

Analysis of Data Warehouse for Transactional Analysis Methods Online Analytical Processing (OLAP) at Company XYZ Silver

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Abstract— Utilization of information technology is a necessity in looking at opportunities available for decision making by the management. With the ability of information technology to analyze existing used the data into useful information for a company. OLAP is Able to Overcome problems in the data processing mechanisms guided to know various information from different angles. By utilizing transactional analysis, then we know the reaction of customers in choosing the products that we will market. The result of Web-based sales has Decreased for the Gianyar and Denpasar regions but has Increased for the Ubud and online areas so as to give a benefit in terms of production costs. With the training for a sales increase of sales can evenly across locations and need input from customers related to minimize returns.

Keywords—OLAP; Sales; Transactional Analysis

I. INTRODUCTION

The information technology has been a necessity in view of the opportunities that exist for decision-making by management. With the ability to use information technology is able to analyze the data into useful information for a company. Various information is data able to be processed using software existingbut in utilizing information technology in need of expertise in using a variety ofsoftware existingthat allows users to access information. OLAP is able to overcome the problems in the data processing mechanisms are guided to know various information from various viewpoints.

II. LITERATURE REVIEW

A. Data Warehouse

Data *warehouse* is data that a very large that have a nature-oriented subject, integrated, time-variant, and is fixed on the stored data in support of decision-making process management, which can improve the accuracy and quality of information that is easily understandable and can be accessed easily by pemkaai containing desired information [1]. There are four characteristics possessed by the data warehouse is as follows.

1. Oriented on the subject

Data warehouse that is designed to analyze the data, based on certain subjects that contain information in an organization that is important forprocessing. Decision support for example, sales data, customer, and so on.

2. Integration

Data warehouse is derived from data that is different and separate but can be stored in the same format and integrated with one another

3. Range of time

Data warehouse is the data that is accurate and valid at any given time which is useful for estimating or comparing information

4. Non-volatile

Data warehouse is not always updatedin real time [1,2].

B. Transactional Analysis

TheTransactional analysis is one of a new way of determining the type of prospective buyers as well as determining sales strategy. The concept is very simple and dpat sderhana to be understood and used as models to improve communication. Everyone has self conditions that determine the person's mental attitude in the message communication and behavior. the condition itself is a condition that affects the behavior of both prospective buyers and salesmen berrati is a system that encourages a feeling of a certain thought patterns consistently [6].

C. Online Analytical Processing (OLAP)

OLAP is a method used to analyze the data to be made a report that summarizes the relationship antara data and information that can be utilized by the user in a fast, consistent, and interaktif [2,4]. There are several advantages to using OLAP namely:

1. Users do not need to know SQL language
2. Users do not need to know the relational database model
3. Able to improve query performance and improve system scalability

4. Enhancing existing systems in the calculation into the information
5. Management system that is easier
6. To streamline the cost of data maintenance
7. Reducing and freeing load data warehouse
8. More centralized control of analytical data [5].

III. METHODOLOGY

A. Data Analysis

Various data have been obtained further analyzed to obtain the appropriate attributes in the manufacture of a data warehouse. The results of this analysis will be used to determine the dimensions, facts, and an appropriate schema for the data model warehouse..

B. Phase Extraction

Data that will be used in the design of data warehouse

C. Data Warehouse Design

Data to be used as data storage that has been transformed. Then the data entered into the data warehouse to be used.

D. OLAP Design Stage

OLAP allows the user to be able to see the data with different dimensions due to the used data that differ from one another.

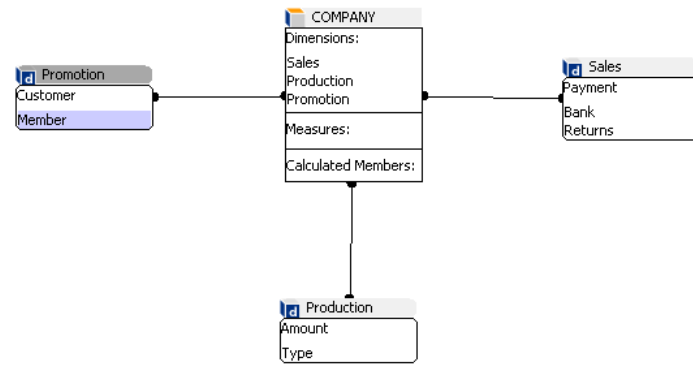


Fig. 2. Data Model for Data Warehouse

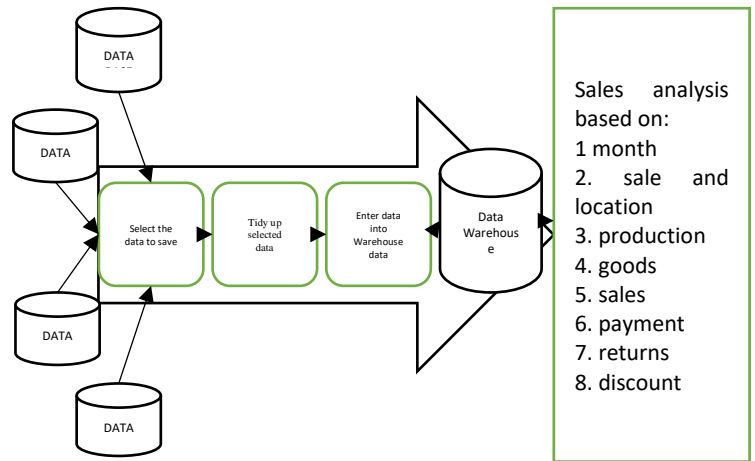


Fig. 3. Architecture Design Data Warehouse

IV. RESULT ANALYSIS

Here are results of some analysis of the data warehouse that is obtained as follows.

Table 1 Sales Analysis (Month and Location)

LOCATION	JANUARY	FEBRUARY	MARCH
GIANYAR	Rp 110,325,164	Rp 51,729,525	Rp 81,733,556
UBUD	Rp 15,000,000	Rp 25,088,000	Rp 26,831,000
DENPASAR	Rp 84,429,000	Rp 78,419,209	Rp 26,831,000
ONLINE	Rp 2,496,000	Rp 7,672,025	Rp 16,433,000
TOTAL	Rp 212,250,164	Rp 162,908,759	Rp 151,828,556

Fig. 1. Model of Data for Sales Performance Analysis

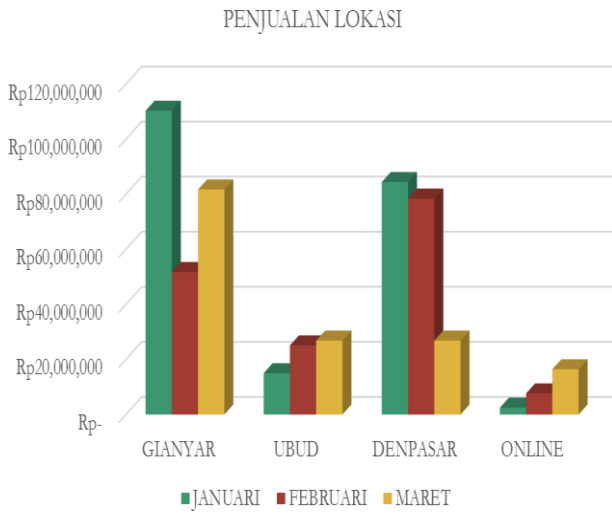


Fig. 4. Sales Analysis (Month and Location)

Table 2 Sales Analysis (Production)

BULAN	TOTAL JUMLAH BARANG	BERAT SETOR BERSIH	TOTAL HARGA POKOK
DESEMBER	610	1,968	Rp 137,414,643
JANUARI	604	1,735	Rp 128,470,000
FEBRUARI	437	923	Rp 105,155,000
MARET	825	2,510	Rp 136,081,000

TOTAL HARGA POKOK PRODUKSI

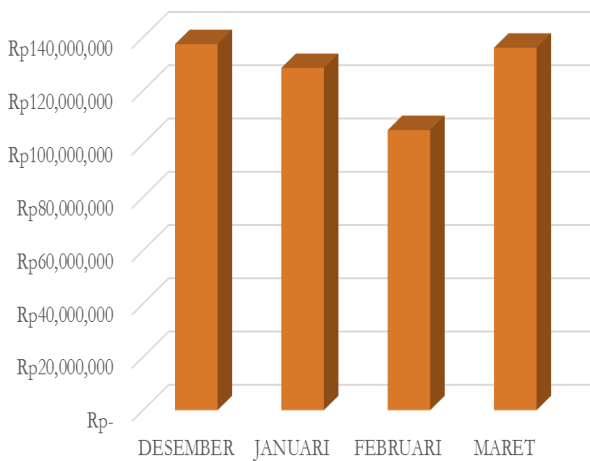


Fig. 5. analysis of Sales (Production)

Table 3 Analysis of Sales Revenue (Sales)

NAME	JANUARY	FEBRUARY	MARCH
SALES A	Rp 23,166,000	Rp 25,906,000	Rp 12,837,000
SALES B	Rp 5,512,009	Rp 9,512,009	Rp 19,881,000
SALES C	Rp 58,831,000	Rp 37,333,200	Rp 10,320,000
SALES D	Rp 33,200,000	Rp 25,088,000	Rp 21,026,000
SALES F	Rp 23,000,000	Rp 43,189,525	Rp 45,274,556
SALES G	Rp 20,816,000	Rp 14,208,000	Rp 10,636,000
SALES H	Rp -	Rp -	Rp 3,800,000
SALES I	Rp -	Rp -	Rp 5,816,000

PENJUALAN SALES



Fig. 6. Analysis of Sales Revenue (Sales)

Table 4 Analysis of Sales (Payments)

BULAN	CASH	CREDIT CARD	DEBIT CARD
JANUARI	Rp 39,155,000	Rp 43,837,009	Rp 44,130,000
FEBRUARI	Rp 37,042,200	Rp 47,262,009	Rp 32,126,000
MARET	Rp 34,421,000	Rp 44,184,000	Rp 15,496,000

PEMBAYARAN

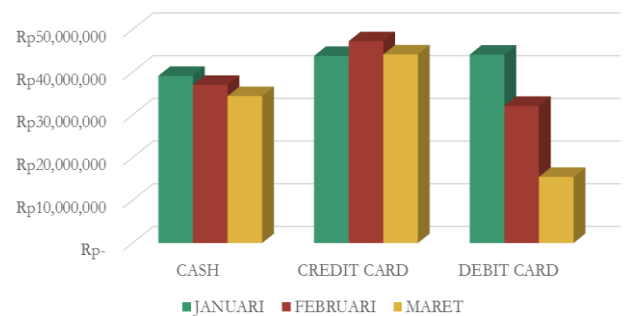


Fig. 7. Sales Analysis (Payments)

Table 5 Sales analysis (Return)

JANUARI	FEBRUARI	MARET
Rp 2,258,000	Rp 1,072,000	Rp 1,787,600

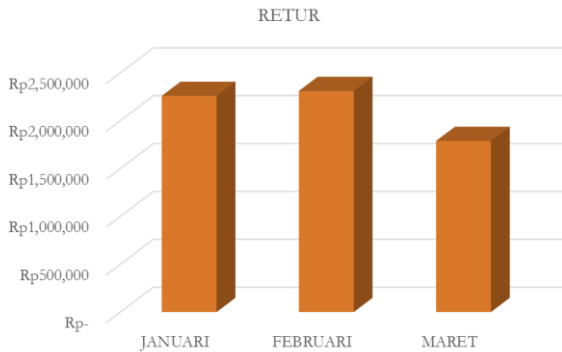


Fig. 8. analysis of Sales (Sale)

Table 6 Sales analysis (Discounts)

JANUARI	FEBRUARI	MARET
Rp 147,219,529	Rp 124,017,451	Rp 133,838,167

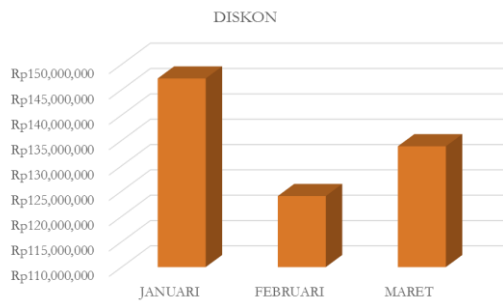


Fig. 9. Analysis of Sales (Sale)

V. CONCLUSION

It can be concluded that the results of decreased sales by location for the area of ganyar and denpasar but increased to the area of ubud and online so that they can benefit by cost of production. With the training for sales to increase sales are evenly distributed throughout the location and the need for customer feedback related to minimize returns..

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