URBAN COLLECTIVE

Business Intelligence Project

Introduction

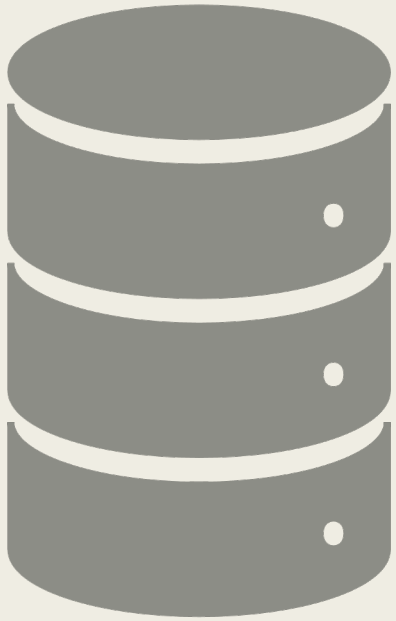
- **Urban Collective**: Dynamic retail venture in urban fashion.
  - *Less than 100 employees, 89 stores across Columbia.*
  - *Annual sales > $2 million.*

- **Challenges**: Managing data across various systems, low customer retention rate, high marketing costs, and less revenue generation.

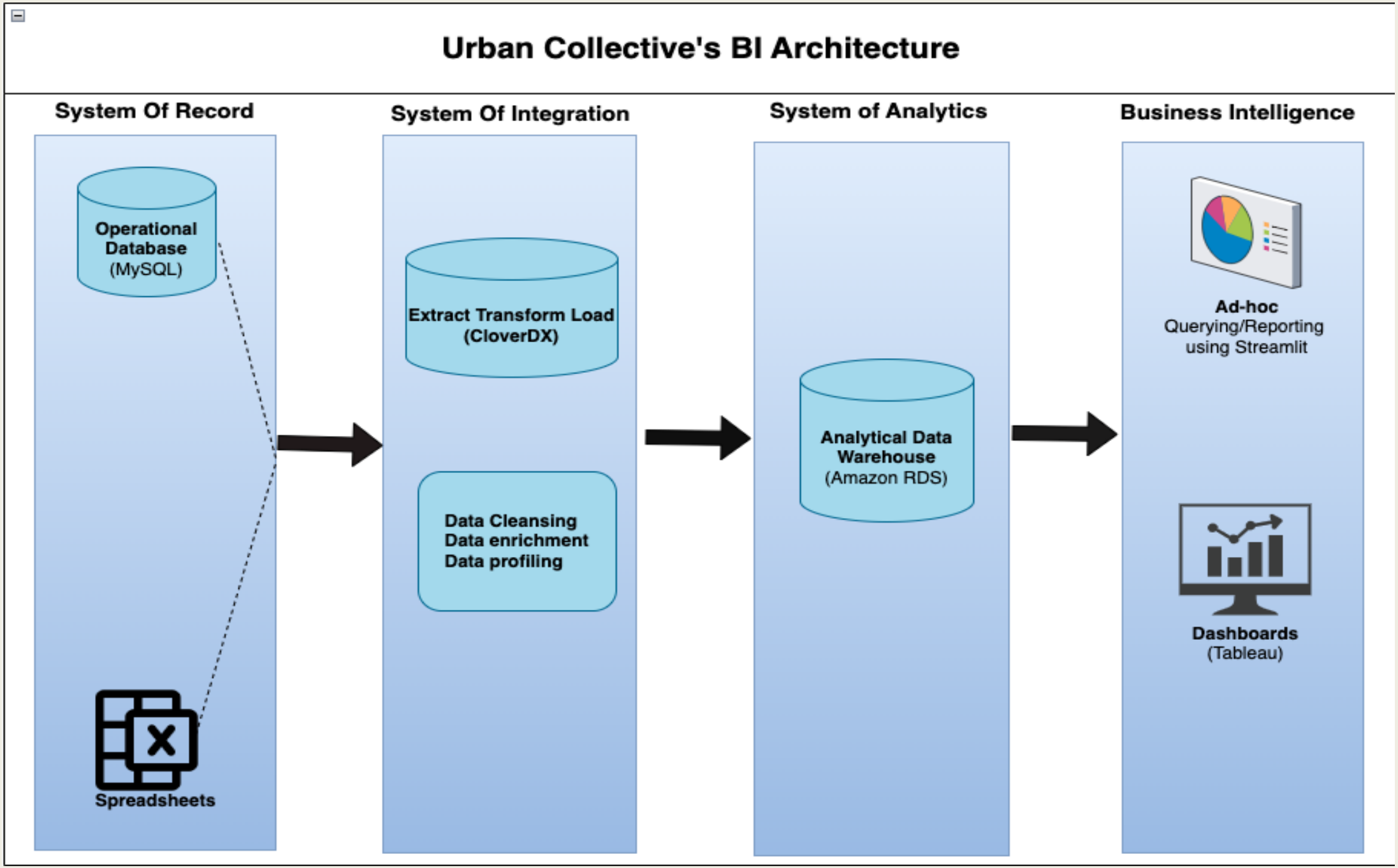
- **BI Project Goal?**

A BI solution will help the management to deep dive to understand the customer segmentation based on order values, sales and reviews of our products and position of the stores.

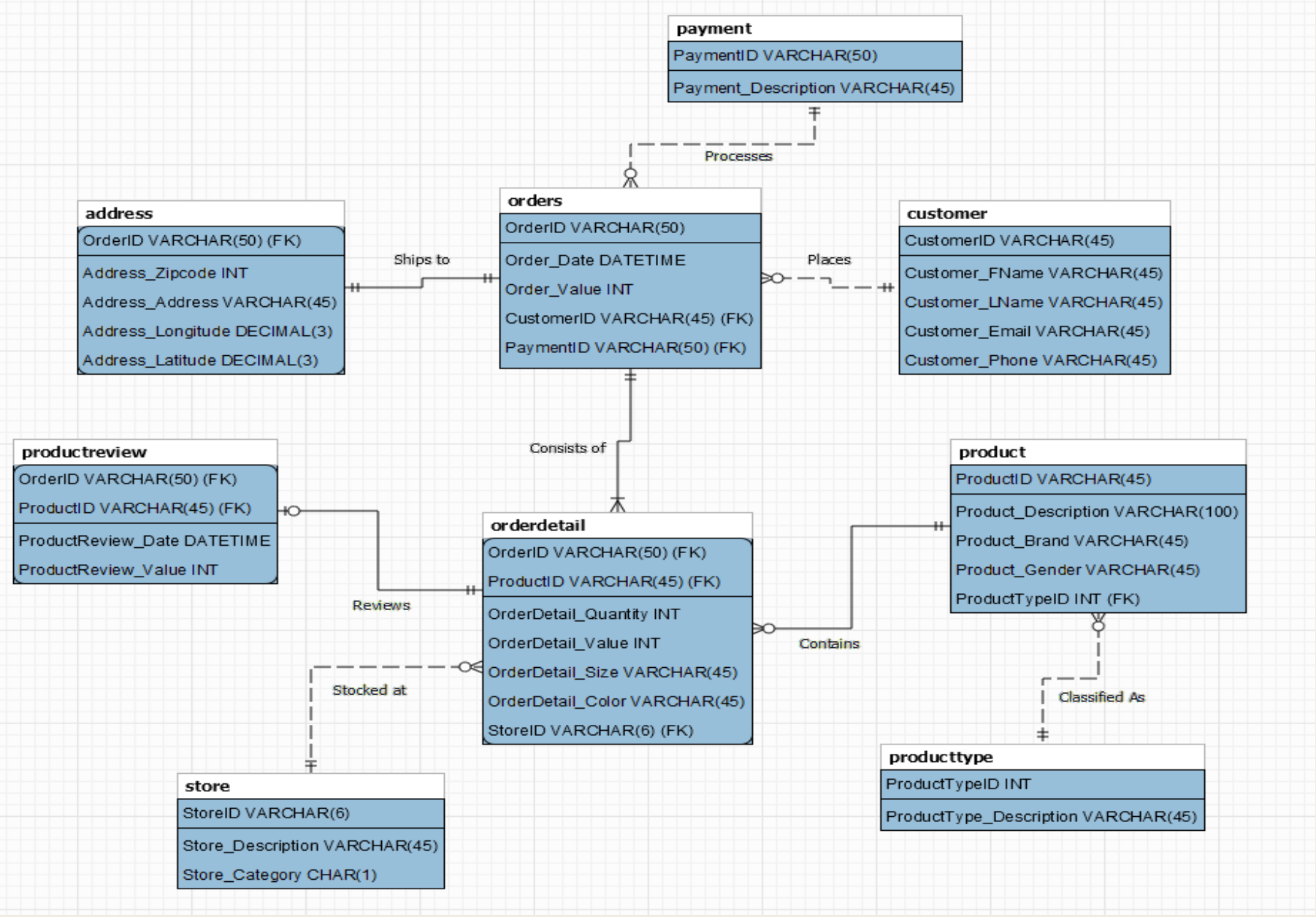
Why is a BI solution needed?



- **Centralized Database System:** Essential for streamlining operations and gaining insights for future growth.
- **Data Warehousing for Insights:** Provides comprehensive business views, anticipating trends and improving decision-making.
- **BI Solution Integration:** Enhances decision-making and customer satisfaction through data-driven strategies.
- **Key Business Metrics in Reporting:** Tracking revenue, customer retention, and market share ensures success.


Urban Collective's BI Architecture
System Of Record
System Of Integration
System of Analytics
Business Intelligence
Operational Database (MySQL)
Extract Transform Load (CloverDX)
Data Cleansing
Data enrichment
Data profiling
Analytical Data Warehouse (Amazon RDS)
Ad-hoc Querying/Reporting using Streamlit
Dashboards (Tableau)
Spreadsheets

Entity Relationship



Data Description

Significance of Extract Transform Load

- **Physical Database Generation and Data Population:** The process of creating tables from ER model and populating data ensures availability for analytical queries.
- **ETL Process Using CloverDX:** CloverDX enables seamless data movement, cleansing, and transformation from source to cloud databases.
- **Significance of Cloud Database Setup:** Transitioning data to the cloud enhances accessibility, scalability, and disaster recovery for efficient data management.

CloverDX Pipeline Implementation

EXTRACT

Extracted data from 9 tables of Operational MySQL database to CloverDX.

TRANSFORM

Customer Phone to limit number of digits <=10

Removing time part of date field

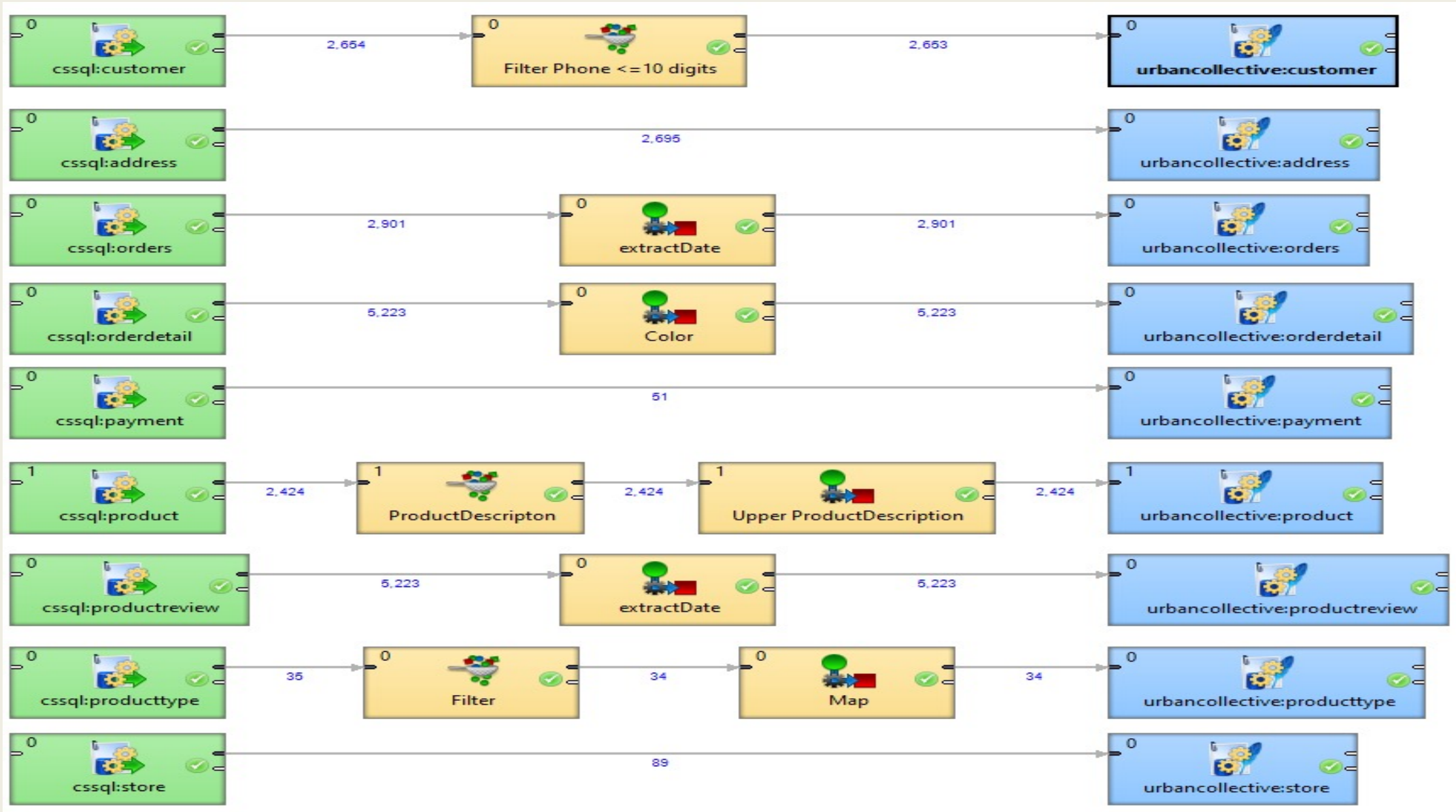
Filtering out N/A product descriptions

Standardizing product description to Uppercase

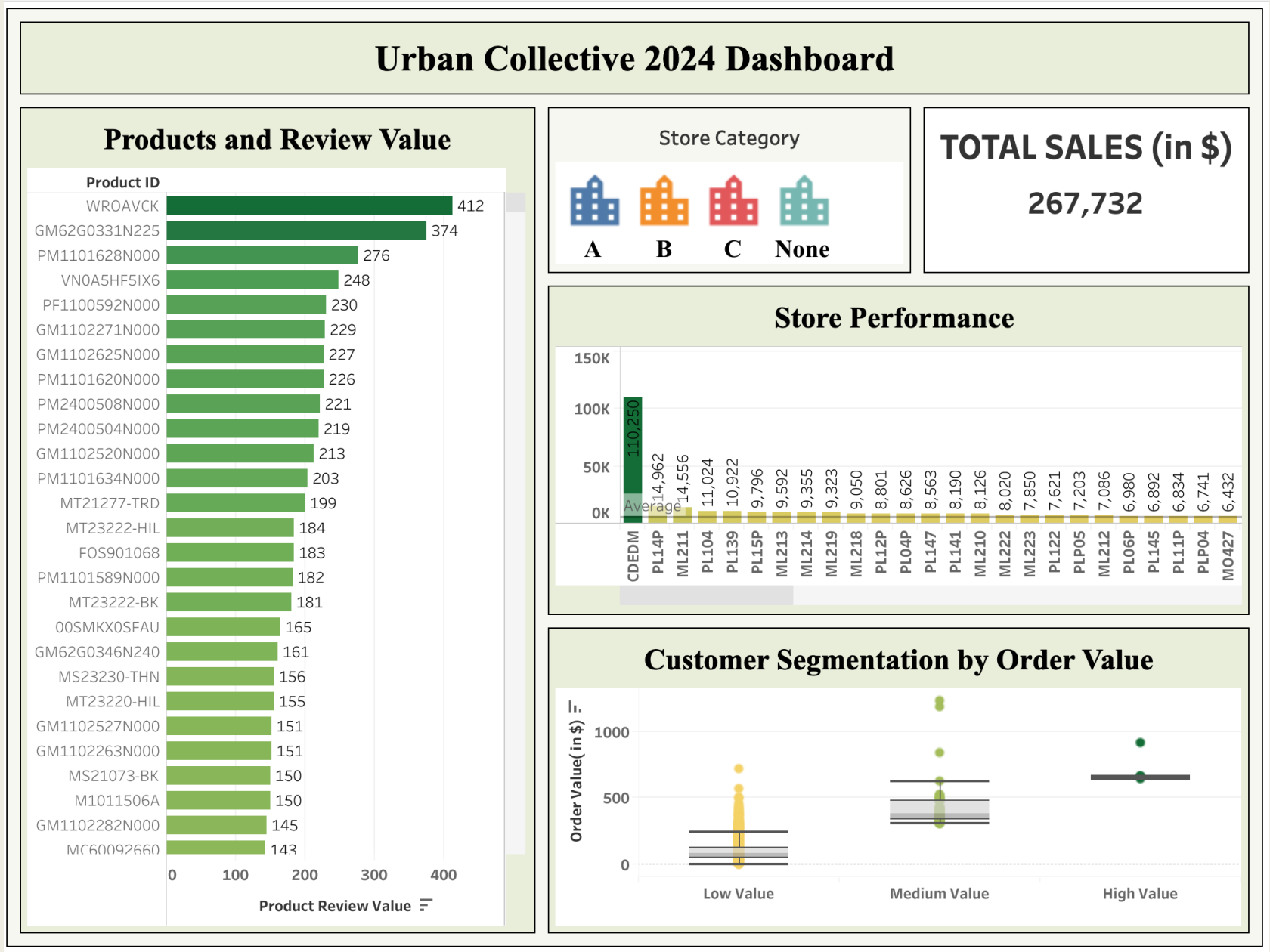
LOAD

Cleansed data is loaded to Analytical RDS database which is used further for Reporting purposes.

CloverDX Pipeline - Urban Collective



Data Visualization: Urban Collective 2024



DASHBOARD

User Guide to view updates:

- Select Store category A, B, or C to view all updates.
- Product Review section -> select Product ID
- Store performance -> select a StoreID
- Customer segment section -> select any order value from low, mid and high section
  -> click productID ->Store Performance

Urban Collective Reporting System

Link to Reporting Site

SCAN ME

Conclusion and Future Work

Conclusion

Implementing a robust data warehouse ensures improved decision-making, reduced costs, increased revenue, and continuous business improvement.

Future Work

- **BI Project Next Steps:** Implement advanced data visualization techniques for enhanced reporting and decision-making.
- **Potential Improvements and Enhancements:** Enhance ETL processes for real-time data updates and seamless integration with additional data sources.
- **Long-Term Goals and Expansion Plans:** Scale BI infrastructure for global expansion, incorporating predictive analytics for market trend forecasting, and Data Stores for each Store Id.