**Tables and Commentary:**

My dimensional data model ERD contains two fact tables and 14 dimension tables. I modeled it this way because one fact table focuses on locations and the other focuses on customers. Product data relates to both fact tables, as customers buy product(s), and the locations sell the product(s).

**Fact Tables:**

1. Fact\_LocationPerformance: Measures the performance and profitability of each store, channel, reseller, and locations in general. Provides the ability to calculate metrics as they relate to sales, products, channels, stores, and target data.
   * Columns: LocationPerformanceID, SalesHeaderID, ChannelID, ProductID, StoreID, TargetDataChannelResellerID, TargetDataProductID, ResellerID, SalesAmount, SalesQuantity, SalesProfit, StoreResellerActualToTarget
     + LocationPerformanceID is the Primary Key which will be uniquely different for each of the different combinations of values in the columns.
     + SalesHeaderID, ChannelID, ProductID, StoreID, TargetDataChannelResellerID, TargetDataProductID, and ResellerID are all Foreign Keys referencing other dimension tables.
2. Fact\_CustomerPurchases: Measures the similar type of performance metrics as Fact\_LocationPerformance, although this is on a customer level.
   * Columns: CustomerID, ProductID, StoreID, ChannelID, ResellerID, SalesHeaderID, SalesAmount, SalesQuantity, SalesProfit, StoreResellerActualToTarget
     + There is no primary key in this table.
     + CustomerID, ProductID, StoreID, ChannelID, ResellerID, and SalesHeaderID are the Foreign Keys referencing other dimension tables.

**Dimension Tables:**

1. Dim\_Customer: Each row in this table provides Customer information
   * This table has a Natural Key – CustomerID
2. Dim\_Store: Each row in this table describes information about a store
   * The Primary Key for this table is StoreID.
   * The Foreign Key in this table is SubSegmentID, referencing table Dim\_SubSegment
3. Dim\_SubSegment: Each row represents information about the segment/subsegment of a store
   * The Primary Key for this table is SubSegmentID
   * The Foreign Key for this table is SegmentID, referencing table Dim\_Segment
4. Dim\_Segment: Each row represents information about the segment of a store
   * Primary Key is SegmentID
5. Dim\_TargetDataChannelReseller: Each row represents the target metrics for the reseller based on the channel
   * This table uses a Surrogate Key – TargetDataChannelResellerID
6. Dim\_SalesHeader: Each row contains information about the SalesDetail of a product
   * The Primary Key is SalesHeaderID
   * The Foreign Key is SalesDetailID, referencing table Dim\_SalesDetail
7. Dim\_SalesDetail: Each row contains detailed information about each sale
   * The Primary Key is SalesDetailID
8. Dim\_Channel: Each row contains information about the channel of the seller
   * The Primary Key is ChannelID
   * The Foreign Key is ChannelCategoryID, referencing Dim\_ChannelCategory
9. Dim\_ChannelCategory: Each row contains information about the category of each channel
   * The Primary Key is ChannelCategoryID
10. Dim\_TargetDataProduct: Each row represents the target metrics for each of the products
    * This table uses a Surrogate Key – TargetDataProductID
11. Dim\_Product: Each row represents detailed information about each product
    * The Primary Key is ProductID
    * The Foreign Key is ProductTypeID, referencing table Dim\_ProductType
12. Dim\_ProductType: Each row contains product type information for each of the products
    * Primary Key is ProductTypeID
    * Foreign Key is ProductCategoryID, referencing table Dim\_ProductCategory
13. Dim\_ProductCategory: Each row contains product category information for each product
    * Primary Key is Dim\_ProductCategoryID
14. Dim\_Reseller: Each row contains information about each of the resellers
    * This table uses a Natural Key – ResellerID