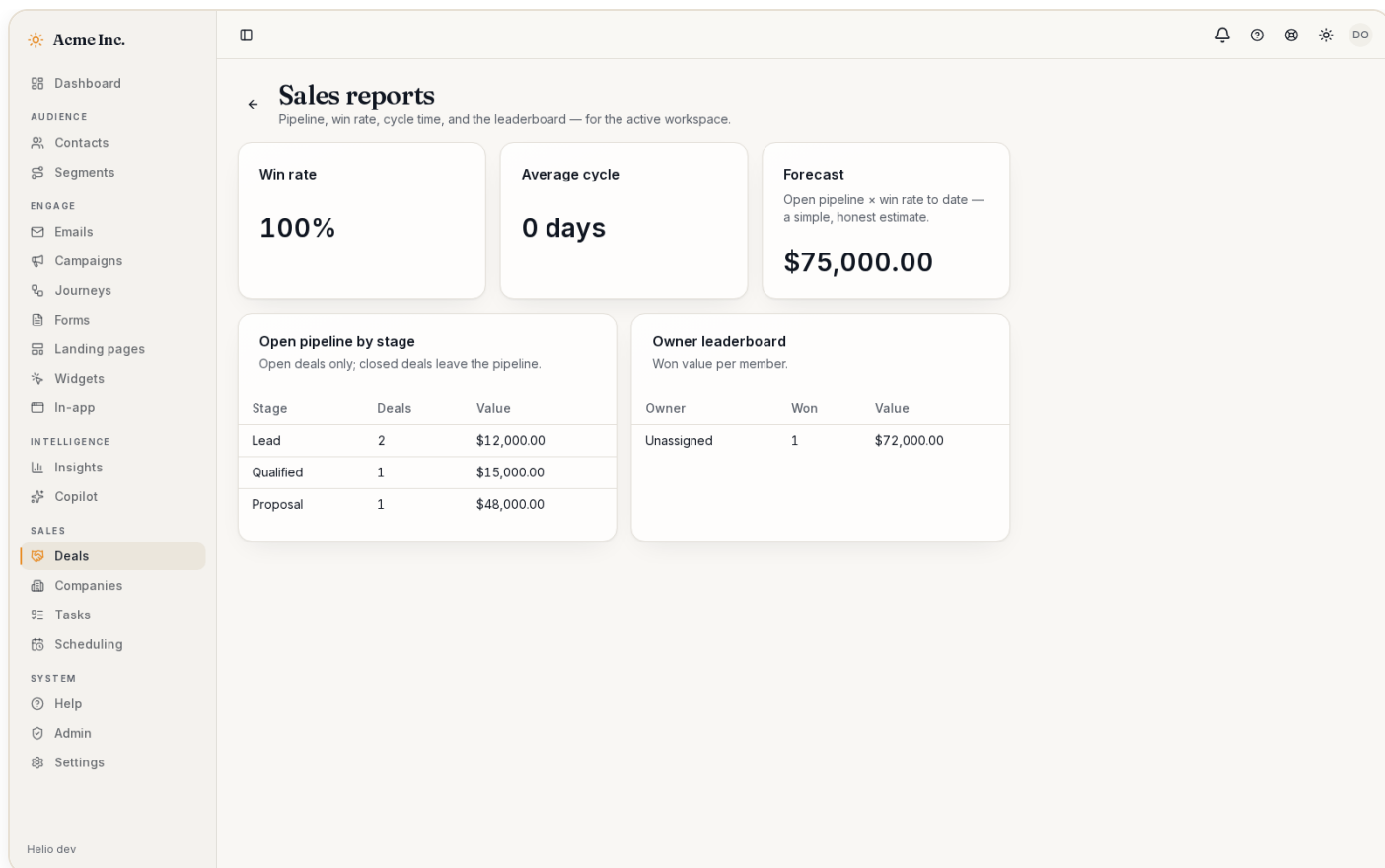
The B2B account object: attach contacts and deals, see live counts, and let imports create accounts from a company column automatically.

A board that moves

Drag deals between stages by the grip handle, tick several and move them in one go — the per-card select stays for keyboard users.

Sales reports

Pipeline value by stage, win rate, average cycle, an honestly-labeled forecast, and the owner leaderboard — from Helio's own database, no analytics store required.

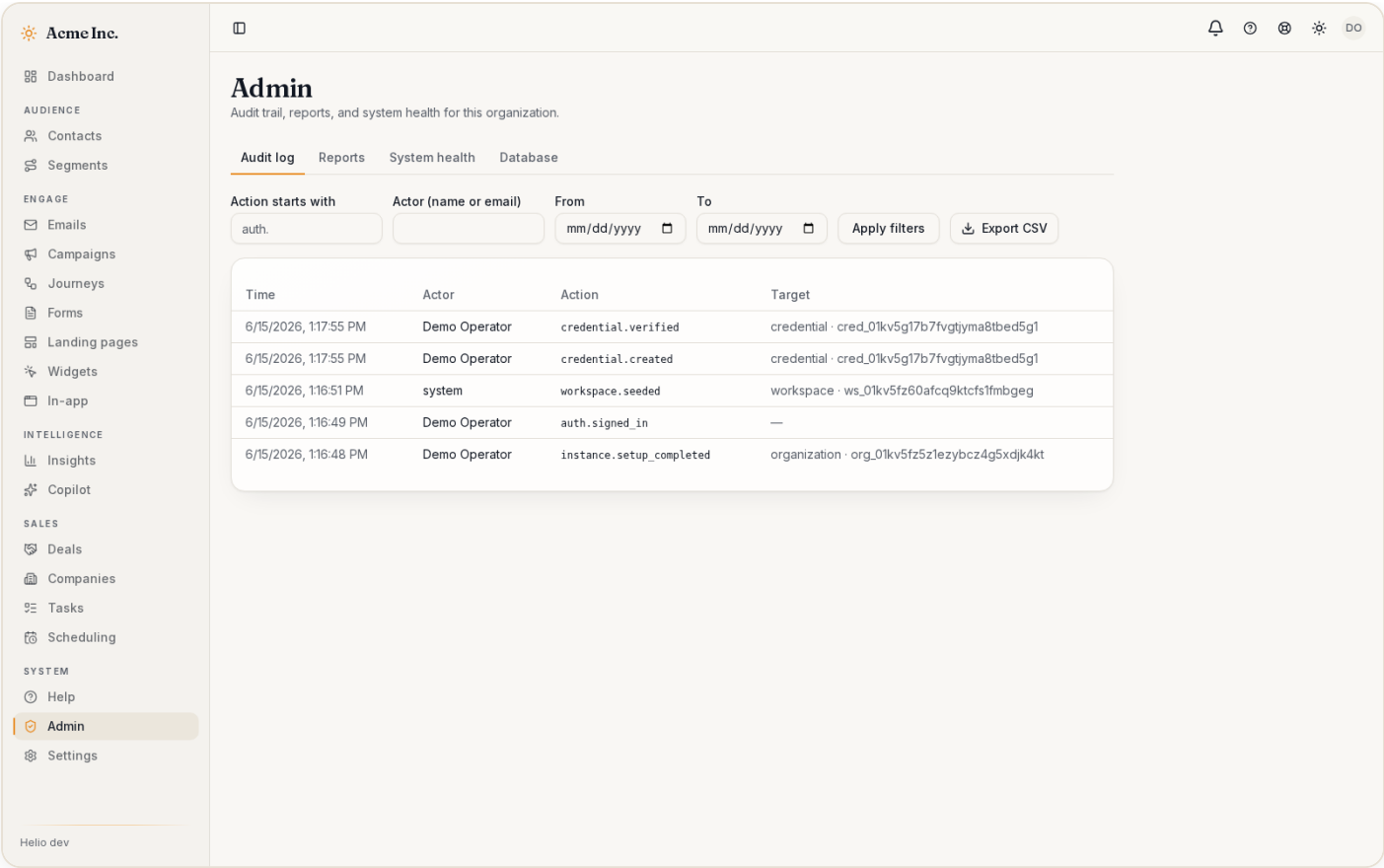


Deals → Reports: the board as numbers.

08 • CONTROL ROOM

Admin: see everything, prove anything

The Admin section (admins and owners) is the organization's control room: who did what, how the system is doing, and a safe window onto your own data.



The audit log: every security-relevant action, filterable, exportable.

Audit log

Sign-ins, 2FA changes, role changes, every settings edit, campaign launches, imports, SQL runs — filter by action family, actor, or date, and export the trail as CSV.

Reports

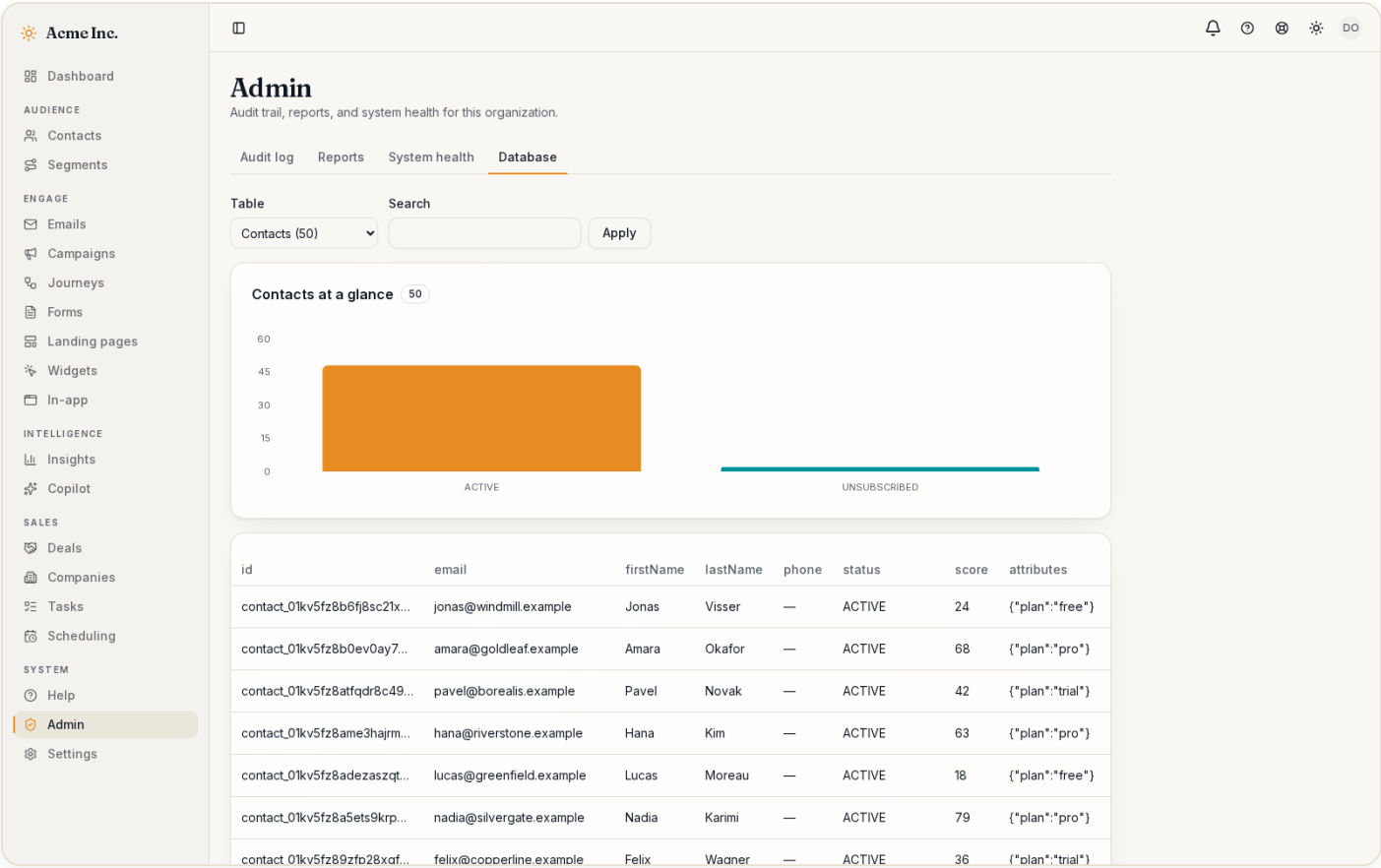
Messages sent per day, contact growth, top campaigns, journey outcomes, member activity — with CSV downloads.

System health

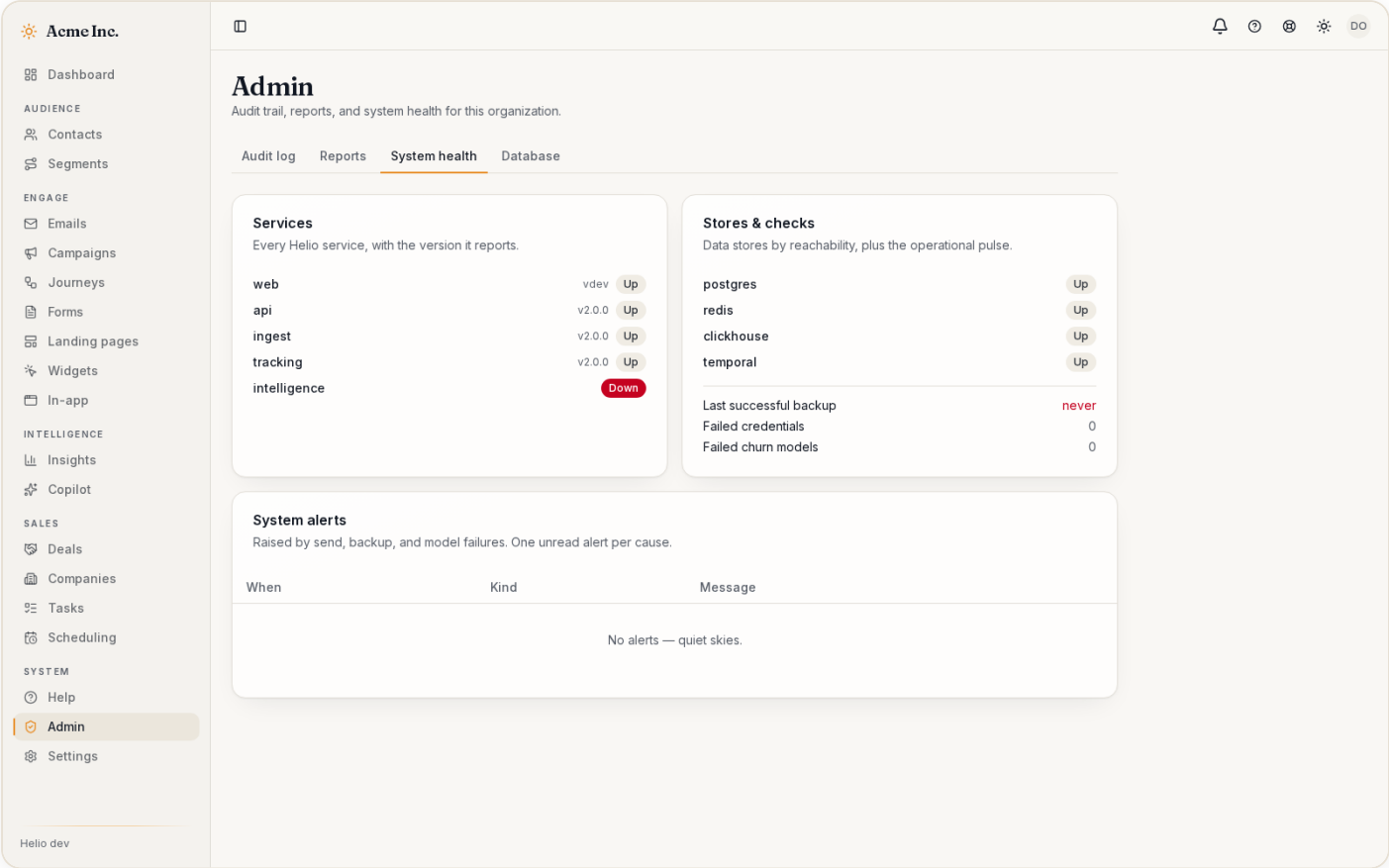
Every service with its version, store reachability, backup freshness, and the alert bell that send/backup/model failures ring.

Database Studio

Browse and safely edit your own tables — allow-listed models only (auth and secrets simply are not there), validated writes, full audit, owner-only typed-confirmation deletes.



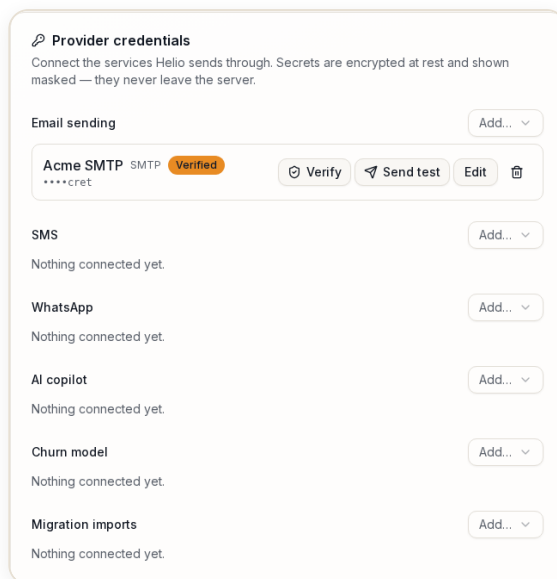
The Database Studio: transparent, validated, audited.



System health: services, stores, backups, and alerts on one page.

Connect every channel & tool

Everything Helio sends or reads leaves through *your* accounts. Provider credentials live in one place — **Settings → Provider credentials** — sealed in an encrypted vault (AES-256-GCM), shown only masked, and proven with a one-click **Verify** / **Send test** before you rely on them. Add one per channel; the rest of this chapter is the field-by-field walk-through.



Provider credentials — one vault for email, SMS, WhatsApp, and AI, each shown masked and test-verifiable.

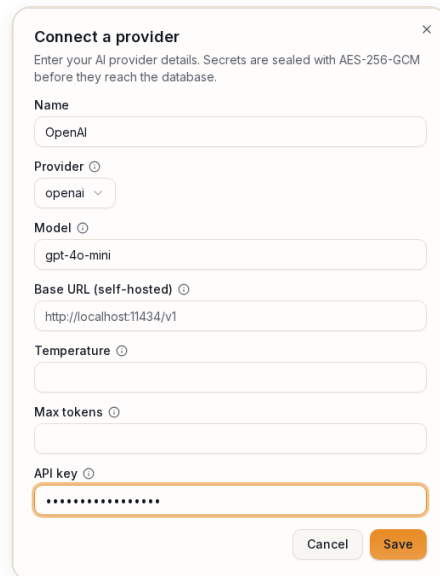
Email — SMTP, or a first-class provider

Under **Email sending** → Add. **SMTP** works with any relay: **Host**, **Port** (587, or tick *Use TLS* for 465), **Username**, the **SMTP password** (vault-sealed), and the **From email** / **From name** your recipients see. Prefer an API key? First-class adapters ship for **AWS SES**, **Postmark**, **Resend**, and **Mailgun**. Save, then **Verify** — Helio does a real handshake and a test send, so a typo can never reach production. Until you connect one, all mail lands safely in the bundled Mailpit test inbox.

Adding an SMTP sender: host, port, TLS, and the From identity every send carries.

AI — your key, any provider

Under **AI copilot** → Add, choose a **Provider** — OpenAI, Anthropic, Groq, Ollama, or any local OpenAI-compatible server — name the **Model** (e.g. gpt-4o-mini, llama-3.3-70b), and paste your **API key**. Self-hosting? Set the **Base URL** to your endpoint and leave the key blank. This one credential powers the copilot, NL→segment/journey, brand-voice content, and predictions; the copilot badge always names the provider that answered. (A deployment can also ship a shared fallback key for anyone who hasn't added their own.)

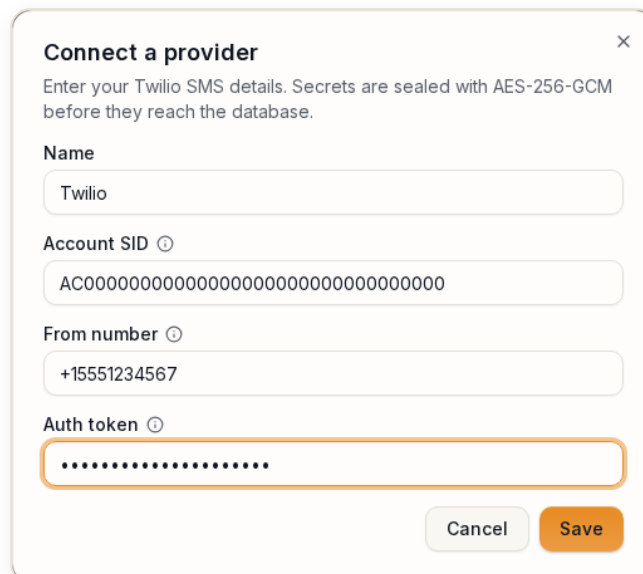


The screenshot shows a modal window titled "Connect a provider" with a close button (X) in the top right corner. Below the title is a subtitle: "Enter your AI provider details. Secrets are sealed with AES-256-GCM before they reach the database." The form contains several input fields: "Name" (text input with "OpenAI" entered), "Provider" (dropdown menu with "openai" selected), "Model" (text input with "gpt-4o-mini" entered), "Base URL (self-hosted)" (text input with "http://localhost:11434/v1" entered), "Temperature" (text input), "Max tokens" (text input), and "API key" (password input field with dots). At the bottom right are "Cancel" and "Save" buttons.

The AI provider form: provider, model, an optional self-hosted base URL, and your key.

SMS — Twilio

Under **SMS** → Add Twilio: your **Account SID**, a **From number** (an SMS-capable Twilio number in E.164, e.g. +15551234567), and the **Auth token** (sealed). Drop a *Send SMS* node into any journey and it goes out through your Twilio account — quiet hours, frequency caps, and A/B splits all apply. Delivery-status callbacks update each send (wire them under Webhooks, next).

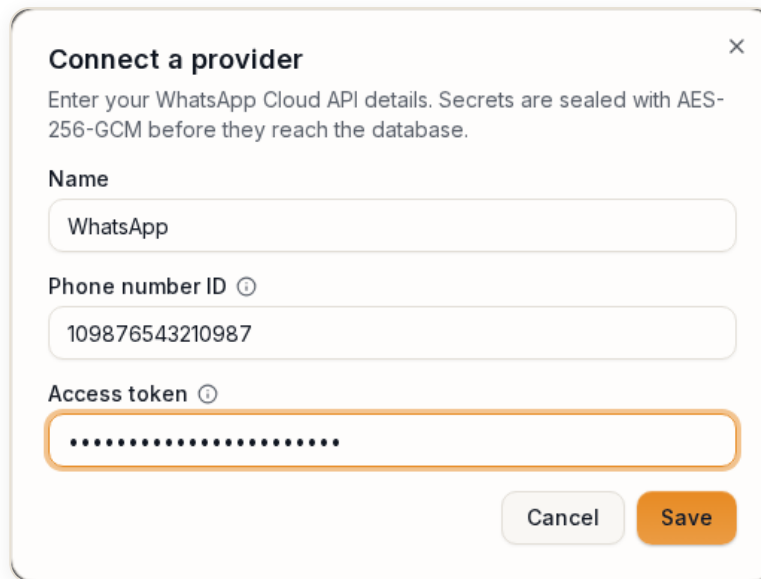


The screenshot shows a modal window titled "Connect a provider" with a close button (X) in the top right corner. Below the title is a subtitle: "Enter your Twilio SMS details. Secrets are sealed with AES-256-GCM before they reach the database." The form contains several input fields: "Name" (text input with "Twilio" entered), "Account SID" (text input with "AC00000000000000000000000000000000" entered), "From number" (text input with "+15551234567" entered), and "Auth token" (password input field with dots). At the bottom right are "Cancel" and "Save" buttons.

Twilio SMS: account SID, From number, and the sealed auth token.

WhatsApp — Meta Cloud API

Under **WhatsApp** → Add the **Cloud API**: your **Phone number ID** and a permanent **Access token**. A *Send WhatsApp* journey node then reaches contacts on WhatsApp from your own business number — same canvas, same guardrails as every other channel.

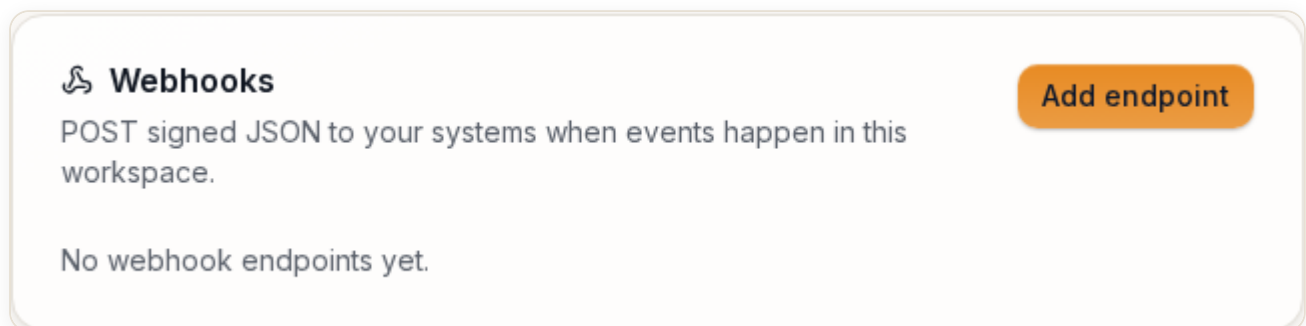


A modal dialog titled "Connect a provider" with a close button (X) in the top right corner. Below the title is a note: "Enter your WhatsApp Cloud API details. Secrets are sealed with AES-256-GCM before they reach the database." There are three input fields: "Name" with the value "WhatsApp", "Phone number ID" with the value "109876543210987", and "Access token" which is currently empty and highlighted with an orange border. At the bottom right are two buttons: "Cancel" and "Save".

WhatsApp Cloud API: the phone-number ID and your access token.

Webhooks — both directions

Inbound webhooks keep deliverability honest: point your email provider's bounce/complaint events and Twilio's status callback at the gateway (`/webhooks/email/...`, `/webhooks/sms/twilio`, each guarded by a token you set in `~/.helio/.env`) and Helio adds bad addresses to the suppression list automatically — every send path honors it. **Outbound** webhooks (**Settings** → **Webhooks**) push *your* systems on contact, deal, and task events: add an endpoint URL, choose the events, and copy the signing secret — every payload is signed (`x-helio-signature`) so you can verify it really came from Helio.



A settings panel titled "Webhooks" with a bell icon. It contains the text "POST signed JSON to your systems when events happen in this workspace." and a button labeled "Add endpoint". Below this, it says "No webhook endpoints yet."

Outbound webhooks: an endpoint, its event subscriptions, and a signing secret to verify delivery.

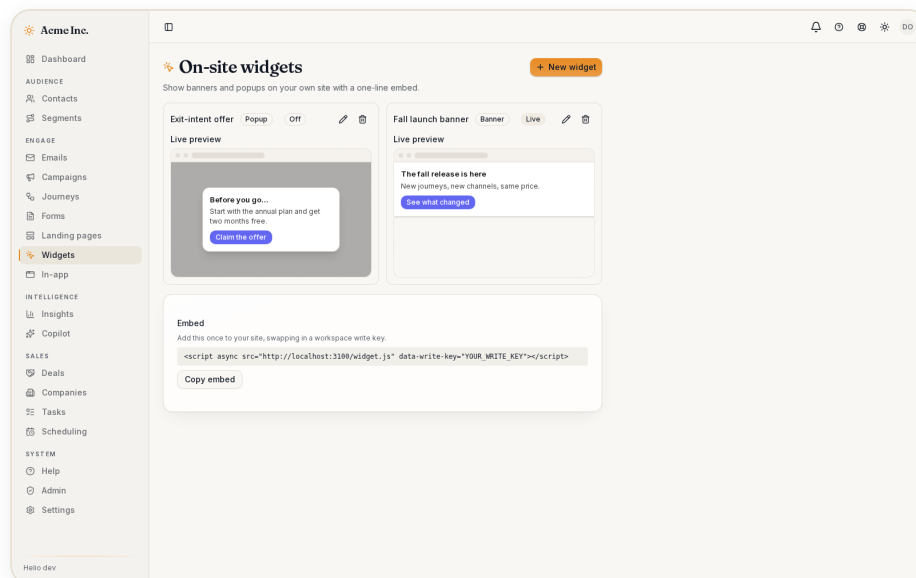
Capture from your website — forms, widgets & click tracking

Three white-labeled ways to turn your site into a Helio source: **Forms** (a hosted link or an iframe embed), **Landing pages** (block-built, published on your domain), and **Widgets** (a one-line script for banners, popups, and on-site forms). All create contacts and can trigger journeys.

For the **clicks and page views** that power segments, funnels, and attribution, drop the tracking snippet on every page. It posts events to the ingestion service under your workspace's **write key** (Widgets shows it); identify ties a visitor to a contact:

```
<!-- once, on every page of your site -->
<script src="https://your-helio-domain/widget.js" data-write-key="wk_live_..."></script>

// then anywhere in your app — page views are automatic
helio.identify('ada@acme.com', { plan: 'pro' });
helio.track('Added to cart', { sku: 'AB-12', cents: 4200 });
```

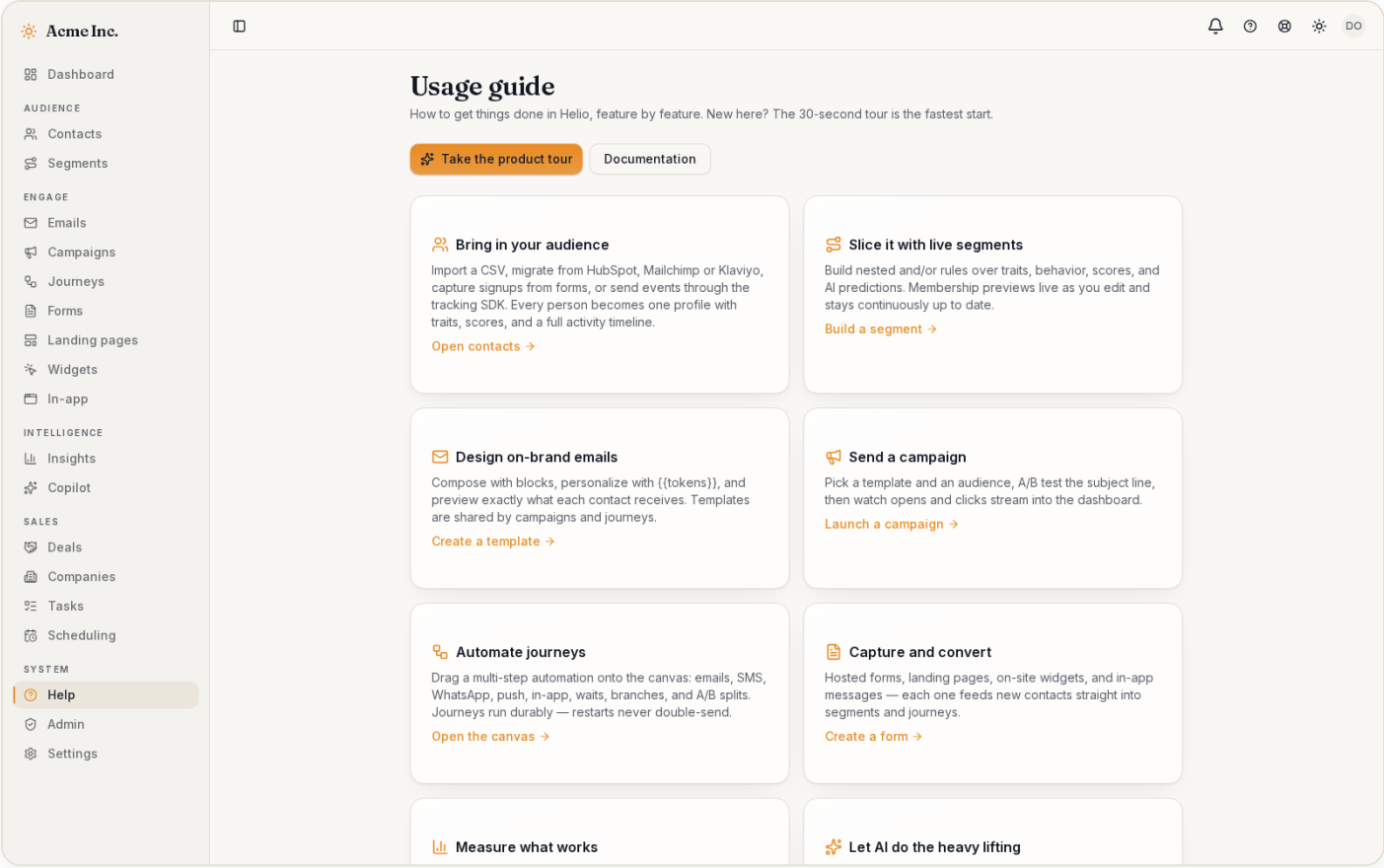


Widgets: a one-line embed per surface, each keyed to your workspace write key.

Bring your own churn model

If your data team has a better churn model, Helio will use it instead of its own. **Settings → Churn prediction model → Training CSV** downloads the exact feature columns Helio computes plus the churn label, ready for a notebook. Upload the result as **ONNX or XGBoost JSON** (pickle is refused — it can execute code) or point Helio at your own **HTTPS model server**. Validation runs in a sandbox; one model is active per workspace, and if it ever fails Helio raises an alert and falls back to the built-in model, so predictions never stop.

The usage guide — how do I...?



The same guide lives in the product: Help → Usage guide, with deep links.

I want to...	Do this
Find one person and their history	Contacts → search by name or email → open the profile for traits, scores, predictions, and the event timeline.
Target "pro plan, engaged recently"	Segments → New segment → add an attribute condition (<code>plan equals pro</code>) and a behavior condition (did event in the last 30 days). The member count previews live; Save.
Send this week's newsletter	Emails → build or pick a template → Campaigns → choose template + segment → optionally add subject B → Send. Watch opens/clicks on the campaign card.
Welcome every new signup automatically	Journeys → New journey → trigger on your "Signed Up" event → Send email → Wait → Branch on plan → upsell or nurture. Activate. Or tell the copilot the same sentence and review its draft.
Reach people off email	Add SMS, WhatsApp, web push, or in-app nodes to any journey. Channel credentials live in the environment; the in-app feed is one SDK call in your product.
Capture leads from the website	Forms (hosted link or embed), Landing pages (block builder → publish), or Widgets (one-line embed). All three create contacts and can trigger journeys.
Prove what's working	Insights → run the funnel for your activation steps; check weekly cohorts; run attribution on your conversion event to credit campaigns; drop to SQL for anything bespoke.
Track a sales pipeline	Deals for stages and values, Tasks for the to-dos, Scheduling for a public booking link that fills the calendar (and the CRM) by itself.
Let scores drive outreach	Contacts → Scoring rules give points per event; the AI adds churn risk and conversion propensity you can segment on directly.
Automate from my own systems	Settings → API keys → use the REST gateway or the JS/Python SDKs; subscribe outbound webhooks; or connect an AI agent to the MCP server and let it drive campaigns with the same guardrails.
Get unstuck	The Help menu (top bar) replays the product tour, opens the in-app usage guide, and links the docs. The life buoy files a bug straight into the workspace's support inbox.

11 • FOR THE TECHNICALLY CURIOUS

Under the hood, kept light

Two planes, deliberately: a TypeScript product plane and a Python intelligence plane, joined by typed APIs and one event stream.

Layer	What runs there
Dashboard	Next.js 16 + React, server components, a shadcn-based design system, the React Flow journey canvas.
APIs	tRPC for the dashboard; a public REST gateway with OpenAPI 3.1 and generated JS + Python SDKs; inbound and outbound webhooks with signed payloads.
Data	PostgreSQL 16 (system of record — tenant isolation enforced by row-level security at the database, not just the app), ClickHouse (events & analytics), Redis (cache & rate limits), Redpanda (Kafka-compatible event backbone), MinIO/S3.
Journeys	Temporal durable workflows — every enrollment is a workflow run that survives crashes and restarts; waits are real timers, not cron sweeps.
Intelligence	Python + FastAPI: the copilot, predictive scoring and churn, NL→segment/journey/email, and the MCP server. Provider-agnostic LLM gateway (Groq, OpenAI, Anthropic, Ollama, any local OpenAI-compatible server).
Security	RBAC, 2FA, SSO/SCIM, scoped API keys, strict security headers and CSP, rate limits on every public surface, audit logging, GDPR export/delete, suppression honored on every send path, secrets only via environment.
Operations	Health and readiness endpoints, OpenTelemetry traces, structured logs, graceful shutdown everywhere, a production runbook, and a k6 load-test harness.

Deeper dives — C4 diagrams, ADRs for every significant decision, and the threat model — live in the repository under docs/.

12 · JOIN IN

Contributing

Helio is AGPL-3.0 and built in the open. Contributions are welcome — the bar is "production-grade", and the repo is set up to help you clear it.

- 1

Start from develop.
main is releases only. Branch as feature/<area>-<what> or fix/<what>.
- 2

Keep PRs small and single-purpose.
One concern per PR, rebased on develop, squash-merged. Conventional Commits (feat:, fix:, docs:...) with lowercase subjects.
- 3

Ship the proof with the change.
New code lands with tests (Vitest, pytest, Playwright e2e), docs for new surfaces, and .env.example entries for new configuration. task verify runs the whole local gate.
- 4

Good first areas.
Delivery-provider adapters, importer coverage, dashboard polish, docs and translations — and anything labeled in the issue tracker.

The full protocol — including security disclosures — lives in CONTRIBUTING.md and SECURITY.md at the repo root.

Questions?

I'd genuinely like to hear them — bug reports, deployment war stories, feature ideas, or "how would I move my team onto this?".

Author	Achref Soua
Repository	https://github.com/achref-soua/helio
Issues & ideas	https://github.com/achref-soua/helio/issues

Helio · AGPL-3.0 — every screenshot in this guide is the real product.



Helio

