

# SSIS ETL PIPELINE REPORT

Generated on November 30, 2025

## SSIS ETL Pipeline Objectives 1 - 5 Report

Complete ETL Design & Implementation Report

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## TABLE OF CONTENTS

1. Objective 1 - Basic ETL Modeling	3
2. Objective 2 - Modeling from Multiple Source Tables	4
3. Objective 3 - Modeling Technical Architecture	5
4. Objective 4 - Modeling User Entities	6
5. Objective 5 - Modeling Business Entities	7
6. Summary & Conclusions	8

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## Objective 1: Basic ETL Modeling

### Business Objective

Design an ETL pipeline for basic inventory data movement into a dimensional data mart containing DimProduct, DimSupplier, and FactInventory.

### ETL Summary

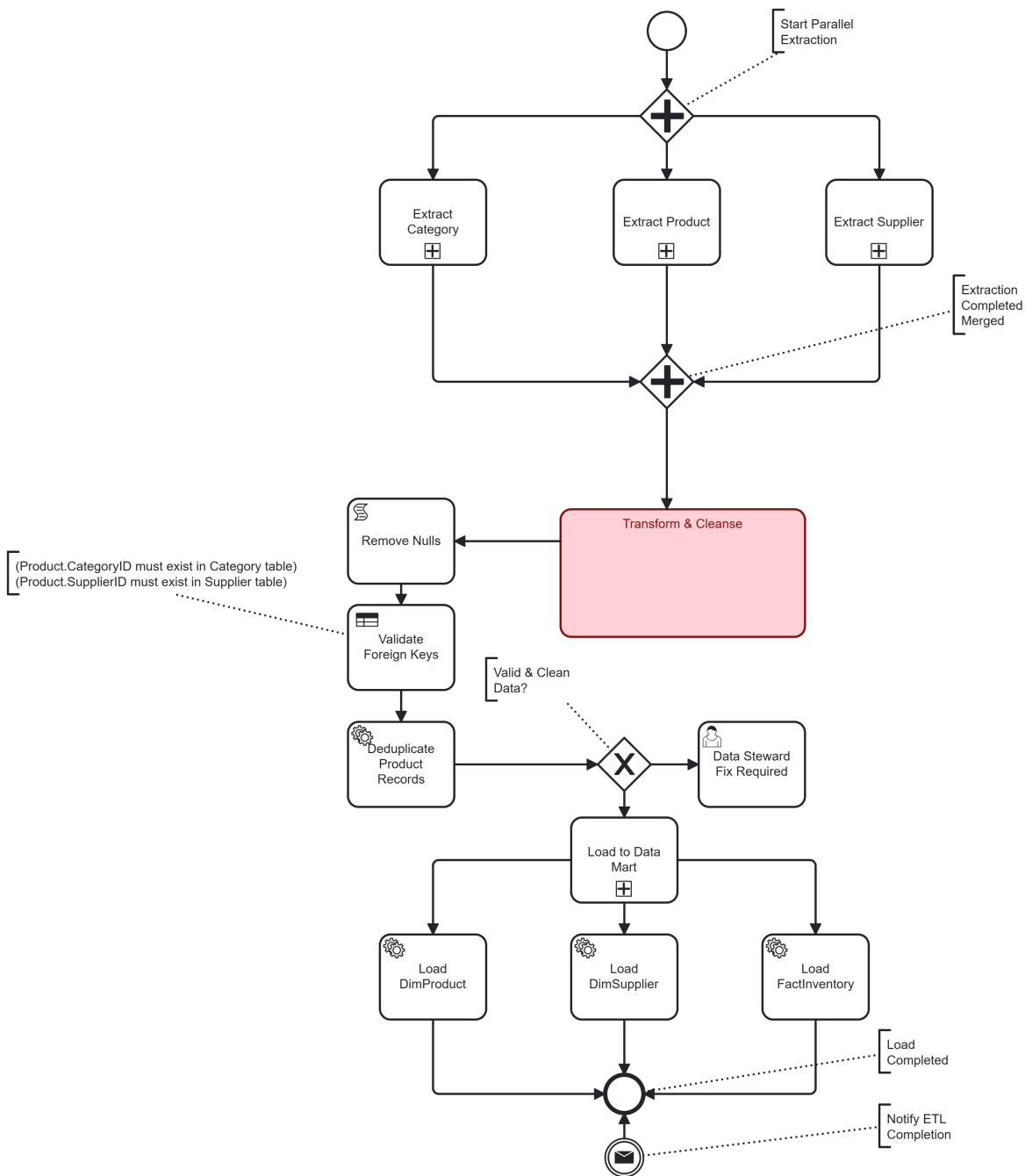
- \* Extract Category, Product, Supplier
- \* Transform: join, clean, map keys, remove duplicates
- \* Load: DimProduct, DimSupplier, FactInventory

### ETL Architecture Diagram

Figure 1.1 - ETL Flow for Objective 1

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## Objective 2: Modeling from Multiple Source Tables

### Business Objective

Integrate Category, Product, and Supplier while enhancing dimensions with additional attributes such as CategoryName and City, and adding DefectRate to FactInventory.

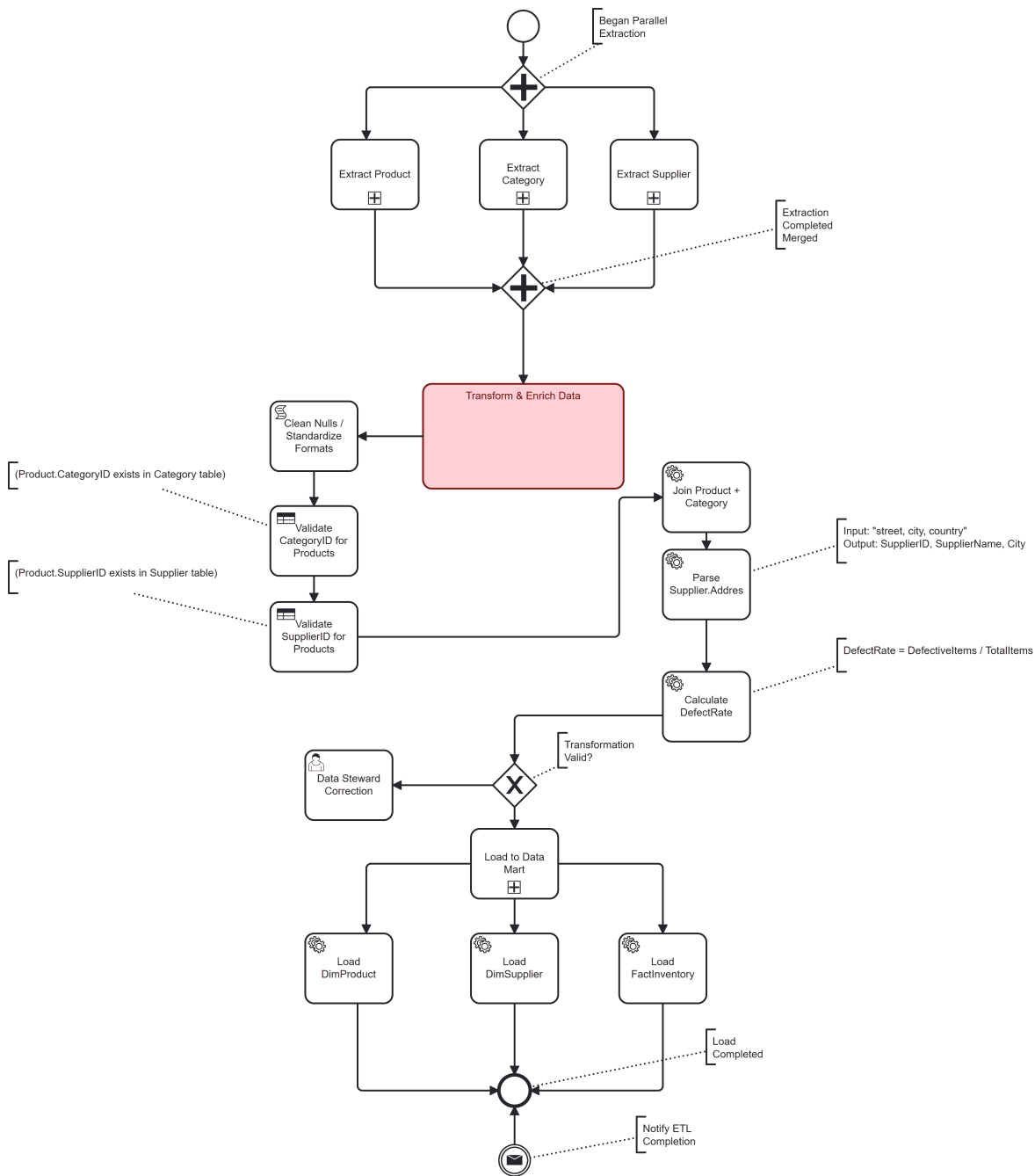
### ETL Highlights

- \* Added new attributes in dimensions
- \* Performed reference lookup and enrichment
- \* DefectRate added using rules

**Figure 2.1 - ETL Flow for Objective 2**

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## Objective 3: Modeling Technical Architecture

### Business Objective

Integrate three independent store systems (Lahore, Islamabad, Peshawar) into a unified warehouse supporting DimProduct, DimSupplier (with city), and FactInventory.

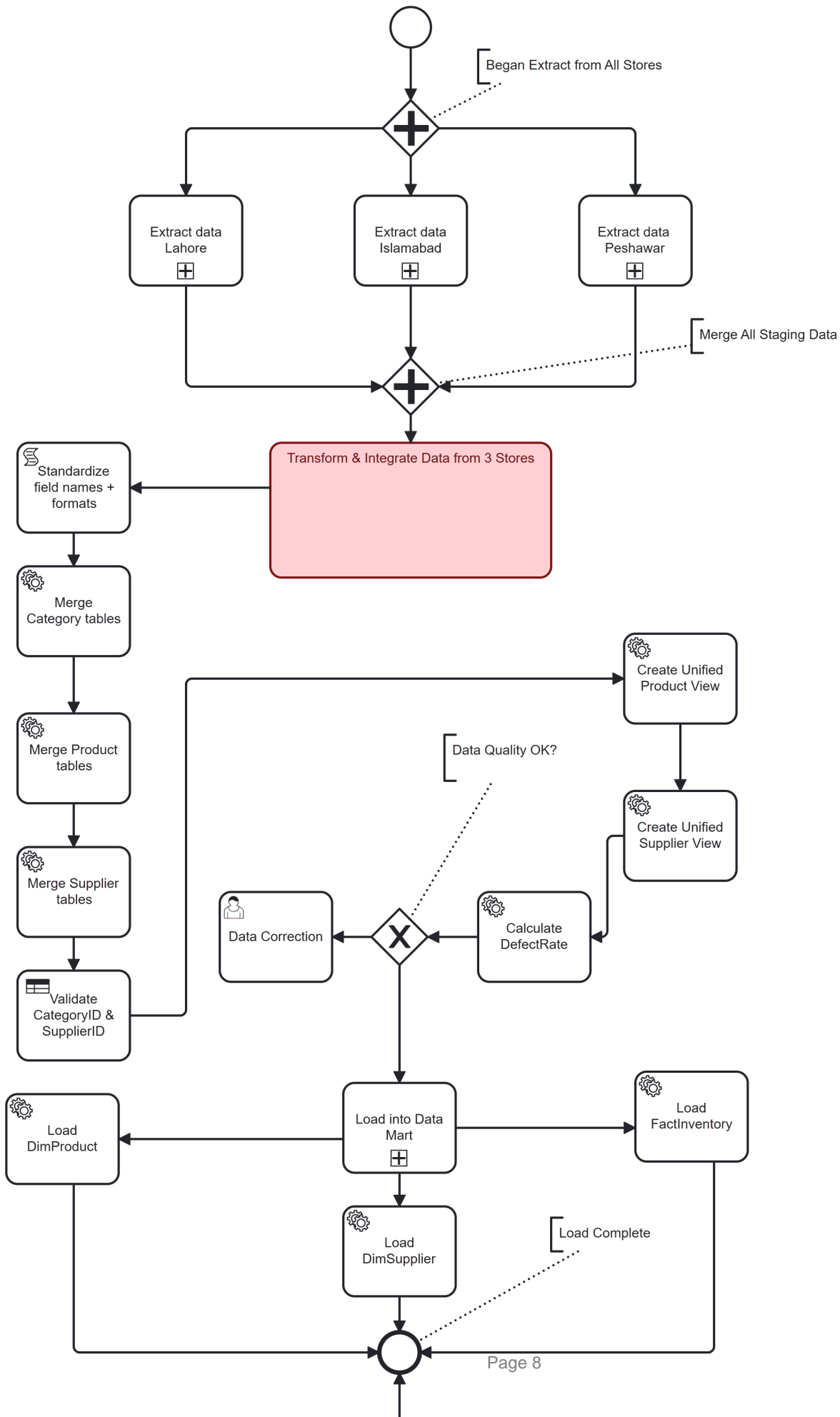
### Key Achievements

- \* Merged multiple store-level schemas
- \* Applied city tagging and standardization
- \* Unified fact table creation

**Figure 3.1 - Integrated Multi-Store ETL Flow**

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## Objective 4: Modeling User Entities

### Business Objective

Integrate Product Category (decided by Product Manager) and Product Rating (given by investors) into DimProduct, along with CityPriority in DimSupplier.

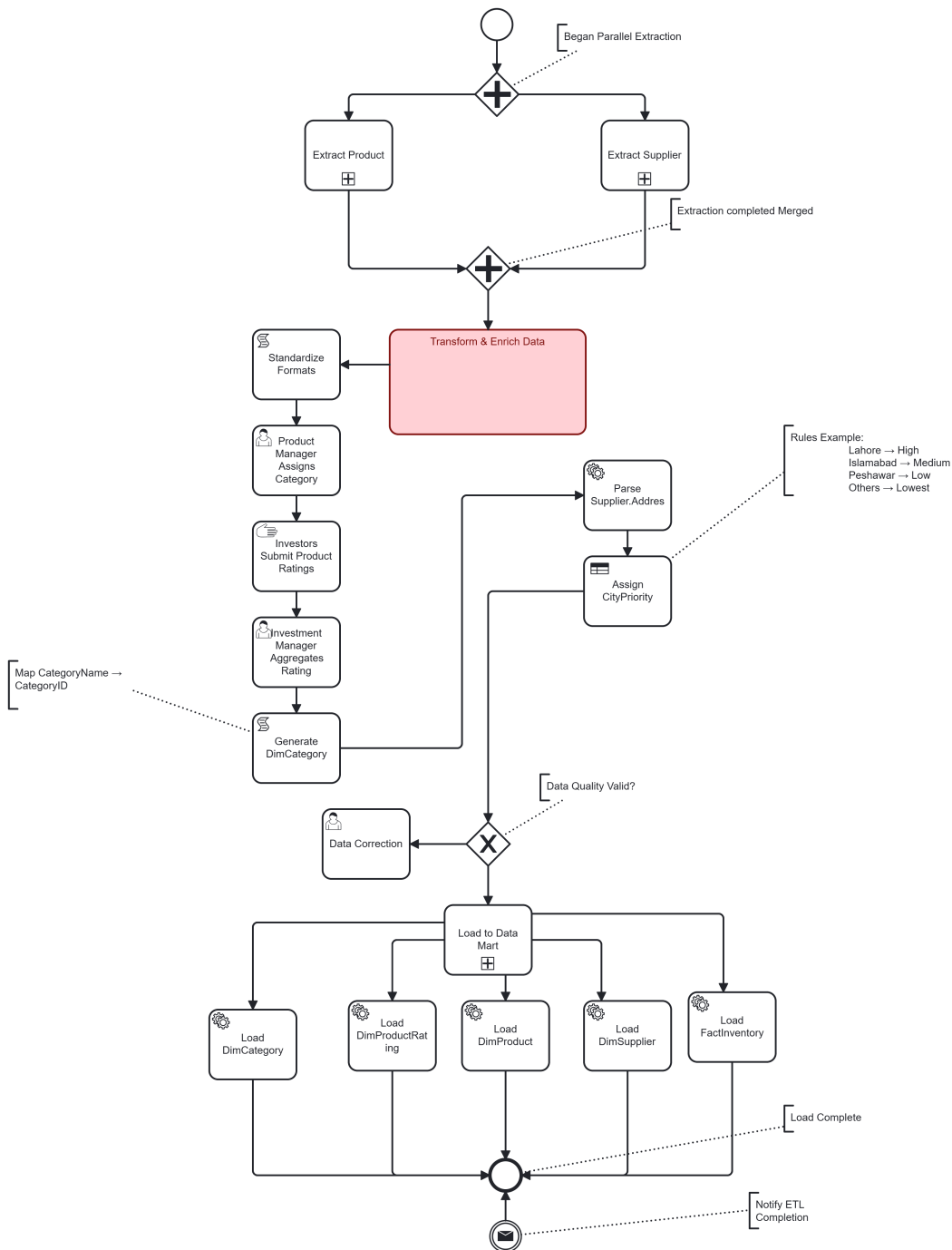
### Highlights

- \* Generated derived business attributes
- \* Aggregated product rating
- \* Created dimensional structure for user-driven classifications

**Figure 4.1 - User-Based Entity ETL Flow**

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## Objective 5: Modeling Business Entities

### Business Objective

Model and integrate business entities from Inventory Management, Sales Transactions, and Customer Management departments into DimProduct, DimCategory, DimSupplier, DimTime, and FactInventory.

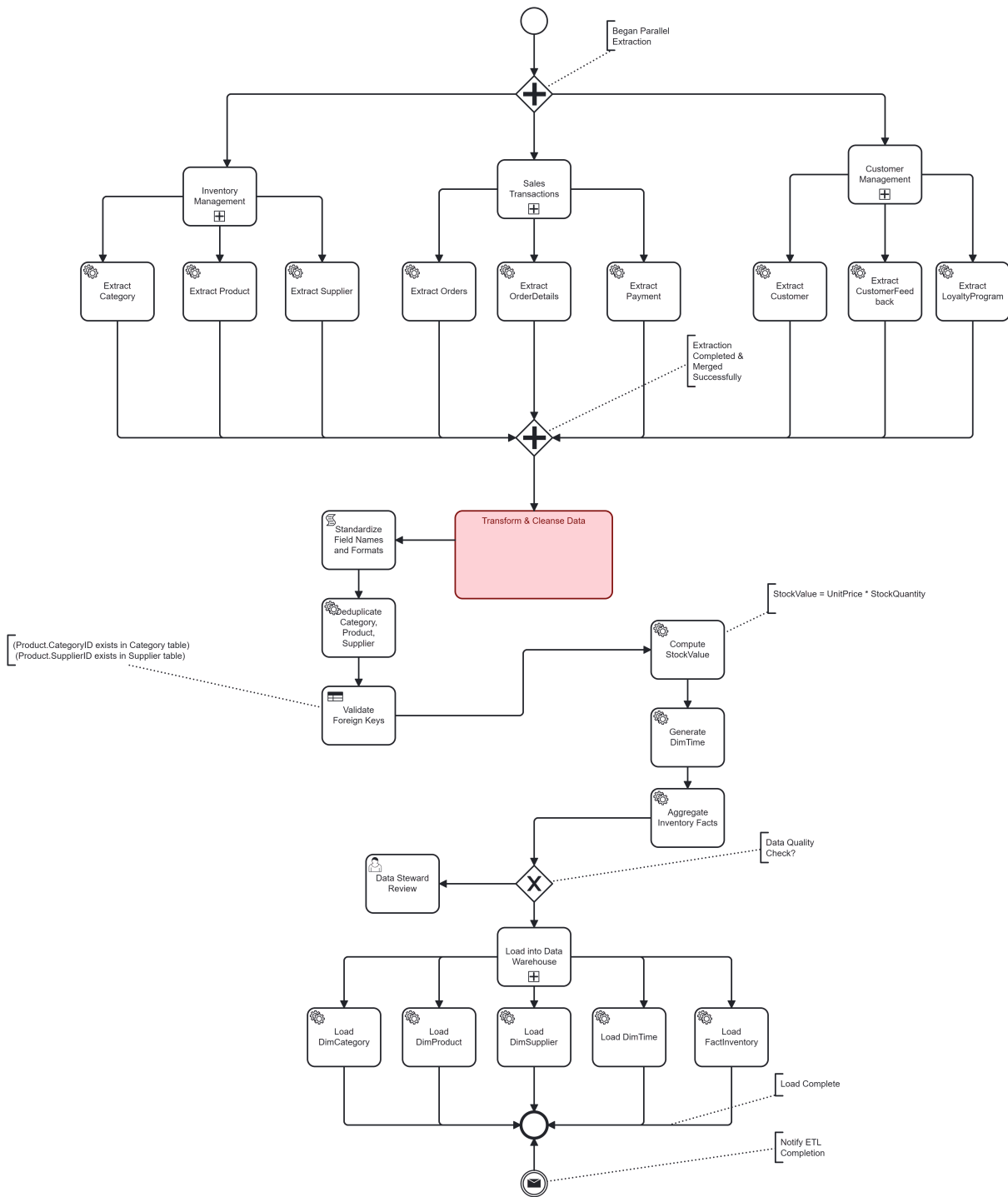
### ETL Highlights

- \* Multi-department integration
- \* Time dimension generation
- \* Stock value computation
- \* Restock & LastUpdated tracking

**Figure 5.1 - Business Entity Modeling ETL Flow**

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## Executive Summary

All five ETL objectives successfully demonstrate enterprise-grade SSIS data integration covering dimensional modeling, multi-source merging, business rules processing, and entity resolution.