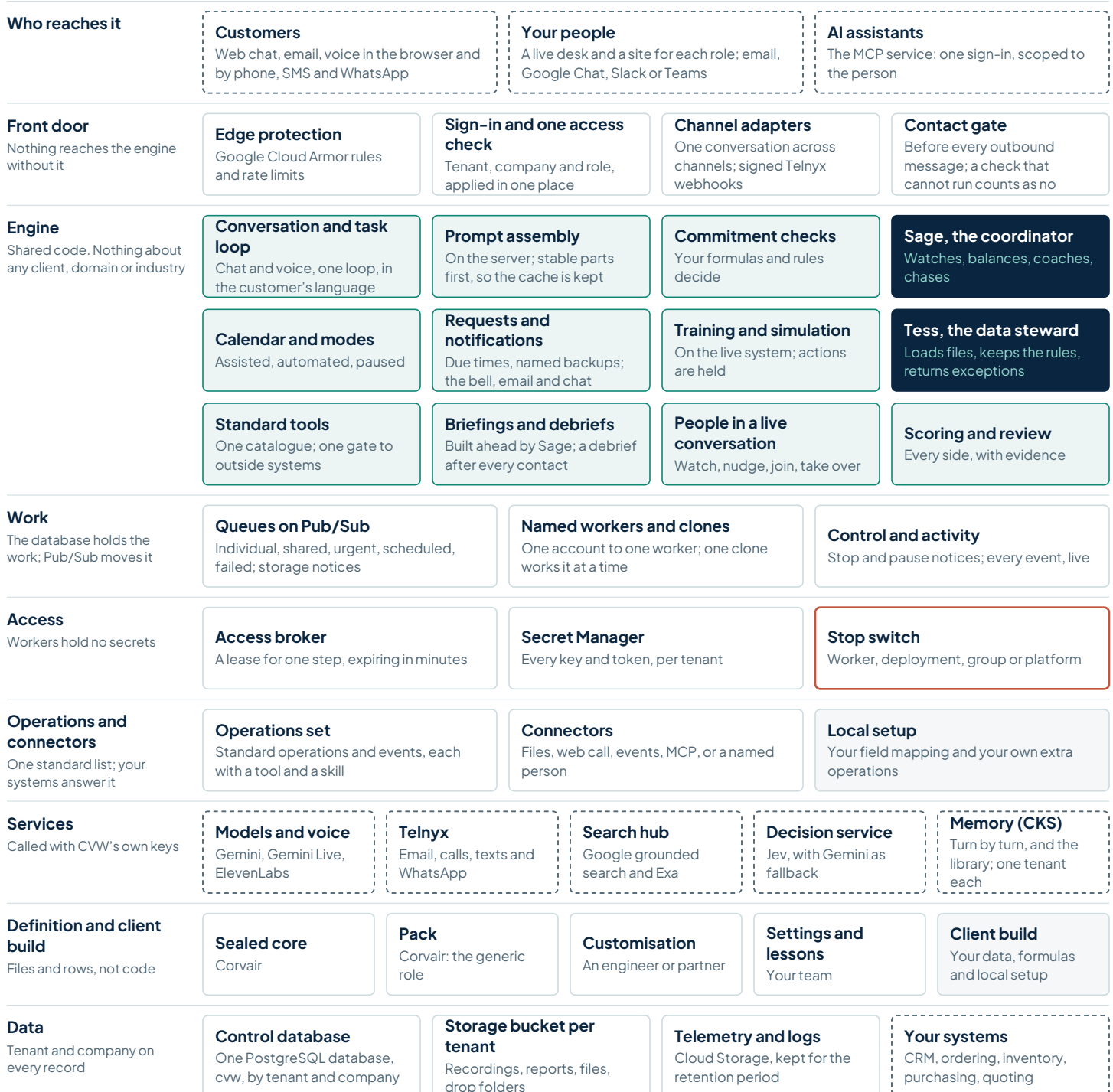


Technical architecture.

The companion to the product concept guide, for your IT, security and architecture teams. A logical view of the layers, where data lives and how it is kept apart, how work runs, and how access is granted and stopped.



Dashed boxes sit outside CVW. Across every layer: tenant isolation, an event for every action, health checks and the stop switch.

Defined, not coded.

A generic pack defines the worker, and a standard operations set defines what your systems are asked. Each client's data, formulas and local setup are built for that client and kept out of both. The engine holds nothing about any client, domain or industry.

THE WORKER DEFINITION: LAYERS OF PLAIN FILES

Layer	Edited by	Holds
Sealed core	Corvaire	The core loop and guardrails, the tool and outcome contract, the assembly template. Never shown to client users; Corvaire and partner engineers read it in the Workbench.
Pack	Corvaire	The generic role: situations and their goal steps, contact types, playbooks, outcome fields, and the scoring, coaching, simulation and research prompts. Sage, the coordinator, and Tess, the data steward, come with every deployment.
Customisation	Engineer or partner, with the client	Situations, objectives and playbooks for this client, company objectives, tone, always and never rules, authority limits, channels, languages and whether the worker follows the customer's language.
Virtual worker	The client's manager	Its share of the work, channels, schedule, supervisor and clone limit.
Account	The account team	Account objectives with an owner and a time frame, the customer's objectives, open items, relationship notes.

THE OPERATIONS SET, AND THE CLIENT BUILD MADE FOR EACH CLIENT

Part	Holds	How the worker uses it
Operations set	From Corvaire. The standard operations and events for one kind of business (next page)	Installed like a pack. The same tools at every client
Data	Products, prices, terms, team, customers and contacts, kept in step with your systems and loaded through Tess	Rows the worker quotes from, never documents
Formulas	Pricing, discounts, lead times and configurators, as tested code with versions	Called by name, for example price.check; the answer is allowed, needs approval or refused
Local setup	Which connector answers each standard operation, the mapping of your fields, addresses and secret names, and operations only you have	An operation such as stock.check is answered through the access broker by the first path that can

HOW THE PROMPT IS PUT TOGETHER

- Assembled on the server from sections, each a file with one owner.
- Stable parts come first and changes are appended, so the model's prompt cache is kept from call to call.
- Never sent to a client user's browser. For voice, the server locks the assembled prompt into the voice session token.
- Every file is versioned. Each conversation records the versions it ran on.
- Setup pages in the site edit the same files, so clients never write prompt text. Each save is a new version with its author. It can be undone, and tried in a training conversation first.

Which section wins

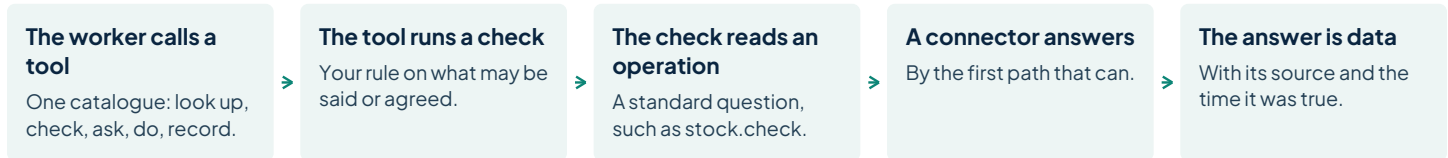
- 1 Core guardrails, always
- 2 The customer's never rules
- 3 Company facts and authority, from the rows
- 4 Active lessons and the worker's notes
- 5 Then the narrower layer: account over worker over deployment over pack

A lesson or setting that conflicts with the core is refused with the reason.

One set of tools. One list of operations.

Every worker has the same tools at every client. Your systems answer a standard list of operations through connectors, so the worker never sees a system directly. Only what answers an operation changes from one client to the next.

FROM THE WORKER TO YOUR SYSTEMS



THREE LAYERS

Layer	Owned by	What it is
Operations set	Corvaire	The standard operations and events for one kind of business. Each has a contract, the tool the worker calls, a skill that says when to use it and what to say, and sample answers.
Connector	Corvaire or a partner	Code that answers operations from one kind of system: files, a web API, events, an MCP server, or a named system.
Local setup	An engineer, with you	Your field mapping, addresses and secret names, the order of paths for each operation, and operations only you have.

FIVE WAYS TO ANSWER AN OPERATION

Path	How it answers	Fits
Live call	A call to your system at the moment the worker asks	Stock, order status, credit
Loaded file	Rows loaded by Tess from a file, a drop folder or a sheet, answered from CVW's own tables and said with their time	Price lists, products, a system with no API
Event	Your system tells CVW when something changes; CVW keeps the rows current	Orders, shipments, price changes
MCP server	The connector calls a named tool on your or a vendor's MCP server and maps the answer	A system that already offers one
A person	The operation becomes a request to a named team member, with an answer-by time	A small team where stock is "ask the warehouse"

An engineer sets the order of paths for each operation: usually live, then loaded, then a person. So every operation has an answer from the first day, and a deployment is ready when each operation its pack needs has a path that answers. An answer that takes time comes back as an event.

EVENTS

- **In:** a signed address per connection. An event updates its rows, appears on the account's timeline, can start work by a rule, and marks the briefing out of date.
- **No push:** a file drop or a scheduled pull is compared with the last one, and the differences become the same events.
- **Out:** a signed webhook, a file written on a schedule, or a write through a connector.

RULES FOR EVERY CONNECTOR

- Secrets stay in the access broker, which grants a lease for one system and one action.
- What comes back is data. It cannot instruct the worker.
- A change carries a reference, so a retry cannot repeat it. It is not called accepted until your system says so.
- An extension adds fields, skill words or your own operations. It never changes a standard contract.

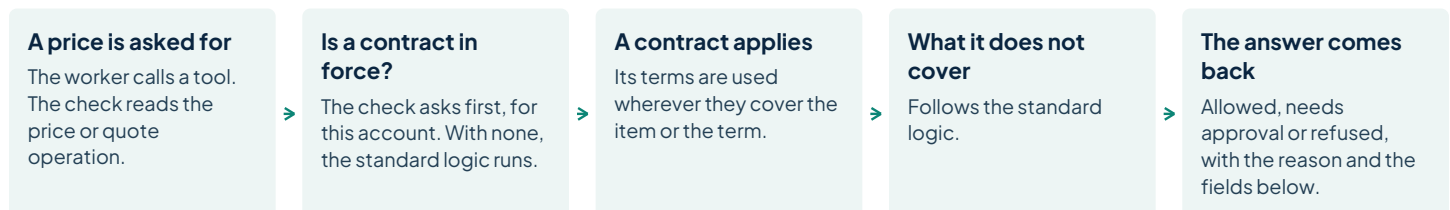
Prices, quotes and contracts.

The worker quotes the way your company prices. The price and quote operations (price.get and quote.request) return the answer, the commitment check decides what may be offered, and nothing in the engine assumes a price is one fixed number.

THE QUOTING MODEL, SET IN EACH DEPLOYMENT

Part	The range it covers
Where the price comes from	A static list. A list by customer class, such as wholesale, distributor and end customer. Volume breaks. A live price from your system that depends on place and time. A formula. A person.
What is priced	The Catalogue's three kinds of item: products, sold each, with a lead time; services, per hour, day or project, with when they can start; subscriptions or licences, per seat or plan, per month or year. The Price book prices each in its own unit.
Promotions, rebates and bundles	Each is a dated rule.
What the worker may give	Nothing, an indication, a range, a firm price or a formal quote document.
Steps before a price	Qualifying questions, an assessment, a site visit, a pilot, a credit check or an approval.
Validity, terms and caveats	How long a price is valid, and the terms and caveats that go with it.

THE PRICE CHECK, WITH A CONTRACT



A CONTRACT IS DATA

- The terms are rows: the items and prices it covers, discounts, payment and delivery terms, limits, the clauses that must go on a quote, and its start and end dates.
- The document itself is in the account's library collection.
- A quote made under a contract carries its reference and its required wording, and the worker can say "under your contract".
- A contract near its end date becomes work for the account owner.

WHAT A PRICE OR QUOTE ANSWER CARRIES

Field	What it says
Price or range	The figure, or the range
Unit and currency	What the figure is for, and in what currency
Conditions	What it holds under
Valid until	When it lapses
Firm or indication	Whether it can be agreed or only indicated
Source	Where it comes from, such as a contract or a list
Caveats	What must be said or sent with it

Live prices

A live price is fetched again at the point of agreement.

Offers are dated rules

A promotion or a campaign offer is a dated rule the price check reads, so the worker cannot offer it outside its terms.

The simplest case needs no engineer

A standard price list loaded from a file, with one standard check. The worker still offers only what a check returned.

What the worker knows.

Sage builds a profile of your company and of each account ahead of time and keeps it current. A worker goes into every contact with a briefing and comes out with a debrief. Every fact shows its source and how far to trust it.

Thing	What it is	Built by	When
Company profile	Your company: what it sells, to whom, how it sells, who is who, its terms, and what each product is for	Sage, from your documents and website. A person approves each section	At setup, then when a source changes
Account profile	One customer: who they are, the people, what they buy, how they decide, what is happening to them	Sage, from your records, past conversations, its website and annual report (next page)	When the account is added, then kept current
Briefing	The page a worker gets before or during a contact	Sage	Ahead of time. Rebuilt when anything in it changes
Debrief	What one contact taught us and what it puts in doubt	A separate pass, not the worker	After every contact

A FACT, AND HOW FAR TO TRUST IT

Attached to every fact	Values
Source	A document and page, a web address, a conversation and who said it, a person on your team, or your own records
Standing	Confirmed: the customer said it, or it is in your records. Reported: a document or the web says it. Assumed: worked out from other facts
Dates	When the source is from, when it was learned, and a check-by date after which the fact is treated as old
Who may see it	Everyone with access to the account, or named people only

THE BRIEFING: ONE FIXED LAYOUT

- 1 Internal. Built by Sage on this date. May be wrong or out of date
- 2 Who they are, and the person: role, what they may approve
- 3 Where things stand: open quotes, orders, requests, promises
- 4 What we want: your objectives, the account team's, the customer's
- 5 What we do not know and want to learn, from the objectives
- 6 To check: facts that are old, only reported, or in conflict
- 7 Not to be mentioned

HOW IT REACHES THE WORKER

- **Outbound:** added to the prompt before the first word. Sage rebuilds it first if it is past its check-by dates.
- **Inbound, known by the channel** (an email address, a signed-in chat, a phone number): loaded before the first reply.
- **Inbound, known by what they say:** the worker looks the account up, and the briefing joins the next reply.
- **Not known to you:** the worker carries on with the company profile while Sage builds a first profile from the web, every line marked Reported.
- Loading a briefing is reading stored text, so it does not slow a reply.

Internal and fallible

A briefing is never read out. Only a Confirmed line from your records is said as fact. Any other line is raised so the customer can correct it, and the customer's version is used from that moment.

What Sage decides

She adds what a customer says about themselves and what the web reports. A fact that conflicts with your records, or would change an objective, goes to a person. Each change can be undone.

The debrief

Learned, corrected, to question, gaps closed and still open, and proposed changes. Each item is applied, waiting for a person, or dismissed, and is kept with the conversation for review.

Research, news and memory.

Sage reads public business sources into each profile, and every line keeps its source. Search runs through the search hub: Google grounded search, and Exa for news. Social sites are never fetched, and the forget list is checked before any research on a person.

WHAT IS READ, AND FROM WHERE

Source	What is read	Where it goes
Account website	The home page and its About, Company, News, Press, Careers and Investors pages. With no website on record, Sage proposes one for a person to confirm	The account profile, each line with its page as the source
Annual report	The latest one, for each key account	Kept in the account's library and read into the profile
Documents	Any document a person adds to an account	Read into the profile
Summary	What the company does, in one line	On the account
Public business profiles	Addresses on LinkedIn, X, YouTube and others. Never fetched	Kept as links on the account or person
News	Exa's news category from a start date, for every account and for your own products: daily for key accounts, weekly for others	A relevant item tells the account owner, and can plan preparation work
Competitors	Their website, documents you upload and their news	A competitor profile. Their offerings are matched to your products, each match with a reason, for a person to confirm

RESEARCH THIS PERSON

- Only on request, and only after the forget list is checked. A person who asked to be forgotten is never researched.
- Their business role, employer and public business statements. Never their home, family, health, beliefs, photos or private accounts.
- Each finding shows its source, and a person confirms it before it is saved.
- A finding that a contact has moved employer becomes a question, such as "Has Greg moved to <company>?", never a change on its own.

MEMORY

- Conversation memory is kept turn by turn in CKS memory, the Corvaire Knowledge Substrate, in one knowledge tenant for each CVW tenant.
- CVW keeps the summary, the facts, the briefings and the debriefs, with pointers to the detail.
- A briefing is read from stored text, so loading one does not slow a reply.

One notice per account

A relevant news item tells the account owner once. Further items on the same account add to the count on that notice.

Sage's daily brief

Each morning: what needs you and by when, what is slipping, news on your accounts, what she changed in profiles and Tess's data summary, each with an action.

Sources stay attached

Every line Sage reads into a profile keeps its source and date, and is marked Reported until a customer or your records confirm it.

How work runs.

A manager creates named workers under a deployment. Each runs one or more clones. The database holds every work item and its history, and Pub/Sub carries the notices that move work, so nothing polls.

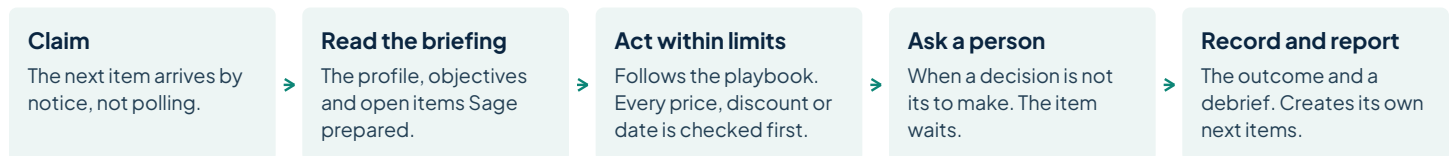
FROM THE PLATFORM TO ONE CLONE



A clone is an instance in the code. Customers never see clones, only the worker's name. A worker may run 0 clones (defined, not deployable), 1 (the default) or more, up to its limit. An agency is one tenant, and each of its clients is a company inside it, so one client never sees another's records.

Work that starts itself. Rules your administrator sets turn signals into work items: an intent signal, a renewal date, a trial ending, usage near a limit, an incident (which holds outreach), a champion who moves company, or an account going quiet or cooling. A promise to a customer always outranks the weekly contact limit.

HOW A CLONE DOES ONE ITEM



QUEUES ON GOOGLE PUB/SUB

Queue	How it is built
Individual	A subscription that only one worker's clones pull from
Shared	One subscription pulled by the clones of several workers; each item goes to one
Urgent	A separate subscription per queue, emptied first
Scheduled	The calendar service publishes an item when its window opens
Failed	Repeated failures go to a dead-letter topic and need attention
Control	Stop, pause and stop-switch notices, checked before each step
Activity	Every event a clone emits, followed by the live view and health

One account, one clone at a time

Messages carry the account as their ordering key, and a claim on the account in the database lets only one clone work it. Work runs in parallel across accounts and in order within each one.

Modes, from the calendar

Assisted: people first, the worker hands off at once. Automated: the worker works alone under tighter limits; hand-offs wait for the morning with a callback time it can keep. Paused: no new work. Urgent matters go to the person on call in any mode.

Control

A supervisor can pause or stop a worker or a clone, stop an item, reassign work and change priorities. A stopped item blocks the items that depend on it, with the reason shown.

Scaling with the work

Sage starts and stops clones within each worker's limit as queues grow and shrink. Cloud Run adds capacity as load rises. The account lock keeps each account with one clone.

Campaigns, pools and cadence.

A campaign groups work under one purpose. Each work item records its campaign, so usage and results are counted for each campaign. A campaign runs in CVW, or outside it by marketing.

THE CAMPAIGN RECORD

Field	What it holds
Name, owner, dates	Who runs it, when it starts and when it ends.
Where it runs	In CVW, or outside CVW by marketing.
Audience	A list of accounts, or a pool of people who may have no account yet, with where the list came from and its basis for contact.
Situation	The situation from the pack that the worker follows: Prospect, Reactivate, Follow up, Invite, Notify or Remind, each with its own goal steps.
Message	The points to make. The worker writes each message from them and from the person's record.
Offer	What is offered, its terms and its dates, held as a dated rule that the price check reads.
Cadence	The plan of attempts: the channels in order, the gap between them in working days, the most attempts, and what ends it. One message a week to one person, across all campaigns.
Materials	Documents from the library.
Objective and priority	What it is for, and where it ranks on an account.
Outcomes that count	The key events it is meant to produce.
Profile depth	A light record, or a full profile, for the people in it.
Greeting	Who the worker says it is an assistant for.

POOLS: PEOPLE BEFORE ACCOUNTS

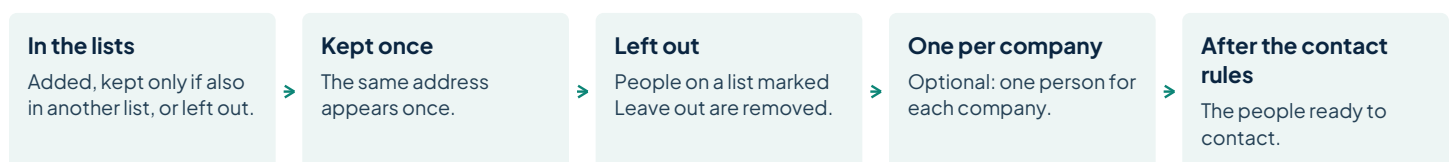
- A pool is an audience of people who may have no account yet. A person gets a record from the list row, and becomes an account when they respond.
- A person on two lists is contacted once.
- When a person belongs to an account with its own worker, the account owner decides who makes the contact, and a recorded preference of the customer overrides that. By default the account's own worker makes it.
- A person the worker is referred to in a conversation is tracked from that point, with who referred them.

WHERE A CAMPAIGN MEETS THE ENGINE

- **Run outside CVW:** the worker is told what was sent, to whom and the offer. It handles the replies and follows up the leads.
- **Work:** each work item records its campaign.
- **Offer:** a dated rule, so the worker cannot offer it outside its terms.
- **Contact gate:** the check runs again before every attempt in the cadence, and the frequency limit counts across campaigns.
- **Results:** people reached, replies, outcomes, key events and value, for each campaign.

THE CAMPAIGN STUDIO: THE AUDIENCE, COUNTED AT EACH STEP

A campaign is planned in four steps: Audience, Message and offer, Who and when, and Review and start. Lists combine with Add, Only if also in, and Leave out, and Sage can build a list from a description. The studio shows the count after each step.

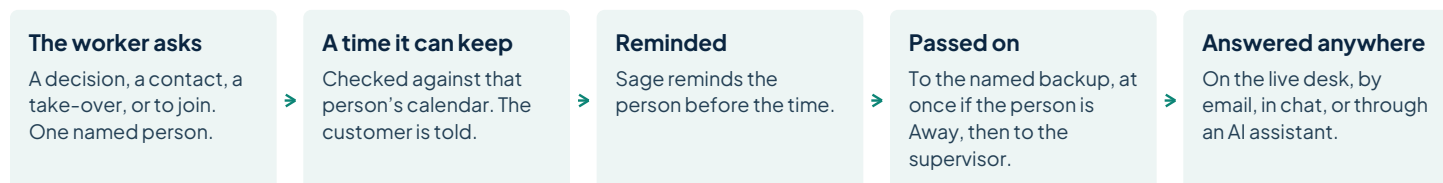


The contact rules leave out people who asked not to be contacted, have no basis for contact, are in a country with no approved profile, were contacted by anyone in the last 14 days, are in another running campaign, or prefer a person.

People in the loop.

A worker asks a person when a decision is not its to make, and a person can step into any live conversation. The product acts on what is clear and asks only when the meaning is in doubt or the result is hard to undo.

A REQUEST CANNOT STALL



IN A LIVE CONVERSATION

A person can	How it works
Watch	The transcript line by line, each reply with where it came from, and what is waiting on a person.
Nudge	A private line that guides the worker's next reply. Only the worker sees it, and the reply that used it is marked. A nudge cannot take the worker past what it may agree. It is kept with the conversation.
Join	The worker introduces the person by name and role before their first word, in chat and aloud on a call. The worker stays, speaks only when asked, keeps the record, and gives the person facts in a panel the customer does not see.
Take over, and hand back	The person is the only one answering until they hand the conversation back to the worker, with an instruction if they wish.
Be asked to join	A worker can ask a person to join. It is a request like any other, with a reference and an answer-by time.

ACTING AND ASKING

Case	What happens
Clear and ordinary	It is done. One line says what was done, with Undo
Could mean two things	One short question that offers both
Hard to undo, or wide in effect	One question, naming what changes

The same rule holds for a worker with a customer, for Sage, and for the screens. What counts as hard to undo is a short list your administrator can change.

NOTIFICATIONS

- A bell on every screen. Each notice says what it is about, what to do, and opens the exact place.
- For failures, things that cannot wait, and completions a person asked for. Work that waits is in Now on the person's live desk.
- Pushed over a live connection. The same notice reaches email and chat, and is read once.
- Failure text is cleaned of secrets before it is shown.

Real unless declared

Everything is real unless a person declares it as training or simulation. What such a conversation would have done is held until it is saved to the account or discarded.

A live desk and a site

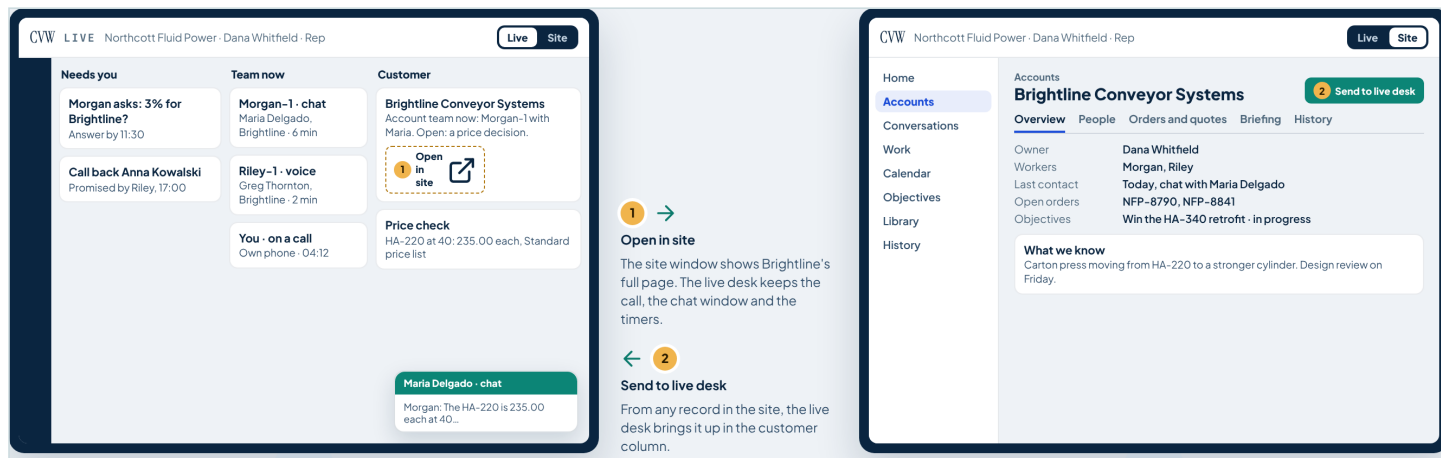
Each role works from a live desk for the work happening now and a site for everything else (next page). One sign-in opens the roles a person holds.

Sage's view

Load and capacity, who has what work, what is due, what is known and what she suggests, scoped to the person's role. She acts on a clear instruction and reports it with Undo.

Live desks, sites and shared pages.

Each role works from a live desk for the work happening now and a site for everything else. The two windows talk to each other in the browser, so showing a record never reloads the desk or drops a call.



The live desk and the site side by side, with Open in site and Send to live desk, shown with the made-up Northcott example. Product design with made-up data.

THE SEATS, AND THE LIVE DESK EACH ONE OPENS

Seat	Live desk
Rep, Manager	The Desk live: what waits, conversations, follow-ups, Team now, the customer column and the phone. A manager also sees the team's controls
Client operator	Operations live: files, rules, reviews, workers, Sage and Tess
Client admin	Setup live: requests, who decides, how ready the company is to sell, today's changes with Undo, and the stop switch
Engineer	Workbench live, for the Corvaire engineer or partner (forward deployed engineer, FDE): releases and tests
Platform operator	Platform live, for Corvaire: services, tenants, jobs and the stop switch
Agency seats	An agency rep works several clients from one desk. Each card names its client, and calls and replies go out under that client's name. An agency manager, and an agency engineer who sets up the agency's own clients

TWO WINDOWS, ONE APP

- Both windows are the same app. The live desk never turns into a page: records open inside it, beside the work.
- Open in site** shows a record's full page in the site window. **Send to live desk** brings a site record up in the live desk.
- Calls, chat windows and timers live only in the live desk. A site page shows a ringing call or a waiting chat with Back to live desk. With one screen, the site opens as a tab.
- A person with several roles picks the role once, and both windows follow. Every page shows which role it is for. A seat changes the desk and the menus, never what a person may do.

SHARED PAGES, AND WHO MANAGES EACH

Page	Managed by
Accounts, Contacts	Reps correct their own. Managers change owners and merge
Catalogue, Price book	The client admin. The client operator loads price files through Tess
Library	The client operator adds and retires documents. The client admin decides who may see each
Competitors, Glossary	The client operator, with notes from reps
Calendar	Each person their own

Each is the same page in every role's site and a drawer in every live desk. Everyone can look things up. Only the managing role sees edit controls, and the lowest price that may be agreed shows only to people who may agree a price.

Data, services and telemetry.

One control database. Every record carries its tenant and company, and is read as needed, never whole tables into memory. Many workers and people work on the same records without locking each other out.

WHERE DATA LIVES

Store	Holds	Kept apart by
Control database	Tenants, companies, workers, accounts, work items, requests, key events, settings versions, load rules and loads. One PostgreSQL database, cvw, partitioned by tenant and company; schema changes in one numbered sequence.	Tenant and company columns on every row, with one access rule per table
Storage bucket	Recordings, reports, library files, drop folders, exceptions files, exports	One bucket per tenant
Memory and library	Conversation memory, turn by turn, and library search with citations, in the Corvair Knowledge Substrate (CKS)	One knowledge tenant per CVW tenant
Telemetry and logs	Step and model records and service logs in Cloud Storage for the retention period, then deleted; counts and key events in the database	Tenant on every record; debug records visible to engineers only

Residency. A deployment's servers run in the country it serves, such as the USA, or in the nearest region where the cloud has none. Its database, storage, telemetry and memory stay in that region. Some model APIs do not say where they process data, so each deployment lists its models and where they run, and a tenant that needs sovereignty uses models with regional processing. Many tenants can share one system in a region, or one tenant can run in its own cloud project and database.

Limits are settings. The reply reader's times, model call times, prompt sizes and turn budgets are settings an operator changes, not fixed in code.

SERVICES, CALLED WITH CVW'S OWN KEYS, AND WHAT HAPPENS WHEN ONE IS DOWN

Service	Used for	If it is down
Gemini	Text conversation, writing, summaries, reasons behind scores, translation of each turn for your team	Shown as down on the status page; supervisors are alerted
Gemini Live, ElevenLabs	Voice in the browser; ElevenLabs as the alternate voice	Shown on the status page; ElevenLabs is the alternate
Google grounded search, Exa	Quick answers with sources, account research, filings, news, list building	The search hub routes to the next provider, such as "research is using Google only"
Jev	Scoring against rubric files, customer mood, yes-or-no decisions with confidence	Gemini answers the same typed questions; scoring may be slower
Memory and library	Account memory; document search with the file and page	Shown as degraded or down on the status page; supervisors are alerted

TELEMETRY AT A LEVEL YOU SET

Level	Records	Typical use
Debug	Every model call with its full prompt and response, every tool call, timings. Expires back to a lower level.	Diagnosing a problem; engineers only
Detailed	Every step and tool call, without full prompts	Tuning a new deployment
Standard	Every work item, conversation and state change	Normal running
Operational	Health, counts and key events only	Quiet, long-running deployments

Tess and data loading.

Tess, the data steward, works beside Sage in every deployment. She is always on, loads your files, keeps the rules for each kind of file and returns what she cannot load. She reports to the manager your company names, Sage can direct her, and she never talks to customers.

ONE POPUP FOR ANY FILE

- 1 Reads the character set, the separator and the header.
- 2 Finds rows to skip, and totals at the end.
- 3 Profiles each column: how full it is, its formats and its problems.
- 4 Matches the columns to the fields of the file type.
- 5 Offers clean-up: capitals, spaces, emails, phone numbers in international form, dates and countries.
- 6 Checks every row before anything is written.

RULES, LOADS AND EXCEPTIONS

- Rules are saved with the column matching, and versioned. One can be the standard for a kind of file, so the next file of that kind loads the same way.
- Load rules, data files and loads are versioned records in the control database.
- Refused rows are kept, and written to an exceptions file in the same format and header as the original, with a column saying why.
- A company in a contacts file that is not an account yet is added as a prospect.
- The client operator works with Tess on loads, rules, exceptions and reviews.

EVERY KIND OF RECORD

- Every kind of record CVW holds can be loaded and has a page where people see it, including quotes, orders, invoices, cases, installed equipment, service contracts, stock and lead times.
- A worker can say where a customer's case stands, as of the last load, and says the time it was true.

DROP FOLDERS

A file is dropped

Into the company's folder in the tenant's own Cloud Storage bucket.



A notice arrives

Storage notices come in on one Pub/Sub topic. A file is found within a minute.



It fits saved rules

Tess loads it, if your settings allow.



A new kind of file

Tess drafts rules for a person to approve.



Not a table

Returned with a note.

Tess never makes new rules live and never lets a held load go on. A person decides.

FILES BACK TO YOUR CRM

- Written every hour: new prospects, contacts added or changed, conversations as activities, cases raised, stops and opt-outs, and meetings booked.
- Until a live connection to the CRM is set up, data moves both ways by file.

THE DAILY DATA SUMMARY

- Each morning: files in, loaded, waiting, returned, and rows sent to exceptions files.
- People can ask Tess "What came in today?" in chat.

LOAD

Open in site

Price list October.csv

Loaded

Today 09:12, by Tess

Rules

Price list, version 3

Rows

1,204 read · 1,192 changed · 12 refused

Why rows were refused

Unit price is not a number
 9 rows, such as "235,00"

Product not in the catalogue
 3 rows: HA-9X0

What changed

HA-220, 10 to 49
 241.00 to 235.00 each

HA-340, 10 to 99
 418.00 to 412.00 each

And 1,190 more
 See the load in the site

Fix the 12 rows

Download refused rows

Undo load

A price list load opened: why 12 rows were refused and what changed, shown with the made-up Northcott example. Product design with made-up data.

Email, calls and texts on Telnyx.

Each worker has its own email address on your own subdomain and its own number for calls and texts. Clones share them. Email, calls and texts run on Telnyx, with WhatsApp on the same provider when it is enabled, on the same engine, memory and rules as every other channel.

HOW IT IS INTEGRATED

Part	How it works
Addresses	Each worker's address sits on the client's own subdomain, such as morgan@northcott.corvair.live. CVW registers and verifies each subdomain and publishes its own SPF, DKIM, DMARC and MX records. No codes are added to an address; replies are matched by thread.
Email templates	Email is not a chat. Every email a worker sends to a customer uses a template from a standard library of layouts, each with a section for a freeform reply. The signature and footer are a separate template added to each.
Worker numbers	Rented through Telnyx in the country of service, with what the country requires: sender registration for texts in the US (A2P 10DLC brand and campaign), or the documents some countries need before a number is issued. A number belongs to the worker, not to a clone. Each number has its own messaging profile, so a STOP reaches only that number.
Desk numbers	Optional, for people. Desk phones run in the browser over WebRTC. Without one, a person calls and texts from the account's worker line, or uses their own phone and records the call on the Desk, without ringing first, the live transcript, cards brought forward, recording, transfer, listen or join.
Voice	When a worker answers or places a call, Telnyx call control streams the audio both ways over a secure WebSocket (L16 at 16 kHz), checked by a one-call token. The voice engine bridges the stream to Gemini Live, or to ElevenLabs as the alternate, with the prompt assembled on the server.
Webhooks	Every Telnyx webhook (ringing, answered, completed, failed, delivered, a message in) is signed, and the signature is checked before anything else is done. It then becomes an activity event.

SETUP PROVISIONS THE CHANNELS

- Setup provisions each client's domains and channels.
- Email and website chat for every client.
- Voice, texts and WhatsApp where they are enabled, each with what the country requires.
- Each channel shows its state on Setup live: Ready, Waiting or Needs you, with its page in the site.
- Texts from a US number wait for its registration.

KEYS AND SYSTEM EMAIL

- Provider credentials sit in the tenant's Secret Manager and are used through the access broker.
- Mailgun sends only Corvair's own system email: notifications, sign-in and access requests. It never sends a client's email.

● Ready	Website chat On at northcott.com, with Morgan and Riley	Website chat ↗
● Ready	Email morgan@ and riley@northcott.corvair.live	Email ↗
● Waiting	Phone numbers 2 numbers. One for each worker	Phone ↗
● Waiting	Text messages Your SMS brand is registered from your company profile. Texts start once carriers approve	SMS ↗
● Needs you	People and who decides 9 people. Dana Whitfield has no backup next week	People ↗
● Ready	Schedule Holiday on Friday 23 October. Automated after 17:00	Schedule ↗
● Needs you	Behaviour Version 6 in use. Draft "Shorter replies" is ready to publish	Behaviour ↗
● Ready	Products and prices Price list loaded today at 09:12	Prices ↗
● Ready	Contact rules US rules in force. Opt-outs checked on every send	Contact rules ↗

Setup live: each channel and setup area with its state, shown with the made-up Northcott example. Product design with made-up data.

Calls, texts and country profiles.

Each number has its own rule for calls in. Calls out and texts pass the contact gate at the moment they go. Each country's rules are a reviewed profile that the gate applies.

Part	How it works
Calls in	Each number has a rule: ring a person first and the worker after a wait (10 to 60 seconds, 20 by default), the worker answers, or ring a person only. Which person: the account owner, a named person, or whoever is on duty. Out of hours, the worker answers or takes a message. When the worker is full, the least busy worker answers, or it takes a message.
Ringin	The caller's account comes up at once on the live desk, with Answer, Let the worker take it, and Voicemail. Unanswered in the set time, the worker answers and the person gets the summary. Voicemail hands the call to the worker, which takes a message and a good time to call back and gives the person a request with it.
Transfer	To the account's worker, which carries on with a summary of what was said, or to a person.
The worker on the phone	Answers with the greeting and the AI notice. It can be watched, listened to, joined and taken over like any conversation. Listening needs the recording notice: a call with no notice cannot be listened to. A person who joins is introduced by name and role, with a fresh notice where the country profile requires it.
Calls out	The customer sees the person's Desk number or the worker's number, attested by the carrier (STIR/SHAKEN in the US). A worker's planned call joins the queue only inside the contact's allowed hours, and the contact gate runs again at dialling, including the country's rules and any do-not-call registry. A number that does not exist is not called again.
Answering machines	The worker leaves one short message: who it is, with the AI notice, why it called, and how to reach us.
Recording	Only after the notice, and never if the customer declines. A person's call is transcribed only where the customer's country allows recording after notice. Audio and transcript go to the tenant bucket and follow its retention periods.
Texts and WhatsApp	The worker's first text to a contact names it as an AI assistant. STOP, START and HELP are handled by the number they were sent to. WhatsApp, when enabled, runs on Telnx after the same contact gate. Each message joins the contact's one conversation.

COUNTRY PROFILES

Corvaire keeps a profile for each country: permitted hours by day, the registries to check, consent by channel and purpose, the AI disclosure in each language, recording consent (one party or every party), frequency limits and number rules. CVW drafts the contact rules from official pages, with the source beside each rule, and a Corvaire operator reviews and publishes them. Public holidays load into the calendar. Each country's requirements sit in one place: registry accounts, sender registration, permits and the documents a phone number needs. A deployment can add stricter rules. Profiles are not legal advice. A worker cannot contact anyone in a country with no approved profile.

- **US:** an AI voice is an artificial voice under the TCPA (FCC, February 2024), so marketing calls need prior express written consent; Do Not Call Registry; 8am to 9pm local; state recording consent.
- **UAE:** marketing calls 9am to 6pm; Do Not Call Registry; no call after a refusal; one a day and two a week when unanswered (August 2024 rules).
- **Singapore:** Do Not Call Registry under the PDPA.
- **Australia:** Do Not Call Register, calling times, and the Spam Act.

Greeting, disclosure and consent

Every chat, call and text opens with the AI disclosure the contact's country requires, in the contact's language, from the country's approved profile. The first line is a template: "Hi, I'm [name], an AI assistant for [person or department] at [company]." The recording notice sits in the same slot. Consent is recorded by channel, and after a person says no to a call, they are not called again about it. The client can rewrite the greeting and keep versions by language, by channel and by direction. The rule that the worker says it is an AI when asked is unchanged.

Basis for contact and stop scope.

The contact gate runs before every outbound message or call. It reads two records: the basis for contact recorded for the person, and the scope of any stop. A check that cannot run counts as no.

THE BASIS FOR CONTACT

Basis	Recorded with it
Opt-in marketing list	Which list, and what the person agreed to receive
Attendance at an event	Which event, and what attendees were told
An enquiry	What they asked, where and when
An existing customer	The account
An employee referral	Which employee, and how they know the person
An external referral	Who referred them, and whether the person expects the contact
A warm contact of the account team	Which team member, and the relationship
None	Nothing. The person is cold

HOW THE GATE USES IT

- Recorded for each person and each purpose, with its source and date. It cannot be edited, only withdrawn.
- A list carries its basis when it is loaded. The person loading it says where it came from and what the people agreed to, and that becomes the record for each person.
- One person can be added with a basis. A referral the worker hears in a conversation is recorded the same way.
- The gate reads the country profile for what each basis allows, by channel and by purpose, and picks the allowed channels. A cadence uses only those.
- A person with no allowed channel is not contacted, and shows in the campaign's results with the reason.
- Where the profile sets how long a basis lasts, the gate reads its age from the date.
- Where the person's country and the client's differ, the stricter rule applies.
- Whether a person is cold, dormant or warm is worked out from the records, not typed in.

STOP SCOPE

Where the stop is said	What it stops
In a call or a chat	This call or chat
On an action, or in reply to one message	This action. In reply to a campaign message, that campaign's messages to this person
On an account	Contact on this account
On a worker	This worker
A STOP texted to a number	Texts from that number. Other numbers can still text the person, unless the country requires a wider stop
In wider words, such as "take me off your list"	What the words say, up to every list, channel and worker
In narrower words, such as "don't call me, email is fine" or "not before January"	That channel, or that period

A stop is stored with the words used and the scope applied. A country's profile can widen the scope, and then the wider scope is applied. The rule that a stop is always honoured stays in the sealed core. Promises already made to that person go to their owner.

Scoring, analytics and improvement.

The records that run the worker also improve it. Sage runs the scoring, the reviews and the coach with the decision service. Every change is a new release of the definition files, tested in simulation before it is promoted, and nothing reaches a worker until a person approves it.

THE LOOP, AND HOW EACH STAGE WORKS

Stage	How it works	Kept in
Record	Each conversation and task run keeps its transcript, the audio for voice (after notice), every tool call and search with its results, the sources used, the definition versions in force, the outcome, the debrief and the scores.	Control database; audio in the tenant bucket; detailed steps in Cloud Storage
Outcome	Whether the step is confirmed or tentative, and how a tentative step will be confirmed; a possible upgrade the customer left open; a stop; and whether the customer said no or refused the contact. Each comes with the line that shows it.	Control database
Score	The rubric is a file in the pack, editable per deployment, turned into typed questions. Each is answered 1 to 5 with a reason: Jev answers with a confidence, and Gemini if Jev is down, citing the transcript lines. A new surface runs Jev in shadow first.	Control database
Findings	Three to eight items for each scored conversation, each a strength, an issue or a risk, with its lines.	Control database
Mood and tags	Five levels at the start and end of each conversation, with a confidence. Tags say what each conversation contains. Five of them also send it to the review queue: a worse ending, a complaint, anything said about AI, a request for a named person, or a broken rule.	Control database; the review queue
Analyse	A batch review over a period and filters (worker, channel, direction, situation, outcome, mood, tag) reads every match and ranks the top issues by frequency and cost, with examples. On demand or on a schedule.	A report in the tenant bucket, indexed in the database
Coach	A person adds a comment to a conversation, and the coach writes a debrief and up to six recommendations: a change to the instructions, a lesson, or a note for Corvair. The person ticks the ones they agree with. The coach can also work from a finding across many conversations.	Lesson files: proposed, active or retired, by scope
Approve	Lessons and the instruction change wait for approval, shown against the current version. A named person approves or rejects each, and approved changes make a new release. A change that conflicts with the sealed core is refused with the reason.	Versioned definition files
Test and promote	The new release is tested against the one in use in simulation, case by case, on every scoring side. A case worse on the customer's side holds it back (next page).	The deployment points at one release
Live watch	After a release is promoted, its first 30 scored live conversations are compared with the release before. Nothing is rolled back without a person.	Control database

Analytics data

Key events, counts and scores in the control database feed scorecards and value. Detailed step records and logs are kept in Cloud Storage for audits and deeper analysis.

Simulation, tests and the live watch.

A new release meets simulated customers before it meets real ones. It is tested against the release in use, case by case, and watched after it goes live. A person decides each step.

TRAINING AND SIMULATION

- Everything is real unless a person declares it as training (a person plays the customer) or simulation (CVW plays the customer).
- Both run on the live system: the current accounts, memory, prices, notes and lessons. What the worker would have done is held and shown as held. Nothing leaves CVW.
- When it ends, the person saves it to the account, which applies what was held, or discards it.
- Simulation covers outbound as well as inbound. CVW plays the contact, an assistant who may book a time or put the call through, a voicemail, or a wrong person who may name the right one.
- Simulated customers vary by segment and answer the survey in character.
- A simulation run is configured in files: the worker release, situations, simulated customers and their dials, number of runs, rubric, and whether the simulated customer answers the survey. Standard sets ship in the pack; a deployment adds its own.
- Every run is recorded, scored and debriefed like a real conversation, and is never counted in a worker's results.
- A replayed call follows the real customer's lines, and the worker is scored against what the person did.

TEST

Open in site

Northcott release 9 against release 8

Cases

6 · simulated customers, chat

Finished

Today 10:48

Price for 40 HA-220

Both 5 of 5

Same

A product we do not sell

Release 9: 5 · release 8: 2

Better

Lead time for seal kits

Release 9: 3 · release 8: 4

Worse

Wants a person

Release 9: 2 · release 8: 5

Worse

Booking a call

Both 4 of 5

Same

Angry about a late order

Both 4 of 5

Same

Compare "Wants a person"

Promote release 9

Promote waits for a verdict with no case worse.

A test of release 9 against release 8, case by case, shown with the made-up Northcott example. Product design with made-up data.

FROM AN APPROVED CHANGE TO A RELEASE IN USE



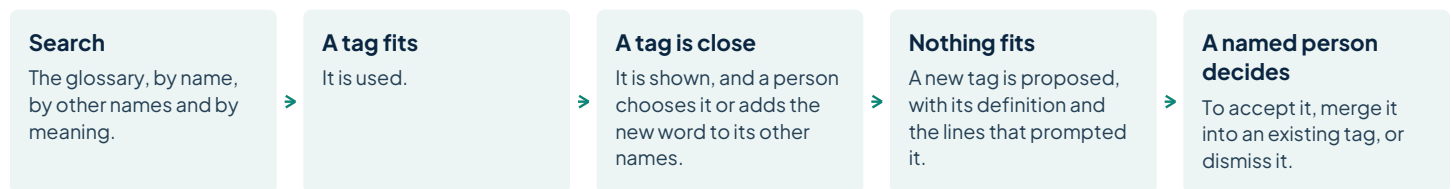
Tags and the tagging pass.

Every conversation is tagged automatically, in three kinds. A tag says what a conversation contains. It is not a score. All tags live in one glossary for each company.

THREE KINDS OF TAG

Kind	Set by	Examples
Happened	The engine, from the record, at the moment it happens	A person nudged the worker, joined or took over. A request was raised. A promise was made. A stop was given. The campaign, the channel and the language.
Mentioned	A pass after the conversation, run with the debrief, matching against the company's records and its keyword list	A product, a part number, a quote or order number, a competitor, a named person, a keyword the client set.
Said	The same pass. Jev answers each tag as a yes-or-no question, with its evidence lines and a confidence	A price objection, a complaint, a delivery problem, a referral, a contract question, a wish for a person, a remark about AI.

NO NEW TAG WITHOUT A SEARCH OF THE GLOSSARY



The tagging pass never makes a tag by itself. It proposes one for a named person. The same rule holds for a person and for Sage.

Mentions on a live call. The same matching runs on the live transcript. It marks the products, orders, quotes, competitors, documents and people mentioned, and Brought forward shows a card for each on the live desk. Mentions are matched to records CVW holds, not guessed.

THE GLOSSARY

- Each tag has a name, a definition, other names and examples. A tag in use can be merged into another, which keeps the history of both.
- A product tag is the product's own record. The pass matches what was said against the products the company sells, including the customer's own words for them.
- Sage reports tags that overlap, tags nobody uses, and words that keep appearing with no tag.

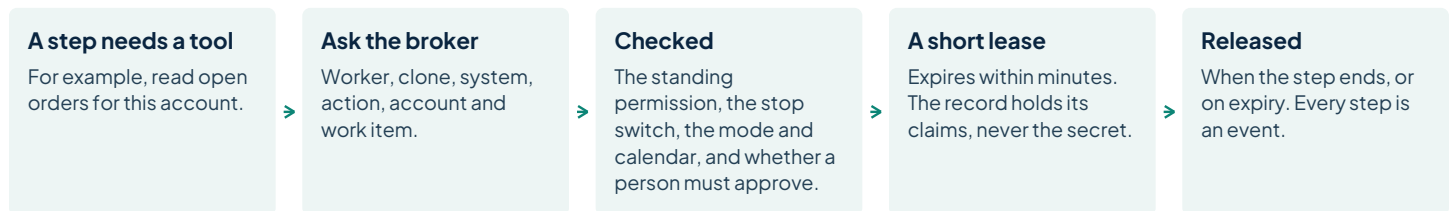
HOW TAGS ARE USED

- People find conversations by tag and act on several at once, in the conversations list, in batch review and in reports. A person can add or remove a tag.
- A tag can start work by a rule, such as "a complaint goes to the account owner".
- The five earlier flags are tags that also send the conversation to the review queue: the customer ends worse or angry; complains, may leave or mentions legal action; says anything about AI assistants; asks for a named person or states how they want to be served; or the worker broke an always or never rule.

Security architecture.

Each worker has its own identity and a short list of standing permissions. It holds no secrets: it is granted access by a broker for one step at a time, and the access ends with the step. One switch, at any level, cuts all access at once.

ACCESS FOR ONE STEP AT A TIME



IDENTITY AND PERMISSIONS

People act as themselves. Each person signs in with their own login and role. The MCP service never lets an assistant do more than that person's login allows.

Seats, by role. Each seat opens its own live desk and site. A person sees only the seats their role opens, and a seat changes the desk and the menus, never what the person may do.

Each worker has its own identity. Tied to its tenant, company and deployment. It never uses a person's login.

Standing permissions. The system, the action, the scope (its accounts), the modes it applies in, and whether a person must approve. Your administrator sets the list.

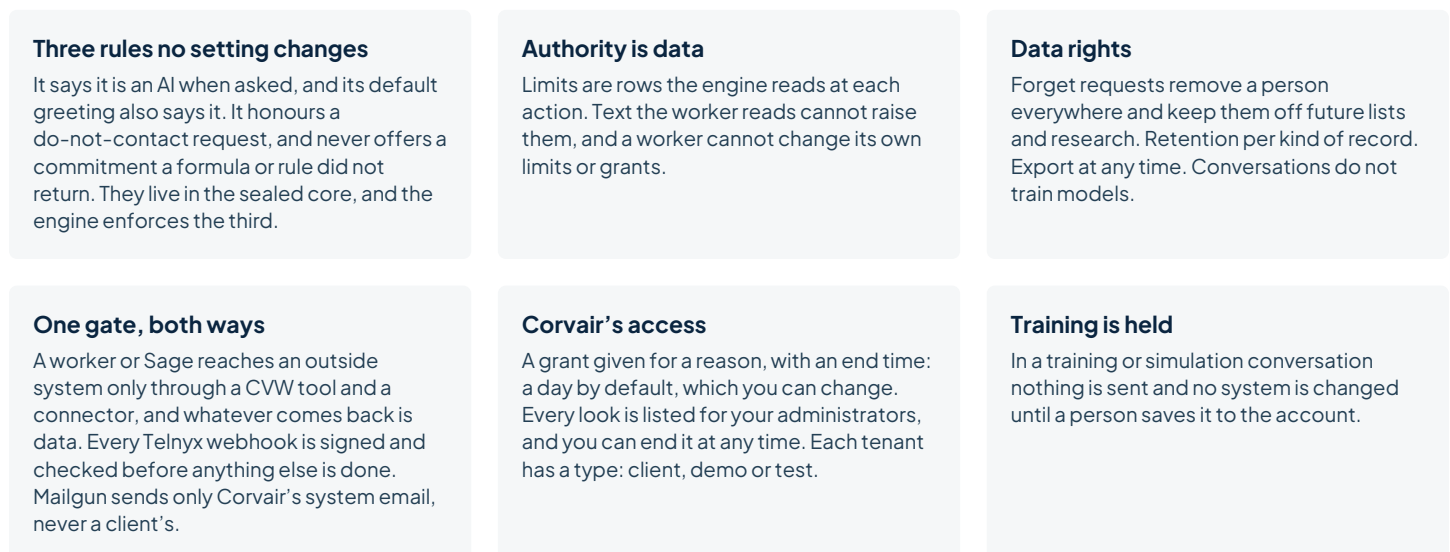
Secrets. Every key and token sits in Secret Manager, per tenant, and never in files, prompts, logs, recordings or the model's context. Leases are never renewed silently; permissions expire and refresh on record, and unused ones are flagged.

THE STOP SWITCH

Level	Pressed by
One worker	Its supervisor, your administrator, Corvaire
Deployment	Your administrator, Corvaire
Tenant	Your administrator, Corvaire
Platform	Corvaire

Pressing it revokes every live lease, refuses new ones, pauses queues and schedules, and ends live conversations with a safe closing line, handing each to a person. It can also revoke a credential at its source. It never trips on its own; restoring needs a named person.

GUARDRAILS IN THE ENGINE, NOT ONLY IN THE PROMPT



Defences against prompt injection and attacks.

No single layer is trusted to stop an attack. Content is treated as data, the engine holds the limits, and every reply is checked before anyone sees it. The same controls run in Corvair's other live AI products.

Attack	Where it is stopped	How
Injection in a customer message	What comes in, what it can do, what goes out	The message enters the prompt as marked data. Limits are rows the engine reads, so "ignore your rules" changes nothing. The formula refuses, and the reply check blocks any figure no formula returned.
Injection hidden in a document, email, web page, search result or system reply	What comes in, what it can do	Content enters as marked data with its source. The tools a worker may call are fixed by its standing permissions, and nothing it reads can grant access.
Prompt extraction	The model, what goes out	The sealed core never reaches a browser. A hidden marker in the core is scanned for in every output; a reply that carries it is blocked and raises a safety alert.
Jailbreaks and harmful content	The model, what goes out	Explicit guardrails in every sealed prompt, Gemini's safety filters, and an output check for prohibited content. A failed reply is not shown, and the conversation is flagged.
Malicious uploads	What comes in	Every file is virus-scanned, checked for active and prohibited content, and quarantined until it passes.
Stolen credentials	Access	No secret enters a prompt, log or recording. Access is granted for one step and expires in minutes. Keys sit in Secret Manager, per tenant.
Reaching another tenant's data	Data	Row-level security, forced on every tenant table, plus a storage bucket, memory space and secrets per tenant.
Social engineering	What it can do	A claimed job title gives no authority. Decisions above the limits go to a named person, with a backup.
Floods, bots and web attacks	The edge	Google Cloud Armor rules and rate limits in front of the service.
A forged call or message event	The edge	Every Telnyx webhook is signed, and the signature is checked before anything else is done.
Using the worker to spam or harass	The contact gate	Do-not-contact, consent, local hours and frequency limits before every message. A check that cannot run counts as no.
A generated report with failures	What goes out	Jev scores it against the rubric, a different model from the one that wrote it. It is revised once, then rejected and flagged if it still fails.

Safety alerts

Attempted injections, blocked replies, refused actions and leak markers appear on the safety alerts screen and go to the supervisor. Sage escalates at once.

Your data is yours

Customer data belongs to the customer, and so do uploaded documents, templates and processes. Export at any time. Never used to train models.

Clear terms

A privacy policy, terms of service, an acceptable use policy and a data processing agreement. Corvair's access is granted for a reason and a set time, and every look is listed for you.

Read the product concept guide

The concept guide explains each part in plain words. The architecture reference on the website gives the mechanism in more detail.

corvair.ai/cvw
