

Gold Nexus LLC
Delaware State File Number: 10381659
16192 Coastal Highway, Lewes, Delaware 19958

GOLD NEXUS – Phase A MVP Development Specification

Version 1.0 – Official Document

Prepared by: Gold Nexus LLC

1. Overview

Gold Nexus is a global digital platform focused on gold products, jewelry commerce, and second-hand gold processing. The purpose of Phase A (MVP) is to launch a stable, fully responsive, premium-quality website that includes a working marketplace, payment system, and a second-hand gold lead module, while establishing a scalable technical foundation for advanced future development.

2. System Objectives

The MVP must include the following core capabilities:
a responsive website, a functional marketplace for new products using a manual dropshipping model, a working checkout and payment flow, a second-hand gold lead submission system connected to an external partner, an administration interface for products, orders and leads, a live gold price module, user authentication, and a clean, modular backend architecture prepared for future expansion.

3. Technology Requirements

Frontend must be developed using Next.js with React and TypeScript. The interface must be fully responsive for mobile, tablet and desktop. Styling should be implemented using TailwindCSS or an equivalent modern CSS system.

Backend must be implemented in Node.js using Express or NestJS. All APIs must follow a clean modular structure. Authentication must be implemented with JWT tokens (access and refresh tokens) using RS256 signatures. Passwords must be stored using Argon2id hashing.

The database must be PostgreSQL using Prisma ORM or TypeORM.

Payments must be integrated through Stripe Checkout including webhook confirmation.

The system must be deployed on Vercel (Frontend) and an appropriate host for the backend and database (Railway, Render, Supabase, RDS or equivalent).

4. Functional Requirements

User Authentication

The system must support registration with email and password, login, token refresh, and a basic user profile containing full name, country and phone number.

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Live Gold Price Module

The backend must fetch the live gold price from an external API at regular intervals and expose the current price through an API endpoint. Data must be cached for performance.

Marketplace (Dropshipping, Manual Model)

The system must include product pages, product detail pages, and category sorting. Products must be manageable in the admin panel. Bulk product upload must be supported through CSV or Excel import. Each product must include basic fields such as SKU, name, description, price, weight, karat, category, image URL, vendor name, stock status and an active status flag.

Checkout and Orders

The system must create an order when a user initiates a purchase, generate a Stripe Checkout Session, receive webhook confirmation from Stripe, and update the order status accordingly.

An order must store user details, product information, amount, currency, payment reference and shipping address.

Second-Hand Gold Module (Partner Lead Model)

A dedicated page must allow users to submit details about gold items they wish to sell. Required fields: full name, email, phone number, country, city, item type, estimated weight, estimated karat and photos.

The system must calculate a basic estimated price range based on weight and the live gold price, save the lead in the database, and automatically forward it by email to the designated partner.

An administration interface must allow managing all leads, viewing details and updating the lead status.

Admin Panel

The system must include an administration interface restricted to admin-role accounts. Admin must be able to manage products, import products via CSV, view and manage orders, and view and manage second-hand gold leads.

5. Database Structure

The MVP requires at minimum the following database tables: users, products, orders and second_hand_leads.

All tables must use UUID primary keys, timestamps and proper indexing.

6. API Requirements

Authentication endpoints for registration, login and token refresh.

Product endpoints for listing, retrieving individual products and managing products

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from the admin interface.

Order endpoints for checkout session creation and Stripe webhook processing.
Second-hand gold endpoints for submitting leads and retrieving them through the admin interface.

An endpoint for retrieving the live gold price.

7. User Interface Requirements

The UI must be clean, modern and fully responsive. The design must look premium and reflect a high-end brand identity. All pages must function smoothly on mobile devices.

Core pages must include a homepage, marketplace overview, product detail pages, checkout pages, user profile pages, “sell gold” page, and informational pages about the company.

8. Deployment Requirements

The system must be deployed to a live production environment, including domain configuration, secure environment variables and Stripe webhook setup. The developer must deliver a working production build accessible publicly.

9. Deliverables

The final delivery must include:

a fully functioning MVP system matching the specification above, a production build deployed and accessible online, an administration interface, all required API endpoints, a complete source code repository, and basic technical documentation for setup and API usage.

End of Document

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