

AVENIR AI SOLUTIONS

AI Growth Infrastructure - System Architecture Overview

Infrastructure de Croissance IA - Aperçu de l'Architecture Système

1

Lead Capture Layer

Couche de Capture de Leads

Website Form → /api/lead

AI Enrichment → GPT-4o-mini

Multi-Channel Sync

- ▶ Gmail auto-response
- ▶ Google Sheets logging

2

AI Memory System

Système de Mémoire IA

Email-Based Deduplication

Historical Tracking

- ▶ **tone_history** - Evolution of tone
- ▶ **confidence_history** - Confidence trajectory
- ▶ **urgency_history** - Urgency patterns
- ▶ **relationship_insight** - AI-generated insights

- ▶ Supabase storage
- ▶ Intent/Tone/Urgency analysis

Next.js API

OpenAI

Gmail API

Supabase

- ▶ Bilingual insights (EN/FR)
- ▶ Automatic upsert (no duplicates)

PostgreSQL

JSONB

RLS

3

Growth Intelligence Engine

Moteur d'Intelligence de Croissance

Weekly Analysis → growth_brain

- ▶ Urgency distribution analysis
- ▶ Top intent detection
- ▶ Confidence trajectory tracking
- ▶ Tone sentiment scoring
- ▶ Engagement score calculation
- ▶ Predictive insights (EN/FR)
- ▶ Per-client + global analytics





Trigger: → Vercel Cron (Mon 00:00 UTC) +
Manual

4

Growth Copilot Dashboard

Tableau de Bord Copilote de Croissance

Real-Time Intelligence

- ▶  Trend Summary - Urgency/tone patterns
- ▶  Recommended Actions - AI suggestions
- ▶  Predictions - Engagement forecasts
- ▶  Relationship Insights - Lead evolution
- ▶ Activity Log - Recent actions
- ▶ Lead Management - Tag/Archive/Delete
- ▶ Bilingual UI (EN ⇄ FR)

Next.js

Framer Motion

next-intl

Tailwind

Vercel Cron

Analytics

GPT-4o-mini

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Multi-Tenant API

API Multi-Tenant

Client Authentication

- ▶ API key management
- ▶ Per-client lead isolation
- ▶ API key rotation with audit logs
- ▶ Client dashboard access
- ▶ Row-level security (RLS)

JWT

Supabase RLS

UUID Keys

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Automation Loop

Boucle d'Automatisation

Intelligence Feedback

- ▶ Weekly auto-analysis (Cron)
- ▶ Real-time lead updates
- ▶ Auto-refresh Growth Copilot
- ▶ Predictive insights generation
- ▶ Relationship tracking
- ▶ Action logging & audit trail

Vercel Cron

Real-time

Webhooks



Complete Data Flow / Flux de Données Complet



Database Schema / Schéma de Base de Données

lead_memory

- id, name, email, message
- ai_summary, intent, tone, urgency
- confidence_score, language
- **tone_history (JSONB)**
- **confidence_history (JSONB)**
- **urgency_history (JSONB)**
- **relationship_insight (TEXT)**
- last_updated, archived, deleted
- current_tag, client_id

growth_brain

- analysis_period_start/end
- total_leads, top_intents
- urgency_distribution
- urgency_trend_percentage
- tone_distribution
- tone_sentiment_score
- avg_confidence
- confidence_trajectory
- language_ratio
- engagement_score
- **predictive_insights (JSONB)**

Supporting Tables

lead_actions

- Audit trail (delete/archive/tag)
- timestamp, performed_by

clients

- Multi-tenant API keys
- Company isolation

api_key_logs

- Key rotation audit trail

✨ Key Features / Fonctionnalités Clés



Bilingual

EN ⇌ FR



Real-Time

Live updates



AI-Powered

GPT-4o-mini



Analytics

Predictive

Avenir AI Solutions — Building intelligent infrastructures that think and grow.

Nous construisons des infrastructures intelligentes qui pensent et évoluent.

Tech Stack: Next.js 15 • TypeScript • Supabase • OpenAI GPT-4o-mini • Framer Motion • Tailwind CSS • Vercel