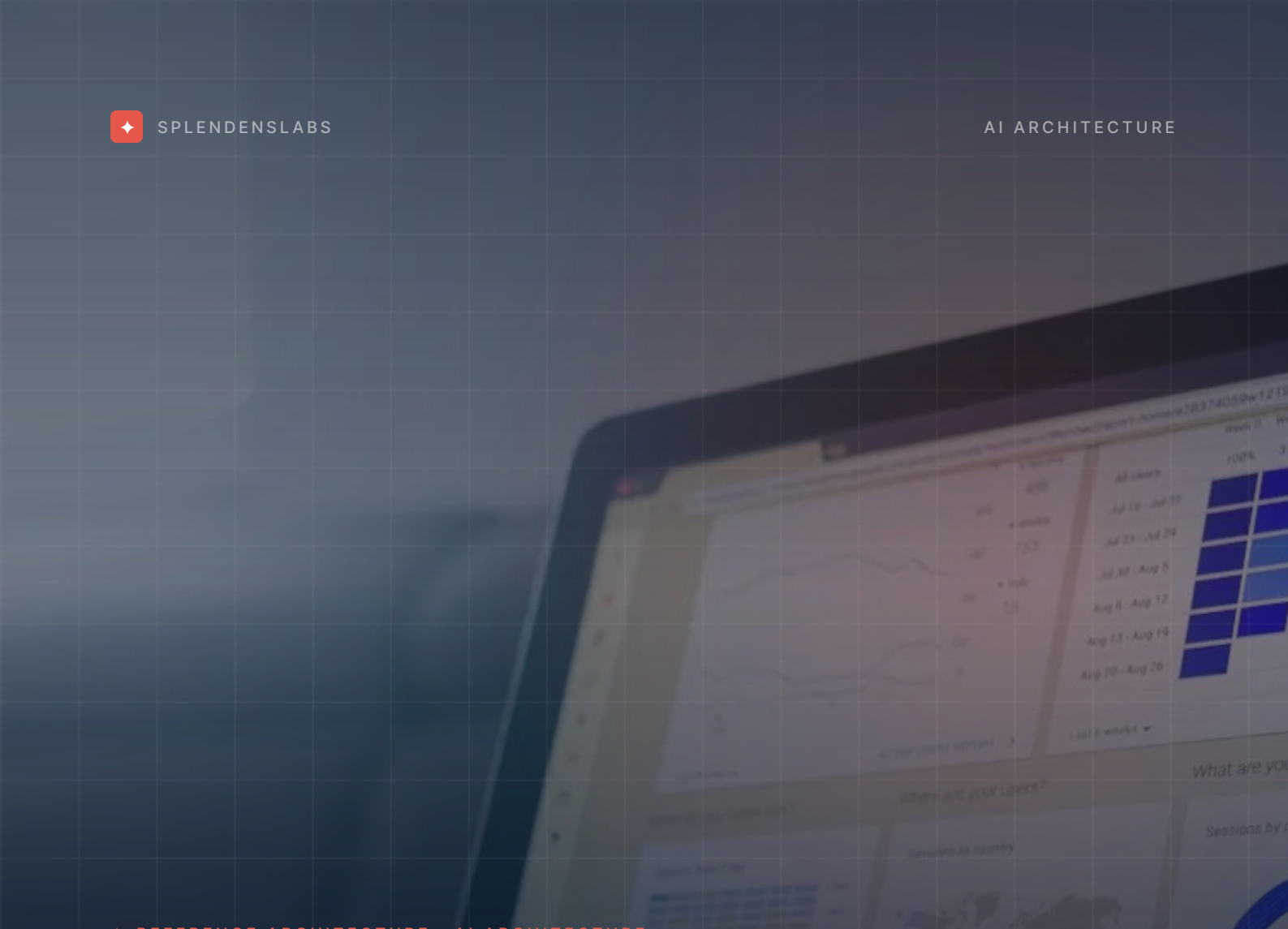


✦ REFERENCE ARCHITECTURE · AI ARCHITECTURE

AI CRM Architecture

A customer 360 data layer, identity resolution, an intelligence layer for scoring, next best action and summarization, governed automation, and cross-product insight — the shape of an AI-native CRM.

FORMAT	LEVEL	READ TIME	UPDATED
Reference Architecture	Advanced	18 min	Oct 2026

OVERVIEW

What this reference architecture covers

Adding a chat box to a CRM does not make it intelligent. The value comes from a clean, unified view of each customer, models that turn that view into decisions, and automation that acts on those decisions inside clear limits. This reference architecture describes the layers we use in BloomCRM and in client CRM builds — from raw events to identity resolution, scoring, next best action, summarization, automation and reporting — and how intelligence can be shared safely across multiple products.

KEY TAKEAWAYS

- Intelligence is capped by the customer data layer; unify and resolve identities before building models.
- Keep an event log as the source of truth and derive profiles, features and timelines from it.
- Combine predictive scores with LLM reasoning: models rank, language models explain and draft.
- Next best action should be a ranked, explainable recommendation with guardrails — not an opaque instruction.
- Automations need the same policy checks, approvals and audit trail as any agentic workflow.
- Cross-product intelligence works only with explicit consent, shared identity and per-product data boundaries.

WHO IT'S FOR

CTOs and product leaders building CRM or customer platforms

Data and AI engineers

Revenue and customer operations leaders

Privacy and compliance reviewers

HOW TO USE IT

Sections 01–02 cover data and identity; agree these first. Sections 03–05 describe intelligence, automation and reporting. Section 06 applies when several products share one customer base.

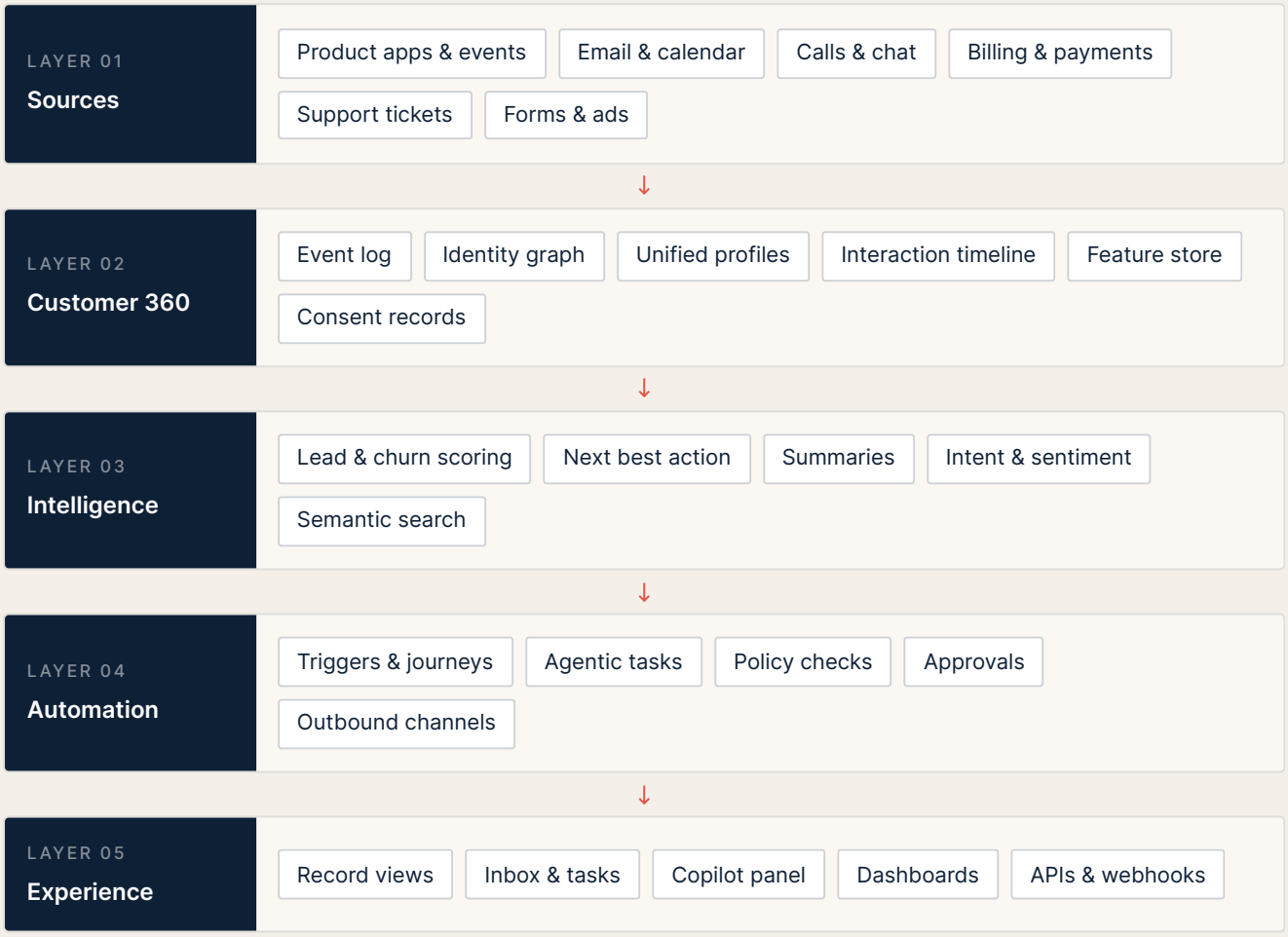
CONTENTS

01 The reference architecture
02 Customer 360 and identity resolution
03 Scoring, next best action and summarization
04 Governed automation
05 Reporting and analytics
06 Cross-product intelligence
07 Production readiness checklist

01 / ARCHITECTURE

The reference architecture

An AI CRM is a customer data platform, an intelligence layer and a workflow engine behind a familiar user interface. Each layer depends on the one beneath it being trustworthy.

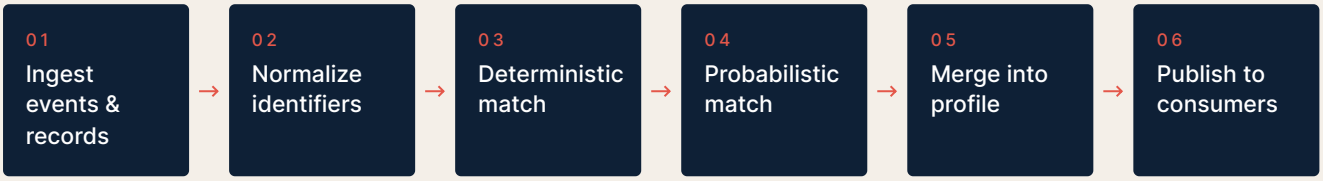


The copilot panel is the most visible part and the least important architecturally. If profiles are duplicated, timelines incomplete or consent missing, every summary, score and draft built on top inherits the problem.

02 / DATA

Customer 360 and identity resolution

The same person shows up as an email in marketing, a phone number in support, a user ID in the product and a billing account in finance. Resolving them is the foundation.



MATCH TYPE	SIGNALS	USE
Deterministic	Verified email, phone, login ID, account number	Auto-merge; high confidence
Probabilistic	Name similarity, address, device, company domain	Suggest merge above a threshold; review below it
Household / account	Shared address, billing account, company	Group profiles without merging individuals
Never merge	Conflicting verified identifiers	Keep separate; flag for review

01

Event log as source of truth

Store immutable, timestamped events; derive profiles and features from them so you can rebuild after fixing a match rule.

02

Reversible merges

Record every merge with its rule and evidence so a wrong merge can be split without data loss.

03

Consent travels with data

Each profile carries consent and purpose flags; downstream models and channels check them before use.

04

Freshness targets

Define how quickly an event must appear in the profile — seconds for live support, hours may be fine for reporting.

03 / INTELLIGENCE

Scoring, next best action and summarization

Use each technique for what it is good at. Predictive models rank at scale; language models read unstructured history, explain and draft.

PREDICT

Scoring

Gradient-boosted or similar models over profile features for conversion, churn and expansion likelihood, retrained on outcomes.

DECIDE

Next best action

Candidate actions filtered by eligibility and consent, ranked by expected value, with a reason the user can read.

EXPLAIN

Summarization

LLM summaries of timelines, calls and threads, grounded in cited interactions and refreshed on new activity.

UNDERSTAND

Intent & sentiment

Classify inbound messages and calls into intents, urgency and sentiment to route and prioritize.

FIND

Semantic search

Natural-language search across notes, emails and tickets, filtered by the user's record permissions.

DRAFT

Assisted writing

Drafts of replies and follow-ups using profile context and approved templates, always reviewed before sending.

How a next best action is produced

01 **Generate candidates**

From playbooks and rules: call, email, offer, escalate to support, do nothing.

02 **Filter by eligibility**

Remove actions blocked by consent, contact frequency limits, open tickets or account status.

03 **Rank by expected value**

Combine scores and business weights; keep the ranking deterministic and testable.

04 **Explain**

An LLM writes a short rationale from the features and recent events that drove the ranking.

05 **Learn from outcomes**

Record whether the action was taken and what happened, and feed it back into the models.

✦ 04 / AUTOMATION

Governed automation

Automation is where a CRM acts on customers directly. The guardrails need to be stricter than for anything that only shows information to staff.

RULE-BASED JOURNEYS	AGENTIC TASKS
Predictable and easy to audit	Handle unstructured requests and replies
Good for known lifecycle steps	Choose among approved actions
Brittle with free-text inputs	Need policy checks and budgets
Grows into hard-to-maintain trees	Require trajectory evals and audit

Guardrails for customer-facing automation

- [ ] Consent and channel preferences checked on every outbound message
- [ ] Frequency caps per customer across all journeys and agents
- [ ] Human approval for pricing, refunds, contract changes and sensitive topics
- [ ] Approved templates and tone rules for generated messages
- [ ] Every automated action logged with trigger, inputs, decision and outcome
- [ ] Kill switch per journey and per agent

05 / REPORTING

Reporting and analytics

Reporting closes the loop: it tells you whether scores, recommendations and automations change outcomes.

REPORT	ANSWERS	BUILT FROM
Pipeline & funnel	Where are customers in the lifecycle and where do they stall?	Event log, stage changes
Recommendation uptake	Are users acting on next best actions, and with what result?	Action log joined to outcomes
Model performance	Are scores still calibrated against real outcomes?	Predictions vs labelled outcomes
Automation health	Volume, approvals, failures and opt-outs per journey	Automation and audit logs
Natural-language queries	Ad hoc questions answered over a governed semantic layer	Metrics layer, not raw tables

DESIGN NOTE

Put a semantic layer under natural-language reporting

Let the language model generate queries against defined metrics and dimensions, not raw tables. Answers stay consistent with official dashboards and respect row-level permissions.

06 / CROSS-PRODUCT

Cross-product intelligence

When one company runs several products — as SplendensLabs does across therapy, education, pet care and commerce — a shared CRM can see the whole relationship. That power needs firm boundaries.

01

Shared identity, separate data

One identity graph across products; each product's detailed data stays in its own domain with its own access rules.

02

Purpose-based sharing

Only signals with a declared purpose and customer consent cross product boundaries, as derived features rather than raw records.

03

Sensitive domains stay sealed

Health and therapy data never feed marketing or cross-sell models; at most a consented, minimal signal is shared.

04

One timeline, filtered views

Staff see a unified timeline filtered to the products and data classes their role permits.

✦ 07 / OPERATIONS

Production readiness checklist

Use this as the definition of done before intelligence and automation reach real customers.

DATA

- [ ] Event log captured from every source
- [ ] Identity resolution with reversible merges
- [ ] Consent and purpose flags on every profile

INTELLIGENCE

- [ ] Scores monitored for calibration
- [ ] Next best actions carry readable reasons
- [ ] Summaries cite the interactions they draw on

AUTOMATION

- [ ] Policy checks and frequency caps enforced
- [ ] Approvals for sensitive actions
- [ ] Full audit trail and kill switches

CROSS-PRODUCT

- [ ] Data-sharing matrix agreed per product pair
- [ ] Sensitive domains excluded from cross-sell
- [ ] Role-based filtered timelines

> A CRM earns the word “intelligent” when every recommendation can say why — and every automation knows when to stop and ask.
>
> SPLENDENSLABS ENGINEERING PRINCIPLE

GET IN TOUCH

Let's Talk

We build AI-native CRM and customer platforms, and run BloomCRM across our own products. Bring us your customer data sprawl and the decisions you want it to support.

- Customer 360 and identity resolution design
- Scoring, next best action and copilot features
- Governed automation and cross-product data boundaries

BOOK AN AI STRATEGY SESSION →

EMAIL
hello@splendenslabs.com

WEB
splendenslabs.com

OFFICE
Sona Incubation Foundation, Salem