Decision support systems

A decision support system (DSS) is a computer program which is developed with a specific purpose of analyzing business data and presenting it to users to enable them make business decisions easily. It is different with other applications because of its ability to analyze business data and it is therefore an informational application.

It can therefore be used in analyzing sales figures within a given period, projecting revenue collections within a specific period of time among others.

A decision support system has the ability to present information in a graphical manner for ease of understanding and it can also incorporate an expert system orartificial intelligence.

A mathematical model is a Mathematical representation of some kind of reality which is used to find more details about it. Mathematical model can be used to find a solution to a decision problem and assist in planning, it can also be used to find a relationship among the input variables and establish the meaning of a particular set of data (Silver, 1991). Mathematical model can take the form of dynamic systems, differential equations, statistical models etc.

This is acase studyof Decision Support System called ACRPLAN which Bayer Cooperation installed to assists it with financial planning and budgeting. Some of the problems that the company was encountering during budgeting planning are slow budgeting process, difficulties in obtaining financial data to use in budgeting.

This was a problem because all the company's data were stored in various computers and obtaining them in all the company's department was quite

difficult. There was also inefficient incommunicationmethods between the different departments of the company.

There was no single person who could understand the whole company's data from all the departments and present it to the budgeting personnel to assist with budgeting purposes. The company was also faced with another problem of generating several budgets hence creating redundant data during budget generation. These most of the redundant data occupied the company's resources and were never used.

The management of the company was also faced with another problem of lack of sufficient data for decision making. The budgeting process was tedious and time consuming so the managers had to wait for all the company's data to be gathered and the budget be drawn.

The company was previously using excel worksheets which required manual input of data and this process increased the company's budgeting costs since it had to hire data entry clerks to enter data to the excel worksheets. The excel worksheet was sophisticated and required a lot of training.

The company was growing at a very high rate and this was creating problems to the budgeting team because they could not accommodate all the requirements of the extraordinary growth of the company. The other problem was integrating the company's business processes and the planning process which were increasingly becoming complicated (Gachet, 2004).

The volume of data that the company was generating was also high and analyzing this data for financial planning purposes was quite difficult. Most of

the company's personnel were doctors, sales people, and research scientist who had little knowledge of financial planning and budgeting.

This created problems because the company's financial data was quite complex and the company had to hire a financial expert to analyze the data and generate the company's budget.