ProQube AI Orchestration & Automation Services

Version: v0.1 (October 28, 2025)

Contact: ProQube.ai — Services & Delivery

Audience: Prospective partners & enterprise buyers

Executive Summary

Enterprises are under pressure to deliver AI capabilities that actually move the needle on revenue, cost, and cycle time—not just proof-of-concept chatbots. ProQube's Services team specializes in **AI orchestration and automation**: we design and build production systems that connect large language models (LLMs), operational data, and business applications to deliver measurable outcomes.

We deliver **front-office** assistants (AI Receptionist, Sales/CX Chatbots, Agentic Lead Nurture) and **back-office** automations (document processing, ticket triage, ERP/CRM flows, knowledge assistants) using a secure, integration-first architecture. Our accelerators enable **weeks—not quarters**—to go from discovery to a live pilot, with governance, observability, and handover built in.

What We Do: Orchestration & Automation

Front-Office (customer-facing)

- **AI Receptionist (voice & chat):** Answers calls/chats; authenticates customers; qualifies leads; books meetings; screens & routes to agents; logs to CRM; summarizes interactions.

- **Sales & Pre-Sales Copilot:** Ingests collateral & product docs; drafts outbound; answers prospect questions contextually; generates call briefs and follow-ups.

- **Customer Support Chatbot/Agent:** Deflects Tier-0/1; performs actions (reset, refund, RMA, status updates) via secure tools; escalates with full context to humans.

- **Web & Mobile Conversational Interfaces:** Embedded widgets and channels (web, app, WhatsApp, SMS, Slack, Teams) with unified intents and analytics.

Back-Office (internal operations)

- **Ticket Triage & Routing:** Classifies and routes IT/ops tickets with context; suggests or executes playbooks; updates SLAs.

- **Document & Email Automation:** Classifies, extracts, and validates forms (invoices, POs, contracts); reconciles with ERP; triggers approvals.

- **Knowledge Assistants:** Retrieval-augmented agents for SOPs, safety, compliance, and field ops; generate step-by-step "copilots" for procedures.

- **Agentic Workflow Orchestration:** Multi-step pipelines that plan/act/verify across CRMs, ERPs, data warehouses, and messaging platforms.

Our Delivery Approach

1. **Discovery & Requirements (1–2 weeks):** Stakeholder mapping, process walk-throughs, success metrics, data & system inventory.

2. **System Design:** Interaction design, data/knowledge strategy, security model, evaluation plan, ROI model.

3. **Pilot Build (4–6 weeks typical):** Implement thin slice; integrate must-have systems; closed-loop evals; production-grade observability.

4. **Scale & Handover:** Harden for volume; role-based controls; runbooks; change management; upskill client teams.

Technical Architecture & Stack

Reference Architecture

- **Channels:** Voice (PSTN/SIP), Web chat, WhatsApp/SMS, Email, Slack/Teams.

- **Gateway & NLU:** Telephony/RTC, speech-to-text/voice-to-text, intent detection.

- **Orchestrator (Agents):** Planning, tool-use, multi-agent cooperation, guardrails & policies.

- **Knowledge & Memory:** Retrieval-augmented generation (RAG), long-term memory, conversation state, vector indexing.

- **Action Layer (Tools):** CRM, ERP, ticketing, scheduling, identity, payments; internal APIs and RPA shims where needed.

- **Data & Observability:** Event stream, traces, metrics, feedback, evaluation harness, red-team testing, content moderation.

- **Security & Governance:** AuthN/Z, PII minimization, encryption, audit logs, deterministic fallbacks/hard stops.

Representative Technologies (non-exhaustive)

- **LLM Providers:** OpenAI/Azure OpenAI, Anthropic, Google, and approved open-source models where on-prem is required.

- **Vector/Index:** Pinecone, Weaviate, pgvector, Elastic; hybrid keyword-semantic search.

- **Agent/Workflow:** LangChain, LlamaIndex, Temporal/Airflow for async orchestration; lightweight Python/TypeScript services for tools.

- **Data & Messaging:** Postgres/BigQuery/Snowflake; Kafka/PubSub/Events; S3/Blob for artifacts.

- **Integrations:** Salesforce, HubSpot, Zoho, Dynamics; Zendesk, Freshdesk, ServiceNow; SAP/Oracle/NetSuite; Outlook/Google Workspace; Twilio/Vonage; Calendars; Payment gateways.

- **Observability:** Langfuse/PromptLayer-style tracing, vector recall analytics, human feedback loops, canary & A/B evaluation.

- **Security:** SSO/OAuth2, SCIM, RBAC/ABAC, tenant isolation, KMS-backed secrets, policy-based redaction.

We tailor the stack to enterprise constraints (cloud, VPC, on-prem) and compliance needs.

Integration Capabilities

- **CRMs & Marketing:** Bi-directional sync for contacts, leads, opportunities; enrichment & dedupe; campaign triggers.

- **Telephony & Scheduling:** IVR, voicemail transcription, call summaries; direct calendar booking and rescheduling; time-zone handling.

- **ERP/ITSM:** Order status, inventory, BOM, MRP updates; incident creation and updates; approval workflows.

- **Data Sources:** Data warehouses, object stores, relational DBs, document stores; content repositories (SharePoint/Drive/Box).

- **Identity & Compliance:** SSO, SCIM provisioning, DLP policies, data residency & retention controls.

Industries & Priority Use Cases

Construction

- **AI Receptionist for Subcontractor & Client Intake:** Route inquiries, pre-qualify bids, schedule site visits.

- **Job-Site Knowledge Copilot:** Voice/chat assistant for SOPs, safety checks, equipment manuals, incident logging.

- **RFI/RFP Automation:** Extracts requirements, drafts responses, maintains document control.

- **Change-Order & COI Processing:** Intake, validation, and routing to PM/finance systems.

Consumer Packaged Goods (CPG)

- **Retailer & Consumer Support Bot:** Answers product queries, warranty, returns; logs tickets to CRM.

- **Content & Listing Automation:** Generate and validate PDP copy & imagery briefs; push to marketplaces.

- **Demand Signal Triage:** Ingest reviews/social/returns; summarize issues; trigger quality/compliance workflows.

Manufacturing

- **Order Status & Self-Service:** Conversational tracking, ASN/ETA updates, RMAs.

- **Parts & Procedure Copilot:** Retrieval over service manuals and SOPs; step-wise guided troubleshooting.

- **Supplier Intake & Onboarding:** Validate documents; route approvals; keep ERP and vendor portals in sync.

Professional Services

- **Lead Qualification & Meeting Automation:** Voice/web intake; enrichment; scheduler; CRM logging; handoff packages.

- **Engagement Knowledge Hub:** RAG over SOWs, deliverables, and playbooks; draft proposals and status reports.

Real Estate & Facilities

- **Leasing Receptionist:** Qualifies prospects, books tours, syncs with calendars/CRMs.

- **Maintenance Triage:** Classifies requests, books vendors, updates tenants automatically.

Logistics & Field Services

- **Dispatch Assistant:** Triages inbound jobs, optimizes assignment, notifies customers.

- **Proof‑of‑Service Automation:** Extracts data from images/emails; closes jobs; triggers invoicing.

Additional verticals supported on request. We prioritize use cases with clear ROI and fast time‑to‑value.

Deep Dive: AI Receptionist & Chatbot Offerings

Capabilities

- Natural conversation (voice & chat), multilingual; caller authentication; smart holds & call‑backs.

- Lead capture & qualification; enrichment; pipeline creation; appointment booking.

- Customer self‑service (order status, returns, FAQs) with secure actions; human escalation with full context.

- Automatic summaries to CRM/ticketing; analytics on intents, resolution, and deflection.

Example Call/Chat Flow

1. Greeting & intent detection (voice or chat).

2. Verify or create contact; consent & compliance check.

3. Resolve or execute an action (status lookup, schedule, policy answer).

4. If needed, escalate with transcript + next‑best‑actions.

5. Log and measure outcome; feedback loop for continuous improvement.

Implementation Snapshot

- **Discovery:** call taxonomy, compliance needs, SLAs, systems map.

- **Build:** channel setup (Twilio/WhatsApp/web); knowledge grounding; tools for CRM/ERP; guardrails & fallbacks.

- **Pilot:** restricted rollout with targeted intents; measure handle time, self-serve rate, NPS.

- **Scale:** additional intents, languages, channels, and geographies.

SLAs & Governance (sample)

- 99.9% API uptime target; latency targets per channel; error budgets and rollback plan.

- Data handling: PII minimization, masking/redaction, regional data residency as required.

- Human-in-the-loop policies for irreversible actions.

- Quarterly red-teaming and eval refresh.

Differentiators & Value Proposition

- **Autonomy with Control:** Agentic systems that act through governed tools; explicit policies, approvals, and auditability.

- **Speed to Value:** Reusable accelerators (templates, tools, evaluators) shorten pilot timelines to weeks.

- **Integration-First:** Deep, bi-directional integrations with CRMs/ERPs/ITSM and telephony—going beyond FAQ chat.

- **Production Discipline:** Observability, deterministic fallbacks, eval harnesses, and safety tests from day one.

- **Flexible Deployment:** Cloud/VPC/on-prem options to meet security and compliance constraints.

Proof of Execution

(examples to anonymize or replace with specific references)

Replace the placeholders below with approved logos or anonymized summaries as available.

- **Conversational Intake & Scheduling** for a mid-market professional-services firm: AI receptionist qualified inbound leads, scheduled consultations, and pushed outcomes to CRM; reduced response delay and improved handoff quality.

- **Customer Self-Service Chat** for a DTC brand: Deflected common inquiries (order status/returns), executed secure actions, and escalated edge cases with full transcripts to human agents.

- **Document Automation** for finance operations: Classified inbound emails & PDFs, extracted key fields, validated against ERP, and routed exceptions for review.

References, demos, and technical deep dives available on request.

Delivery & Commercials

- **Engagement Model:** Fixed-scope discovery → milestone-based pilot → scale-out SOW.

- **Team:** Solution architect, conversational designer, integration engineer(s), QA/evals lead, project manager.

- **Indicative Timelines:** Discovery (1–2 wks), Pilot (4–6 wks for 3–5 intents/tools), Scale (ongoing).

- **Pricing:** Flexible—pilot package with success criteria; outcome-aligned options for scale. *(Details to be finalized per partner/client.)*

Security, Compliance & Risk Management

- **Data Security:** Encryption in transit/at rest; secrets via KMS; scoped service accounts; network policies.

- **Access Control:** SSO, RBAC/ABAC, least privilege; comprehensive audit trails.

- **Privacy:** PII minimization and redaction; configurable retention; data residency controls.

- **Model & Content Safety:** Prompt hardening, input/output filters, toxicity & PII checks, jailbreak resilience.

- **Operational Risk:** Canary releases, circuit breakers, rate limiting; incident response & postmortems.

Next Steps

1. **Use-Case Selection Workshop (90 minutes):** Confirm target intents, channels, compliance, and KPIs.

2. **Systems & Data Readiness Check:** Confirm CRM/ERP/Telephony access, knowledge sources, and identity model.

3. **Pilot Plan:** Define scope, success metrics, release plan, and governance.

4. **Kickoff:** Align on schedule, comms, and decision cadence.

Contact: partners@proqube.ai

Website: https://proqube.ai

Appendix A — Capability Matrix (Excerpt)

Capability	Voice	Chat	CRM/ERP Actions	Knowledge/RAG	Human Escalation	Analytics
AI Receptionist	✅	✅	✅	✅	✅	✅
Sales Copilot	—	✅	✅	✅	✅	✅
Support Agent	✅	✅	✅	✅	✅	✅

Ticket Triage	—	—	✅	✅	✅	✅
Document Automation	—	—	✅	✅	✅	✅

Appendix B — Sample Tooling (Excerpt)

- **Actions:** create_lead, schedule_meeting, lookup_order, initiate_return, create_ticket, post_update, collect_payment

- **Policies:** require_human_for_refund_over_X, mask_sensitive_PII, log_all_escalations, respect_business_hours

- **Eval Harness:** intent detection accuracy, tool-success rate, safe-completion rate, time-to-resolution, escalation quality.