

MITIGATING IMPLICITNESS OF DECISION MAKING PERFORMANCE THROUGH DATA WAREHOUSE MAINTENANCE POLICIES

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ABSTRACT: *The purpose of this research is to mitigate the maintenance strategy to find out under which circumstances the performance of data warehouse is needed to be targeted. Basically data warehousing technology has been used for many years by different organizations for the purpose of planning and consistent decision making at a particular given time. Small businesses hardly afford the expensive price of technology and its maintenance and hiring professionals. Data warehousing deals with strategy to plan, design, and construct a data store regarding answering business questions. Strategy is ever demanding and a continuous cycle having real time enhancements. Data warehouse is based on the historical data mart operations, different maintenance and performance strategies which used to optimize the performance. To improve the performance of the data warehouse this study focuses on different maintenance parameters. A qualitative research methodology is pretended to uncover the hidden patterns. Furthermore, a survey of different organization is needed to be taken to get results for the proposed study. A strategically methodology through the maintenance approaches is adopted to improve the performance decision making for underlying the data warehouse.*

Keywords: Data Warehouse, Online Analytical Processing (OLAP), Business Intelligence (BI), Extraction Transformation Loading (ETL), Enterprise Data Model (EDM), Meta-data

INTRODUCTION

Tons of businesses data available cannot be used for easily identifying trends. The data administrator provides specific business data about sequence at a specific time for specific customer or a single product for selling shares etc [1]. For such strategic decisions, managers and executives must be able for different company's analytical business data. Therefore, they should be able for evaluate product, dealer, region, regional sales and customer base [2]. Data administrator can think of operating business data, but it has quires, e.g. can it easily adapt to any process for analysis, as operational business data are not directly applicable for study of different views. A data warehouse is an object-oriented; variant in the integrated time and nonvolatile data collection management decision making and the data warehouse to bring data from different traditional operating systems used to support an organization [3]. The observation of a data warehouse came by two different units of the world's needs. First, the end user is calling the display of the company for wide information and to realize. And the second is to organize the required information system service, data for economic and technological reasons [4].

DEVELOPMENT OF THE D/W MARKET

Since the first phase of development of many industry professionals data warehouse was under the assumption that technology is advancing rapidly, but not what happened. The data warehouse market fails because much development. Users of the data warehouse are still complaining metadata management problems, data quality, performance and maintenance. Users complain of the data warehouse, it cannot acquire the desired results. In each decade, experts and suppliers have worked together to create a new term to modernize their ideas, products and the field of creation [5]. Today, the main problem is organizations access valuable data, even if a lot of data to make it available, but for the future planning of data policy and market sensing are not easily accessible [6]. Data warehouse is the solution to this problem. The main Objectives of the data warehouse are:

Data Warehouse provides access to business and organizational data. Using data analysts or managers of an enterprise data warehouse can be easily obtained on their PCs or laptops. The tools available for analysts and managers are easy to use and easy to use [7].

Data Warehouse is therefore consistent data with similar data for the same query a user generated requests for information from the data warehouse [8]. For example, when an analyst or manager determines gross sales, respectively, which would gain for December, they will each collect comparable data [9].

The data can be collective and isolated. The rows and columns can also be connected to a relational database, similar to the situation in the data from the data warehouse may be collectively or separately from other data [10].

Data Warehouse, the query data is readily available, you get the right tools. Thus, the data warehouse is not only the data it processes and tools for query and analysis [11].

Data Warehouse is a place where the data used will be published. It's just a place to store the raw data. Instead, carefully collected in a data warehouse with data from other information on the organization, then washed and guaranteed quality by which it is made, whether it is fit for use [12].

Data quality can be a driving force for restructuring. The data warehouse can restore all of poor quality data. This represents a data warehouse; an important role in the structure can perform.

DATA WAREHOUSE CHALLENGES

The data necessary for strategic decision must be able to meet in the format suitable for trend analysis. Managers and directors of a company need to see the trend over time and their companies going in the right direction [13]. Operational data are driven event means that we acquire instant transaction occurring in a while. So we have for a given product in a fixed sequence in relation to a specific customer particular time [14]. A data warehouse contains the company's basic functions that have been recorded with commercial dimensions [15]. For example, a data warehouse

to keep sales units. Customers a question was raised by product, by day, by region and sales so that when a data warehouse gets its data refer the information required by the operating system between the data warehouse and systems operating in "Staging data" where the operational data maintained in favor of purification and transformation [16].

MATERIALS AND METHODS

This research is based on descriptive analysis that tries to explain a situation or a problem/issue logically or explains the behaviors towards the problem. The explanatory research tries to find out how and why there is a relationship among the two facets of a situation or an occurrence [17]. The correlation research tries to identify or set up the existence of association/relationship or interdependence between the two more facets of a situation. The exploratory research is started with the aim either to discover an area which is very slightly known or to examine the chances of undertaking a specific research study [18]. If we examine the research study from the view-point of enquiry mode, then it can be further classified into two types: qualitative research and quantitative research. Enquiry mode is frequently used technique and very useful to find the answers of the research questions. Research is a scientific way of answering questions and testing hypothesis. Research can be classified into three types; Application, objectives and type of information sought [19].

Identification of the main areas of management which are closely related with data warehouse and data mining are identified by the careful review literature. These areas are further explored by the statistical investigation approaches [20]. The people are very important regarding the study of existing systems. The fourteen areas are identified and discussed with those professionals who are mainly concerned with the decision making of the firms.

Then seventy questions are found critical in the working of the firm. These questions are so comprehensive that any enterprises face them as the crucial data services. The questions are carefully categorized and distributed with the selected domain of its working in any organization. These are further discussed in with the data managers, IT Managers and Database Managers make them precise and maximally to the point.

IT Professionals are selected at random from multiple organization and these questions are discussed with them. Their views are collected on the performa carrying the major domains and most related points as a question or professional views.

The percentages are tabulated and graphs are generated to depict the actual figure of the possible improvement and satisfactions regarding the critical data warehouse working.

The firms selected are of enterprise level and are using the existing software for decade or more. So the services are mature and now new drastic change can be made. But our study has revealed that the existing data ware houses can support more in all of selected domains for better data warehouse services.

RESULT AND DISCUSSION

Research is always intended to be controlling; frequently varying and growing put into practice. Issues can differ from the expected ones, and can follow the different flow. There

exists a chance to utilize these differently by disseminating techniques. Depending on the design of the study it is to ensure that evidence obtained can be effectively resolved in a logical and clear study of this problem. With this in mind, researchers often make mistakes, they began an investigation is still early. If researches do not participate in these design problems in advance, study the problem as a whole will not be adequately the risks and lack of convincing conclusions will run low. Therefore, the overall search efficiency will be compromised. Action research design basis follows a cycle characteristic, which began exploring the attitude to the understanding of a problem is some form of interventionist strategies and development programs carried out. So here Implemented is an intervention strategy, and cycle is repeated, continuing until there is enough understanding (or for the effective implementation) problematic.

The agreement is iterative and cyclic, to promote a given situation a deeper understanding of the issues and ideas and particularize several mobile response and assessment. Descriptive study design allows the question of who provides the answer what, when, where and how a specific research question is associated; a descriptive study cannot answer categorically determine the cause. Descriptive studies are used to obtain information about the current state of the phenomenon, and describe "what exists" in the case of the variable or condition. Descriptive studies are often used as a more quantitative approach to research and provide an overview of some valuable insights as to what is interesting to test the quantitative variables. If the limits are understood, they can be a useful tool in the development of more targeted research. Descriptive studies can produce, leading to important recommendations in rich data in practice. The data gathered for the mentioned parameters. The data for various categories is mentioned below.

Table 1. Principal Architecture and Policies implemented in Data Warehouse regarding performance and maintenance

		Agreed	Partially Agreed
01	Paper / E-mail based reports	59%	41%
02	Automatic E-mail delivery of the reports.	55%	45%
03	Interface is directly used for information.	63%	37%
04	Portal based delivery of the reports to the end users	61%	39%
05	Process based target oriented portals for the business.	67%	33%
06	Only some of hand-coded ETL	55%	45%
07	ETL production achievable commencing the meta-data	61%	39%
08	Hand-coded-ETL regarding some standard scripts	47%	53%
09	Standard ETL based software technique	41%	59%
10	Technological Meta-data regarding every ETL	60%	40%
11	Data eminence system apply regarding ETL	58%	42%

12	Development Meta-data / supervised regarding ETL	59%	41%	39	Regular management of the data model	65%	35%
13	Dealing with organizational resistance using ERP	56%	44%	40	Physical synchronization of the few of data models	55%	45%
14	Less data modeling software technique	69%	31%	41	Poor synchronization among data based models	59%	41%
15	Scattered data modeling tools applied barely regarding intended design	58%	42%	42	All synchronization based on data based models	71%	29%
16	Unvarying data modeling	62%	38%	43	Regular organization of much of data based models	69%	31%
17	Uniform data model	59%	41%	44	Dedicated DW applications	76%	24%
18	Speckled data model tools	66%	34%	45	Few method raise routine of the outcomes	67%	33%
19	Solution based principles regarding m/data	62%	38%	46	Application based various modifications	58%	42%
20	BI software technique interrelated for related data-mart	68%	32%	47	Hardware routine fine-tuning (e.g.: DW-server)	65%	35%
21	Software technique regarding main flow of BI	61%	39%	48	Software as well as hardware modification	69%	31%
22	Different applications regarding BI	55%	45%	49	Permanent expansion process	67%	33%
23	Software technique used regarding BI	57%	43%	50	DW working for incremental development process	63%	37%
24	Less BR are defined	57%	43%	51	Business identify predictable principles on the subject of increasing	58%	42%
25	Many irrelevant BR defined as well documented	53%	47%	52	Business apply principles relating testifying, development/implementing Data Warehouse facilities and functionalities	67%	33%
26	E-business rules are defined	63%	37%	53	No discrimination involving data model various levels	64%	36%
27	All BR can be documented with existing	61%	39%	54	Data models processes intangible, reasonable as well corporeal intensity designed	61%	39%
28	Some e-business regulations definite as well predictable	64%	36%	55	Commonsensical as well substantial intensity considered regarding a few data reproduction	70%	30%
29	CSVs as well other files	69%	31%	56	Conceptual plane in addition premeditated meant regarding several data models	71%	29%
30	Operational as well in various data sets	65%	35%	57	Consistent as well substantial levels planned in spite of data models	56%	44%
31	ERP or CRM, XML files	75%	25%	58	Multiple of independently	61%	39%
32	Un-structured sources of data	50%	50%	59	A fundamental incorporated DW or factual-time DW	69%	31%
33	An assortment of unstructured sources of data sources	65%	35%	60	Numerous self-determining data warehouse	61%	39%
34	Web-accessed inner meta-data depository with incorporated, homogeneous, state-of-the-art meta-data	54%	46%	61	Vital DW through several marts	59%	41%
35	Non-integrated meta-data by explanation	56%	44%	62	Desktop like marts (of data) (e.g. Excel worksheets)	64%	36%
36	Innermost up-to-date meta-data storage area	59%	41%				
37	Nix meta-data administration	61%	39%				
38	Vital meta-data warehouse estranged via s/w-tools	57%	43%				

63	No safety measures put into operation	61%	39%
64	Integrated companionship wide protection	57%	43%
65	Independent endorsement implement	62%	38%
66	Substantiation safe keeping	57%	43%
67	Role-level safety measures by the side of database plane	67%	33%
68	Incomplete principles distinct designed regarding the data models	67%	33%
69	Enterprise wide values are definite meant regarding m/data	71%	29%
70	Project wide principles definite regarding m/data	59%	41%

The target of the study was to explore those parts which are related to the decisions making and expert data handling. Business intelligence is based on e mails, delivery of reports to execute and end users. The purpose oriented portals of business and result into good BI. Our study revealed that online information portal/reports are more likely to improve the decision making process of the form. The second theory we studied is the backbone of DWH. We targeted its total existence in the firm. It varies from firm to firm. Some firms are based on just only few processes automated ELT. But some are highly sophisticated regarding ELT. We found that metadata generation is more important.

Thirdly, we identified is data modeling related tools. We find that the modeling is used in the firms, but majority accepted the lack of the DMT. Fourth thing we identified is software techniques based on the usage of BI. We identify the lack of mainstream BI software. Moreover, there is a demand for the interacted data marts. We also identify there must be a good flow of BI. The fifth thing we identified is "defined and documented definition of BR. In this we found, few E-business rules are defined. It is also observed that a well documentation process can be established. Only some of E-business regulations are definite as well as predictable.

The next thing we identify is the data sources regarding data warehouse support. CSVs as well as other files are available and these are in use by Data Managers. Operational as well as other data sets are related in the day to day decision support systems. Unstructured source of data is also available. The next thing was study about the metadata implementation. The metadata administration is not too much implemented. MIS is basically implemented in most of the firms are mostly based on spinning and weaving. So there is not a lot of metadata. Degree of synchronization b/w ETL source as well as target method is studied and it is found that most of the synchronization is based on a database. Models firms are mostly relying only the defined database models. So it simplifies the ELT process and enhance. It is obvious in the study. Degrees of the use of methods regarding performance of DWH are mitigated and dedicated data ware house applications and cloud computing are found. Simple methods can even give good outcomes for decision making. Hardware

and software modifications are available as methods for in improving performance of data warehouse.

Overall development process is also studied and it is found that firms are continually upgrading the deployed systems to avoid any shortfall. Data warehouse is based on incremental development process with experimentation and the principles of testifying for data warehouse facilities. Discrimination between the data model basic stages is targeted to be mitigated. There is no discrimination regarding various data models because firms are make sure regarding their data model usage. Certain data models are combining with the different software for more integrity. Next we targeted the principle architecture of data warehouse. We found that we have multiple independent data marts. There is a fundamental need to interrelate them from multiple hopes and we can go for numerous self-determine data marts. We study the important features of security implemented in data warehouse. Basically the securities implemented over network level. So, now special routine of security are inoperative as a part of data warehouse. Role level security measures are supported to be implemented.

Degree of defined as well documented standards including meta-data were also reviewed. There were incomplete principles for the meta-data handling. Enterprise level importance of data is too much and there are also various solutions which incorporate the meta-data issues. But it is found the enterprise based principles and definite to be meant regarding meta-data.

CONCLUSION

Understanding of the true database and DWH strength is an important part of a central database industry. On the other hand, data mining and knowledge discovery is one of the most dynamic areas of IT. Data mining can be used to generate a hypothesis for the real life and dramatically targeting the decision supports. It required to conduct the practical experiences survey from the data managers to calculate the past, present and targeted future of data warehousing. But there are other possibilities for cooperation in data warehouse and data mining technologies. Study has discussed about the utilization of DWH methods at different levels of the architecture and their possible improvements. Objective of data warehouse system is a comprehensive analysis of vision consisted on all enterprise data, which is relates to analysis tasks. Integrated front end programs are found, based on online analytical processing (OLAP) and data mining combination tool graphical user interface. These are integrated into the database data mining component to increase direct efficiency of DBMS. Interaction with the background layer is also made with data ware house by use using data mining techniques.

The aim of this study is the maintenance strategy of mitigating circumstances, namely the performance of the data warehouse is improved. Small businesses offer only the high price of the technology and the maintenance and updating by professionals. Data Warehousing involved plans for the strategy, planning and construction of a data storage business issue as the answer altogether. The strategy is always difficult, and a continuous cycle of expansion in real time. Data Warehouse used on the basis of historical data

operations, strategies different maintenance and performance to optimize performance. To improve the performance of the data warehouse, this study focuses on doing various maintenance settings. Also, take an overview of the different companies in order to obtain the results of the study indicated. The decision of the performance is made under a strategic methodology is the data warehouse to improve.

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