### **Project 'Market Pulse' - Handover & Status Summary**

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#### **1. Project Overview**

"Market Pulse" is a web application designed to provide hotel performance metrics. It has two primary functions: a live dashboard for immediate operational insights and a strategic analysis tool for market comparison. The application is built with a Node.js backend (Express), a vanilla JavaScript frontend, and utilizes a Neon PostgreSQL database. The entire project is deployed and hosted on Vercel for continuous integration and delivery.

#### **2. System Architecture & Workflow**

* **Test Kitchen (Local Machine)**: Development and testing of new features.
* **Safety Net (GitHub)**: Centralized source code management.
* **Live Bakery (Vercel)**: Production environment for the live application and cron jobs.
* **Pantry (Neon)**: Cloud-hosted PostgreSQL database for all hotel metrics data.

#### **3. Key Files & Their Purpose**

* server.js: The main Express server application.
* public/index.html: The primary frontend file.
* public/script.js: The frontend logic for user interactions and data rendering.
* daily-refresh.js: A daily cron job script to fetch and store 365 days of forecast data.
* initial-sync.js: A one-time script for onboarding new hotels.
* vercel.json: Vercel deployment configuration, including the cron job schedule.
* .env: Local file for storing sensitive credentials.
* **seed-market-data.js**: **(New File)** A special, one-time script created to parse a CSV file (daily\_metrics\_snapshots\_5hotels.csv) and populate the database with mock data for five competitor hotels.

#### **4. API & Endpoints**

* **External**: Cloudbeds Insights API (/reports/query/data) and Cloudbeds General API (/getHotelDetails).
* **Internal**: POST /api/explore, GET /api/hotel-details, GET /api/metrics-from-db.

### **Newly Added Summary**

#### **5. Summary of Today's Session (July 5, 2025)**

**Morning Session: Cloud Deployment & Validation** The primary focus of the morning session was the successful migration of the "Market Pulse" application from a local-only setup to a fully operational, cloud-native solution on Vercel. Key achievements included debugging the data aggregation logic, deploying the application, configuring the production database connection, and setting up a daily cron job for data synchronization. A "sanity check" feature was also implemented in the frontend to compare live API data against the database to ensure perfect data integrity.

**Afternoon Session: Seeding the Database with Market Data** The afternoon session focused on solving the "cold start" problem for the "Us vs. The Market" feature. Since the live API can only provide data for our own hotel, we created a robust set of mock data to simulate a competitive market.

* **Database Schema Enhancement**: We determined that for proper, scalable market analysis (e.g., filtering by city), a new table was required. A hotels table was created to store static information (name, city, coordinates) for all properties in the system. A foreign key constraint was established between daily\_metrics\_snapshots.hotel\_id and hotels.hotel\_id to ensure data integrity.
* **Mock Hotel Creation**: The new hotels table was populated with records for our primary hotel and five additional "fake" competitor hotels, all located in London to provide a realistic market for comparison.
* **Metrics Data Generation**: A comprehensive CSV file, daily\_metrics\_snapshots\_5hotels.csv, was created. This file contains 3,650 rows of realistic, daily performance metrics covering two years for the five fake hotels.
* **Data Ingestion**: The seed-market-data.js script was developed and successfully executed. It parsed the CSV and populated the daily\_metrics\_snapshots table with the mock data, preparing the application for the next phase of development.

#### **6. Future Plan**

With a rich set of market data now available in the database, the next immediate step is to build the backend logic to serve this comparison data. This involves:

* Creating a new API endpoint in server.js, proposed as GET /api/market-comparison.
* This endpoint will query the database to retrieve data for "Us" (the primary hotel) and the consolidated, averaged data for "The Market" (all other hotels in the same city), and send it to the frontend for visualization.

#### **7. Sensitive Project Data (For Internal Use)**

* **Production URL**: https://market-pulse-zeta.vercel.app/
* **GitHub Repository**: https://github.com/your-username/market-pulse
* **Neon Database URL**: Contained within the project's .env file and Vercel environment variables.
* **.env File Contents**: API credentials for Cloudbeds and the database connection string.

#### **8. Developer's Quick Start & Reminders (For Karol)**

* To start the local server: npm start
* To save work: git add ., git commit -m "Your message", git push
* The daily cron job is live and requires no manual intervention.