Human Resources – The Data Warehouse Toolkit

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# Case Facts

# Data Warehouse Concepts

## Customer relationship management is process of trying to better under an organization’s customers. CRMs often track customer’s recent communications and contacts, orders, and behaviors in order to retain existing customers. For a proper CRM implementation in a data warehouse solution, both the operational and analysis data must be included. The following identifies what analytical components would be beneficial to an organization who wishes to combine their operational data with their customer facts.

## Step 1: Select the Business Process

The customer relationship management process involves the following tasks:

* Managing communications with customers
* Tracking sales transactions
* Analyzing customer behavior and retaining current customers while procuring new customers

## Step 2: Declare the Grain

* Customer Fact – One row for each customer.

## Step 3: Identify the Dimensions/Attributes

* Customer Demographics: Customer Key (PK), Salutation, First Name, Middle Name, Last Name, Surname, Street Number, Street Name, Street Type, Street Direction, City, State, Region, Country, Zip Code, Mobile Phone Country Code, Mobile Phone Area Code, Mobile Phone Number, First Date of Purchase (FK), Last Date of Purchase (FK), Amount of Purchase For Year (FK)
* First Date of Purchase: Date Key (PK), Calendar Date YYYY-MM-DD, Day of the Week, Quarter, Season, Holiday, Weekend
  + Based off a view of the Date Dimension Table, named uniquely for the requested shipment date.
* Last Date of Purchase: Date Key (PK), Calendar Date YYYY-MM-DD, Day of the Week, Quarter, Season, Holiday, Weekend
  + Based off a view of the Date Dimension Table, named uniquely for the requested shipment date.

## Step 4: Identify the Facts

* Customer Fact
  + Count of Purchases for a Year
  + Count of Purchase for Previous Fiscal Year
  + Gender
  + Status
  + Income
  + Age
  + Ethnicity
  + Spending Type (High, Medium, Low Spender)

# Summary

The above solution identifies the customer fact table with several dimension tables such as the customer demographics, first date of purchase, and last date of purchase. This brief example of the structure of how to implement CRM capabilities into a data warehouse is powerful. With this implementation, the organization can identify seasonality trends between customer’s first and last purchases. It may help identify customer behavior and why their best quarters or worse quarters are what they are and what promotions should be made available to help boost their worse quarter. In addition, the organization maintains data such as gender, lifestyle, income levels, and the type of spender the customer is. These are really interesting customer attributes that can provide beneficial insights for business users though data slicing.