LEO Activation

12-Day Execution Plan
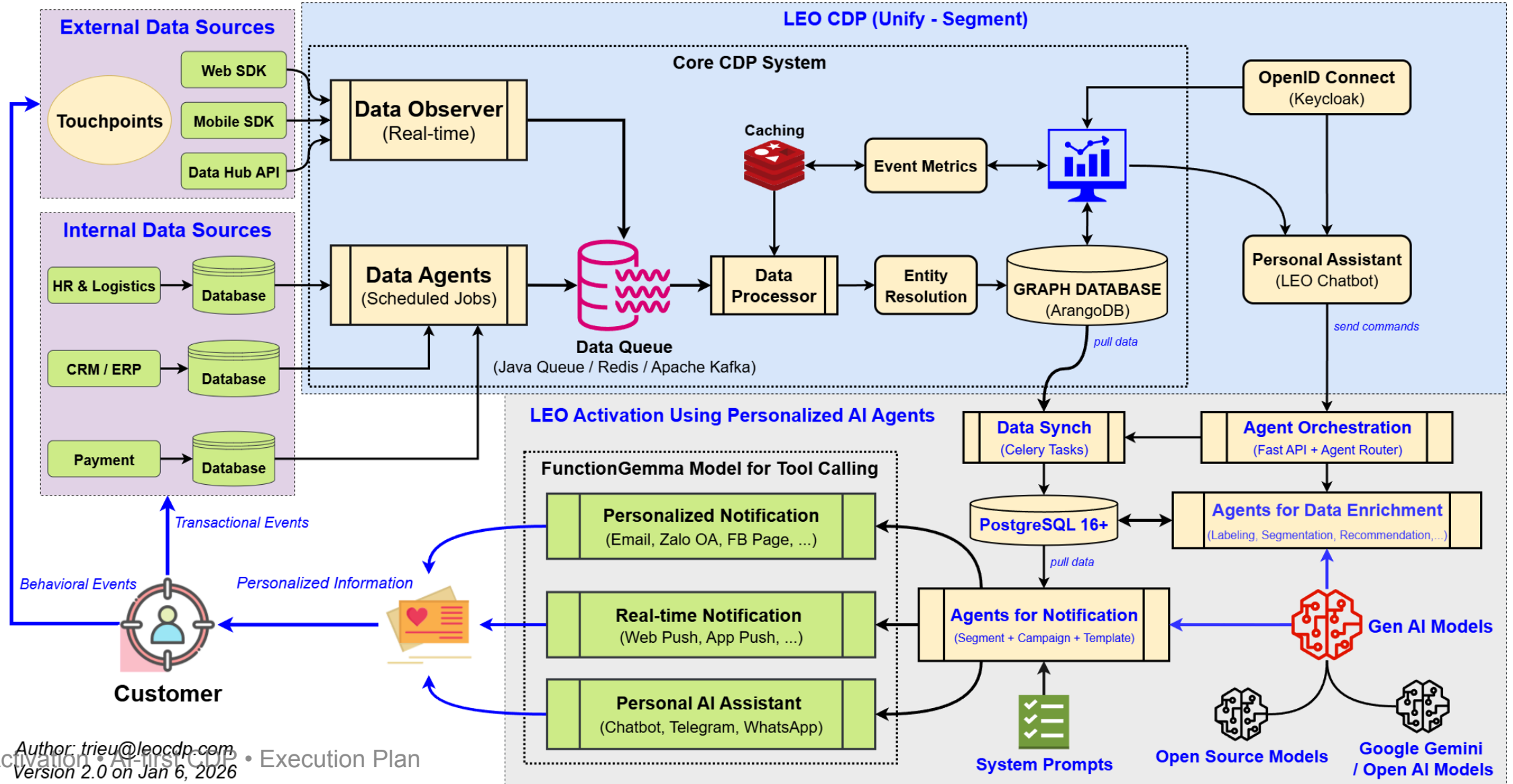
AI-first Customer Activation Platform

Sprint Plan + Jira Tasks + Definition of Done

Owner: Product / Tech

Version: v1.0

AI-first LEO CDP framework

Purpose of LEO CDP framework: Unify, process, and enrich customer data into a real-time golden profile.
Purpose of AI Agents: Use that data with AI reasoning to deliver personalized engagement and customer experiences.

LEO CDP (Unify - Segment)

External Data Sources
- Web SDK
- Touchpoints
- Mobile SDK
- Data Hub API

Internal Data Sources
- HR & Logistics — Database
- CRM / ERP — Database
- Payment — Database

Core CDP System

Data Observer (Real-time)

Data Agents (Scheduled Jobs)

Data Queue (Java Queue / Redis / Apache Kafka)

Caching

Event Metrics

Data Processor

Entity Resolution

GRAPH DATABASE (ArangoDB)

OpenID Connect (Keycloak)

Personal Assistant (LEO Chatbot)

send commands

pull data

LEO Activation Using Personalized AI Agents

Data Synch (Celery Tasks)

Agent Orchestration (Fast API + Agent Router)

FunctionGemma Model for Tool Calling

Personalized Notification (Email, Zalo OA, FB Page, ...)

Real-time Notification (Web Push, App Push, ...)

Personal AI Assistant (Chatbot, Telegram, WhatsApp)

PostgreSQL 16+

Agents for Data Enrichment (Labeling, Segmentation, Recommendation,...)

pull data

Agents for Notification (Segment + Campaign + Template)

System Prompts

Gen AI Models

Open Source Models

Google Gemini / Open AI Models

Transactional Events

Behavioral Events

Personalized Information

Customer

Why LEO Activation?

- CDP không kích hoạt → chỉ là kho dữ liệu

- Activation chậm → mất thời điểm

- Multi-channel không orchestration → spam

LEO Activation = Event-driven + Agent-based + Measurable

Sprint Scope (12 Days)

- **Day 1–4**: Core LEO Activation Engine

- **Day 5–8**: Channels & Notification

- **Day 9–12**: UAT, Load Test, Bug Fix, Release

Ship theo chiều sâu, không dàn trải.

Architecture Context

Event

→ Segment Snapshot

→ Agent Orchestration

→ Channel Dispatch

Mỗi bước phải:

- Deterministic

- Observable

- Testable

Epic Breakdown

1. **Core LEO Activation**

2. **Channels & Notification**

3. **UAT & Stabilization**

Epic 1 – Core LEO Activation

Goal

- Rule-based activation

- Agent orchestration

- Snapshot-based segmentation

Không realtime giả. Không rule mơ hồ.

Task: Setup Activation DB Schema

Tables

- campaign
- segment_snapshot
- agent_task
- delivery_log

Tech

- PostgreSQL 16+
- Indexed, migration-safe

Unit Tests – DB Schema

- Create campaign record

- Insert `delivery_log` < 50ms

- Rollback migration an toàn

Không test → không ship.

Task: Activation Rule Engine (MVP)

Features

- Segment match

- Trigger condition

- Cooldown logic

Performance target

- < 30ms / evaluation

Unit Tests – Rule Engine

- Segment = true → trigger fired

- Cooldown active → no trigger

- Invalid rule → rejected

Task: Agent Orchestration API

Endpoint

- `POST /activate/event`

Responsibilities

- Create `agent_task`
- Async dispatch
- Retry on timeout

Task: Data Sync Worker

- Celery-based

- Sync GraphDB → PostgreSQL

- Delta only

- Idempotent

Task: Segment Snapshot Builder

Principle

- Snapshot immutable
- Snapshot = truth tại thời điểm kích hoạt

Performance

- Query < 100ms

Task: Activation Metrics

Track

- Sent

- Delivered

- Failed

Tech

- Redis cache

- DB fallback

Task: Security – Keycloak

- OpenID Connect

- Scope-based access

- Không log PII

Epic 2 – Channels & Notification

Channels

- Email

- Zalo OA

- Facebook Page

- Telegram

- WhatsApp

- Firebase Push

- PushAlert Web Push

Một payload. Nhiều kênh.

Email & Zalo OA

Email

- SMTP / API
- Template rendering
- Retry on failure

Zalo OA

- Token validation
- Rate-limit handling

Facebook Page & Telegram

Facebook

- Page token security

- Delivery logging

Telegram

- Bot messaging

- Markdown support

WhatsApp & Firebase Push

WhatsApp

- Approved templates

- Delivery status tracking

Firebase Push

- Multicast

- Token cleanup

PushAlert & Unified Dispatcher

PushAlert

- Web push

- `sw.js` compatible

Dispatcher

- One payload

- Multi-channel

- Fallback support

Epic 3 – UAT & Stabilization

Goals

- Verify end-to-end flow

- Load safety

- No silent failure

UAT – End-to-End Activation

Scenario

Event

→ Segment

→ Agent

→ Notification

Requirements

- No manual step

- Full traceable logs

- SLA met

Load Test & Bug Fix

Load

- 1k events / minute

- No crash

- Queue stable

Bug Fix

- No blocker

- Regression-safe

Definition of Done (DoD)

Một task chỉ được DONE khi:

- Unit test ≥ 80%

- Performance đạt target

- Logs + metrics đầy đủ

- Security enforced

- Documentation cập nhật

Final Principle

LEO Activation không phải 1 system "gửi tin".

Nó là:

- Hệ ra quyết định
- Hệ chọn thời điểm
- Hệ tạo niềm tin

> Không đo được → không phải activation.