**Note for Future Updates:** All new entries to this diary should be appended to the bottom of the document, starting with the current date and timestamp. This ensures a chronological record of the project's progress.

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

*Generated: Saturday, July 5, 2025, at 12:51 PM CEST*

#### **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.
* 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.
* vercel.json: Vercel deployment configuration, including the cron job schedule.
* .env: Local file for storing sensitive credentials.

#### **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, GET /api/competitor-metrics.

#### **5. Summary of Morning Session (July 5, 2025)**

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.

#### **6. Summary of Afternoon Session (July 5, 2025)**

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**: A hotels table was created to store static information (name, city, coordinates) for all properties. 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.
* **Metrics Data Generation**: A comprehensive CSV file, daily\_metrics\_snapshots\_5hotels.csv, was created and used to populate the database with 3,650 rows of realistic, daily performance metrics for the five fake hotels.
* **Data Ingestion**: The seed-market-data.js script was developed and successfully executed to parse the CSV and populate the daily\_metrics\_snapshots table.

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#### **7. Summary of Late Afternoon Session (July 5, 2025)**

This session focused on refining the application's data handling and resolving deployment issues to prepare for the "Us vs. The Market" feature development.

* **Backend Data Separation**: The backend logic in server.js was updated to provide clearer data separation.
  + The /api/metrics-from-db endpoint was modified to fetch data *only* for our primary hotel.
  + A new endpoint, /api/competitor-metrics, was created to fetch the raw data for all other hotels in the database.
* **Frontend UI Separation**: The user interface was updated accordingly. index.html and script.js were modified to include a new "Competitor Market Data" section with its own table and data loading controls, creating a clear distinction between our hotel's data and the market data.
* **Timezone Bug Fix**: A critical "off-by-one-day" bug was identified and resolved. The issue, caused by incorrect timezone handling, was fixed in both script.js (for live API calls) and server.js (for all database queries) to ensure date accuracy.
* **Deployment Troubleshooting**: We diagnosed and resolved a Vercel deployment issue where the live site was not updating. The root cause was identified as a disconnected Git repository. We reconnected the project to GitHub, and when a subsequent caching issue occurred, we forced a successful redeployment by pushing a trivial commit to the main branch.

**Current Status**: The application is now correctly deployed on Vercel, displaying the latest version. The UI successfully separates data sources, and all date-related bugs have been fixed. The project is now in a stable state, ready for the next phase of development.