## **Check Point 5 Group 6- Customer Interaction Plan**

For the “Dream Homes NYC” database system, customer interaction is tailored to two primary user groups: data analysts and executive-level leadership.

Analysts will connect to PostgreSQL using pgAdmin 4 or Metabase’s SQL editor with a read/write analytics role. They will have access to curated analytical views and materialized views that standardize joins, calculations, and business rules, enabling them to run advanced queries such as analyzing property features by price range, evaluating the ROI of marketing campaigns, calculating rent premiums for amenities, or identifying the top-performing rental agents.

Executives will access the system exclusively through Metabase dashboards designed for strategic decision-making. These dashboards will surface insights from our prebuilt queries, for example: which marketing strategies yield the highest success rate, the most profitable lease terms, seasonal sales patterns, or neighborhood safety impacts on property values. Executives will be able to filter and drill down by state, office, property type, or time period, and receive scheduled PDF or email reports—weekly on Mondays and monthly on the first day of each month—to keep track of KPIs without direct database interaction.

Redundancy and performance are addressed through a combination of schema design, indexing, and aggregation strategies. The core table schema contains normalized tables for properties, clients, employees, transactions, leases, appointments, marketing campaigns, and property features. Analytical workloads are supported by dimensional structures and materialized views refreshed nightly to keep frequent queries, such as the “best time of year to sell” or “market activity by month,” fast and efficient. Indexed columns on key filter and join fields, along with optional table partitioning for high-volume entities like transactions and appointments, will ensure query responsiveness. Backups will be performed nightly via pg\_dump with a rolling seven-day retention, and the design allows for point-in-time recovery if WAL archiving is enabled. Read-only roles for analysts and dashboard-only roles for executives will maintain data integrity and security.

The initial executive dashboard will present a set of KPIs such as total revenue, number of deals closed, average days to close, active inventory counts, conversion rates from appointments to offers, agent performance rankings, etc. Visualizations will highlight key insights such as a price-range features chart, marketing campaign performance, rent premiums by amenity, agent leaderboards, and so on. These all with select additional charts for seasonal sales trends and office performance.