

Data Warehousing Homework 2

Collecting Business Requirements to Create Your Dimensional Model

After gathering the business requirements from the VP of sales at Guac2Guac, below is my report on the data warehouse we will build. The retail organization Guac2Guac is a multinational retail grocery store that primarily sells produce sourced from local farmers and suppliers. As a retail business, it is currently facing issues in determining the quality of the products delivered, getting more customers and sales, and getting connected with the right suppliers.

I propose a data warehouse where we capture essential details of each of the business processes. The smallest level of detail that will be captured (granularity) is the individual product sold. Coming to the measurable outcome of the business which would be total sales made across all the stores, that data will be captured in the sales fact table. Further, defining context around the sales fact table we capture the sold product details, the customers who make the purchase, the suppliers who supply the product, the store at which the purchase is made, the promotional offer related to the product sale, and most importantly the date and time at which the product is sold. All this context data will be the basis of the dimension tables.

Thus, below is the fact and dimension structure of the data warehouse:

Fact – Sales

Dimensions – Product, Customer, Store, Supplier, Promotion, Date

Next, we define the essential business processes that each product entails. Each product that is sold has a journey -

1. The stores at first issue purchase orders.
2. Next, they receive store deliveries.
3. Then the stores proceed with inventory.
4. Finally, when the product arrives and is stocked, it is ready for sale.
5. Then, the customer buys the product.
6. Finally, the store runs some promotions and offers in order to attract more customers.

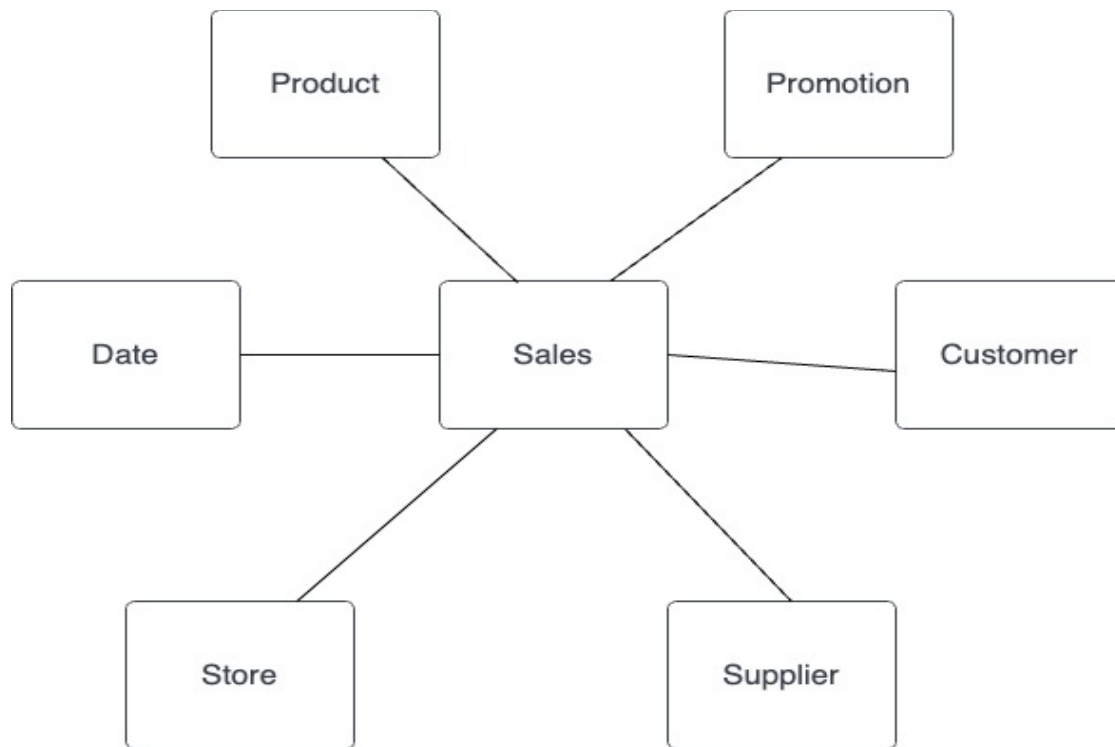
That is all about the important parameters that should be taken care of before building a data warehouse.

Apart from the granularity, facts, dimensions, and business processes I have some recommendations for the company. The employees should be imparted basic knowledge about the data warehouse and should be given training on tools required for setting up and maintenance of the data warehouse.

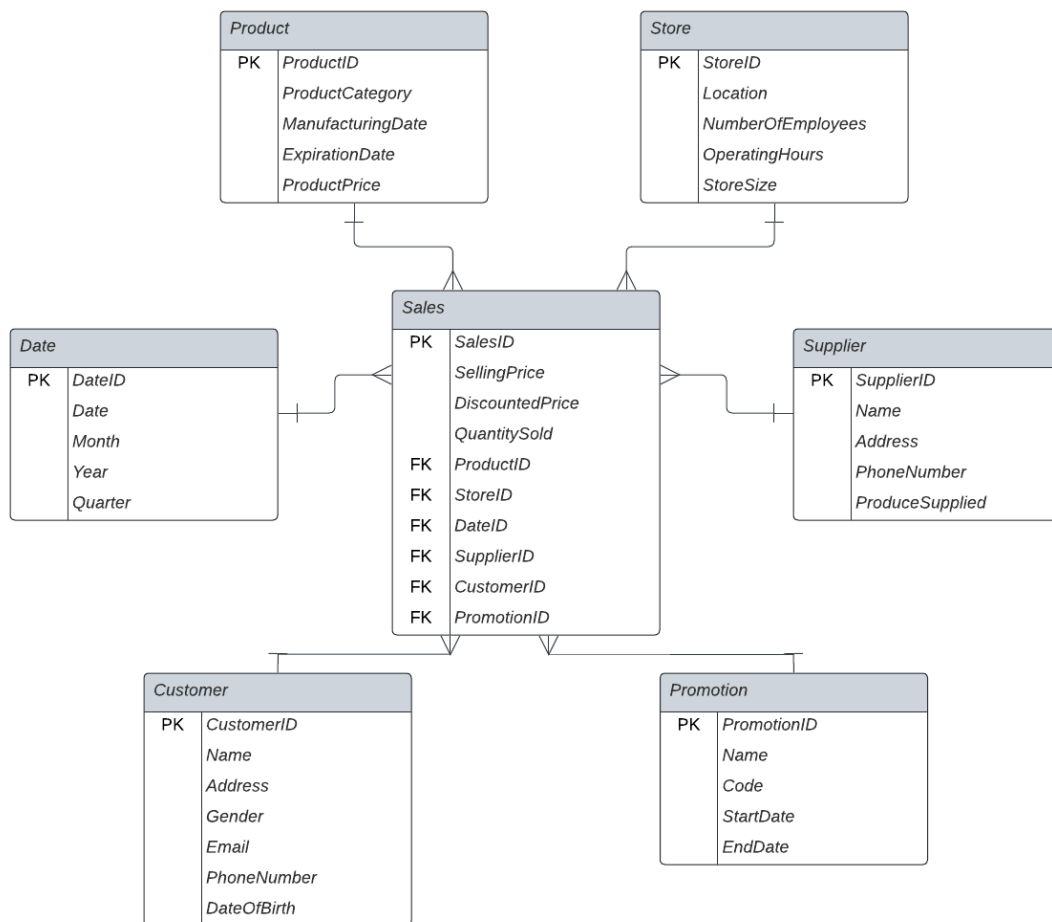
The building of the data warehouse has some limitations. The data report provided by the VP of Sales has some data quality issues. Also, the data is in disparate sources so the ETL (Extract, Transform, and Load) and integration process can be challenging.

Appendix

Dimensional model:



ER Diagram:



Bus Matrix:

Customer Dimensions						
Business Processes	Date	Customer	Store	Product	Supplier	Promotion
Issue purchase orders	X		X	X	X	
Receive Store Deliveries	X		X	X	X	
Store Inventory	X		X	X		
Store Sales	X	X	X	X	X	X
Customer Transactions	X	X	X	X		X
Promotions	X	X		X		X

Interview Questions:

1. What are the existing systems of data management that you have in your business?
2. What are the key performance indicators of your business?
3. Where is your business currently based in?
4. What form do you get business reports in?