

## **Business Intelligence Using Data Warehouse And Adhoc Reports**

**J.Prasad**

**M. Tech Student**

**Lords Institute of Engineering & Technology,  
Hyderabad, India.**

**G.Kumar**

**Assistant Professor,**

**Lords Institute of Engineering & Technology,  
Hyderabad, India.**

### **ABSTRACT**

*Warehouse Management is divided into different levels and the first level is to design various business reports from warehouse management from Raw material to dispatch of material, need to show all the different steps which is required for order dispatch. It includes order management as well as finished goods inventory*

*The Warehouse Management is useful to the business groups to tack the decisions on the data because the data says facts.*

### **INTRODUCTION**

This report useful to business users to calculate the day-to-day PRODUCTION, STOCK, DISPATCH, Delivery and TRANSPORTATION of SBU. This reports are improve the company Sales and Business. The business administrator, end user and Customer also. The business administrators have an idea about PRODUCTION, STOCK, DISPATCH and Delivery and the Customer also have an idea when the product or stock receives. All process can monitor from the table by using this report it save the time and paper cost for company.

### **CURRENT SOFTWARE ARCHITECTURE**

#### **Introduction to Existing Computerization**

#### **Research Methodology:**

Methodology is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases and quantitative or qualitative techniques.

A methodology does not set out to provide solutions - it is, therefore, not the same thing as a method. Instead, it

offers the theoretical underpinning for understanding which method, set of methods or so called "best practices" can be applied to specific case, for example, to calculate a specific result

### **PROPOSED ARCHITECTURE**

#### **Proposed System**

In proposed system we show simulation results quantifying the performance of application and to words friendly development. Now we propose Qlikview 11.20 SR1, in QlikView 11 SR2 the server and publisher both are in Server only. It is easy to develop ad hoc reports and comparative analysis in Qlikview 11 SR2. Using ad hoc report user can make his own reports in Internet Explorer. The external objects like Google Maps and flash player can be used in Qlikview 11 SR2 to bullied better User interface.

### **REVIEW OF LITERATURE:**

Literature survey is the most important step in software development process. Before developing the tool it is necessary to determine the time factor, economy n company strength. Once these things r satisfied, ten next steps are to determine which operating system and language can be used for developing the tool. Once the programmers start building the tool the programmers need lot of external support. This support can be obtained from senior programmers, from book or from websites. Before building the system the above consideration r taken into account for developing the proposed system.

### **FEASIBILITY STUDY**

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the

proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

## **BUSINESS INTELLIGENCE**

Business intelligence (BI) is a technology-driven process for analyzing data and presenting actionable information to help corporate executives, business managers and other end users make more informed business decisions. BI encompasses a variety of tools, applications and methodologies that enable organizations to collect data from internal systems and external sources, prepare it for analysis, develop and run queries against the data, and create reports, dashboards and data visualizations to make the analytical results available to corporate decision makers as well as operational workers.

The potential benefits of business intelligence programs include accelerating and improving decision making; optimizing internal business processes; increasing operational efficiency; driving new revenues; and gaining competitive advantages over business rivals. BI systems can also help companies identify market trends and spot business problems that need to be addressed.

## **NEED FOR THE STUDY**

BI data can include historical information, as well as new data gathered from source systems as it is generated, enabling BI analysis to support both strategic and tactical decision-making processes. Initially, BI tools were primarily used by data analysts and other IT professionals who ran analyses and produced reports with query results for business users. Increasingly, however, business executives and workers are using BI software themselves, thanks partly to the development of self-service BI and data discovery tools.

Business intelligence combines a broad set of data analysis applications, including ad hoc analysis and querying, enterprise reporting, online analytical processing (OLAP), mobile BI, real-time BI, operational BI, cloud and software as a service BI, open source BI, collaborative BI and location intelligence. BI technology also includes data visualization software for designing

charts and other info graphics, as well as tools for building BI dashboards and performance scorecards that display visualized data on business metrics and key performance indicators in an easy-to-grasp way. BI applications can be bought separately from different vendors or as part of a unified BI platform from a single vendor.

## **OBJECTIVES OF THE STUDY:**

### **QlikView Overview**

QlikView is the most flexible Business Intelligence platform for turning data into knowledge. More than 24,000 organizations worldwide have enabled their users to easily consolidate, search, and visually analyse all their data for unprecedented business insight using QlikView's simplicity.

## **INDUSTRY OVERVIEW**

### **Hindalco Aditya Birla group**

The largest integrated primary producer of aluminium in Asia, Hindalco also ranks as one of the most cost-efficient producers globally. With a pan-India presence that encompasses the entire gamut of operations, from bauxite mining, alumina refining, aluminium smelting to downstream rolling, extrusions and recycling, Hindalco enjoys a leadership position in aluminium and downstream value-added products in India.

Our Indian aluminium operations are integrated and consist of bauxite mining, alumina refining, smelting and converting primary metal into value-added products. We have dedicated sources for critical raw materials such as bauxite, power and to a limited extent, coal. We also have committed supply sources for auxiliary chemicals.

Our finished products include alumina, primary aluminium in the form of ingots, billets and wire rods, value-added products such as rolled products, extrusions, foils and alloy wheels and speciality alumina products. Alumina is used for our own captive needs, the excess of which is sold to third parties. Aluminium is used in a range of industries including water-treatment chemicals, refractories, ceramics, cryolite, glass, fillers and plastics, conveyor belts and cables, among others.

Hindalco manufactures intermediate products required for our own production such as power and carbon anode. Our Indian aluminium operations are located in 10 states and one union territory in India, with three refineries and two smelters that are capable of producing over 600 ktpa of aluminium.

## THEORETICAL FRAME WORK

### Meanings:-

#### New:

Opens a new QlikView window and allows creating a new QlikView File.

#### Open:

Opens a new QlikView window and allows opening a QlikView file or a Table file. Opening a table file automatically opens the File Wizard: Type (page200). This command can also be invoked by the following keyboard shortcut: Ctrl+O.

#### Open in Server:

Opens the Connect to Server (page 38). In this dialog it is possible to connect to a QlikView Server and browse for a document to open in client mode. This command can also be invoked by the following keyboard shortcut: Ctrl+Shift+O.

**Note:** When opening documents as a client to QlikView Server the possibilities are restricted on

What is possible to do with the document compared to when opening local documents. As a client it is not possible to add or delete sheet objects, depending on whether the document supports collaboration. Sheets cannot be added or deleted. Furthermore, not all properties dialogs can be accessed, macros changed, the script accessed, data reloaded or the document saved.

## DATA ANALYSIS AND INTERPRETATION

### Data Modeling:-

Data model tells how the logical structure of a database is modeled. Data Models are fundamental entities to introduce abstraction in DBMS. Data models define how data is connected to each other and how it will be processed and stored inside the system. The very first

data model could be flat data-models where all the data used to be kept in same plane. Because earlier data models were not so scientific they were prone to introduce lots of duplication and update anomalies.

### ENTITY-RELATIONSHIP MODEL:-

Entity-Relationship model is based on the notion of real world entities and relationship among them. While formulating real-world scenario into database model, ER Model creates entity set, relationship set, general attributes and constraints. ER Model is best used for the conceptual design of database. ER Model is based on:

- Entities and their attributes
- Relationships among entities

These concepts are explained below.

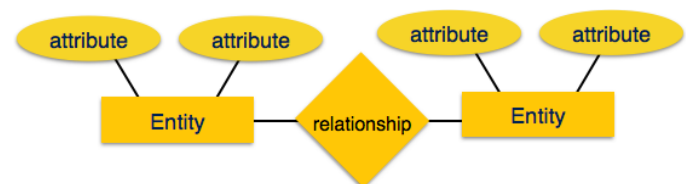


Fig.8.1 Entity-Relationship Model

### Entity:

An entity in ER Model is real world entity, which has some properties called attributes. Every attribute is defined by its set of values, called domain. For example, in a school database, a student is considered as an entity. Student has various attributes like name, age and class etc.

### Relationship:

The logical association among entities is called relationship. Relationships are mapped with entities in various ways. Mapping cardinalities define the number of association between two entities

### Star Schema:

In computing, the Star Schema is the simplest style of data mart schema. The star schema consists of one or more fact tables referencing any number of dimension

tables. The star schema is an important special case of the snowflake schema, and is more effective for handling simpler queries. The star schema gets its name from the physical model's resemblance to a star with a fact table at its center and the dimension tables surrounding it representing the star's points.

The star schema separates business process data into facts, which hold the measurable, quantitative data about a business, and dimensions which are descriptive attributes related to fact data. Examples of fact data include sales price, sale quantity, and time, distance, speed, and weight measurements. Related dimension attribute examples include product models, product colors, product sizes, geographic locations, and salesperson names.

A star schema that has many dimensions is sometimes called a centipede schema. Having dimensions of only a few attributes, while simpler to maintain, results in queries with many table joins and makes the star schema less easy to use.

### Fact tables:

Fact tables record measurements or metrics for a specific event. Fact tables generally consist of numeric values, and foreign keys to dimensional data where descriptive information is kept. Fact tables are designed to a low level of uniform detail (referred to as "granularity" or "grain"), meaning facts can record events at a very atomic level. This can result in the accumulation of a large number of records in a fact table over time. Fact tables are defined as one of three types:

- Transaction fact tables record facts about a specific event (e.g., sales events)
- Snapshot fact tables record facts at a given point in time (e.g., account details at month end)
- Accumulating snapshot tables record aggregate facts at a given point in time (e.g., total month-to-date sales for a product)

Fact tables are generally assigned a surrogate key to ensure each row can be uniquely identified.

## DATA SECURITY

### 1 Section Access:-

Elkview is a great way to gather information and enable easy analysis of data. However a QVW document, like any other computer file might get lost or stolen. A QVW file without Section Access can be opened by anyone that has QlikView installed and this might put your data at risk and a document with section access properly implemented can't.

There are also scenarios where you don't want authorized users to view the full data set. Section Access does a great job in reducing data to control what authorized user can see and cannot see. Section Access comes in many flavors. A simple username and password might be sufficient for some documents where in other scenarios you want a specific user to sit inside your domain and be logged in as a specific user to a specific machine and use a certain serial number. Section Access can do this too.

There are two good reasons to implement section access into your documents.

- To help protect your data from unauthorized access.
- To limit what data authorized users can see and what they can do.

### How to setup and enable Section Access

- Setting up a working Section Access solution is done in three steps.
- Designing the Section Access definition in the script
- Enabling Section Access on document level and define the user permissions
- Set the USER level access

### Hidden Script

When implementing Section Access it is advisable to do so in the hidden script.

"File" -> "Create Hidden Script"

Since the user credentials will be displayed in clear text (if using inline data) or the location of the Section Access definitions, all users with ADMIN status will be

able to see the script as well as users given the privilege to see the script. If the Section Access solution is created in the hidden script it further ensures data security. Keep the hidden script password in a safe place since this password cannot be recovered if lost. The same goes for the ADMIN password, if you lose this password access to the document will be denied and there is no way to recover the password.

### **Access Control**

All access control can be managed via text files, databases or INLINE clauses in the same way as data is normally handled by QlikView. The ACCESS section is loaded in the script is declared by the statement, SECTION ACCESS;. The SECTION ACCESS declaration should be defined before the actual data is added for SECTION APPLICATION.

### **Section Access System Fields**

The access levels are assigned to users in one or several tables loaded within section access. These tables can contain several different user-specific system fields. One can combine several of the fields listed below to build the Section Access solution depending on the desired level of security. Apart from the standard fields, additional fields can be defined to administer data reduction for each user.

Note that all data loaded via an external data source must be loaded in upper case in the SECTION ACCESS statement. This does not apply to INLINE data which always will be treated as upper case.

## **TESTING**

### **System Testing**

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub assemblies, assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

## **TYPES OF TESTS:-**

### **Unit Testing**

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application. It is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

### **Integration Testing**

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfactory, as shown by successful unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

### **Functional Test**

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

Functional testing is centered on the following items:

Valid Input: identified classes of valid input must be accepted.

Invalid Input: identified classes of invalid input must be rejected.

Functions: identified functions must be exercised.

Output: identified classes of application outputs must be exercised

Systems/Procedures: interfacing systems or procedures must be invoked.

Organization and preparation of functional tests is focused on requirements, key functions, or special test cases. In addition, systematic coverage pertaining to identify Business process flows; data fields, predefined processes, and successive processes must be considered for testing. Before functional testing is complete, additional tests are identified and the effective value of current tests is determined.

## **FINDINGS:**

Business intelligence (BI) software supports two primary functions as part of broader performance management issues faced by organizations. Whether in marketing, sales, finance, operations, or human resources, BI is focused first on information delivery and second on supporting the decision making through ad hoc query, analysis, and data modeling.

This whitepaper series is comprised of four deliverables discussing The QlikView Customer Experience:

- **Success and Value From BI: The QlikView Customer Experience:** This paper features data and anecdotes about the customer satisfaction, ease and speed of development, and ease of use for business users of QlikView.
- **The TCO Of BI: The QlikView Customer Experience:** This paper features data and anecdotes about the TCO of QlikView, relative to traditional BI approaches, categorized into software, services and hardware costs.
- **Time to Value and ROI From BI: The QlikView Customer Experience:** This paper features data and anecdotes about the ROI of QlikView, categorized into benefits from the time to value of QlikView, revenue and cash flow enhancements, operating cost reductions, productivity gains, and BI and reporting overhead reductions, as reported by customers.

- **The IDC-QlikView Customer Experience: Survey Findings:** An application developed by QlikTech to analyze the results of the joint survey.

## **SUGGESTIONS:**

QlikCommunity is a discussion forum for qlikview users <http://community.qlikview.com> Log in with your qlikview ID, the same one you used to download qlikview personal edition. Here you will be able to setup your personal profile, join groups, ask questions, read blogs, and make suggestions for improvements to qlikview functionality. The search functions in the qlikview community website works well. Chances are, if you are just starting out, you are not the only one to have ever run into the issue that you are facing

Another highly valuable resource is the QlikCommunity found at <http://community.qlikview.com>. QlikCommunity is the global online community for QlikView, bringing together all kind of QlikView users to interact, learn and share their experiences. QlikCommunity features blogs with latest news and interesting information from QlikTech employees but also hyperlinks to third-party blogs related to QlikView. Forums for the different QlikView products cover countless user questions and provide Professional answers from the very basics to advanced and complex issues.

## **RESULT**

### **Dash board:**

In this dashboard sheet inventory, shipment and Invoice values are running values. The dashboard is working based on system date (Today date) because stock/inventory are calculated on today .In dashboard sheet inventory category we have allocated stock noting but out of stock how much is allocated to Customer and unallocated is same as opposite to allocated stock In shipment we have monthly target given by end user that value is comes from Excel. MTD means Month to till date how much amount of aluminum is shipped till today. This value is Actual value it is reached to target in month end time.

## CONCLUSION:

By using Warehouse Management we can monitor the organization ongoing status as well as future also and day-to-day works easy. Using this dynamic reports user can operates all the works and monitoring enter plant without using of paper reports. User can see the historical data by one click .In future enhancement the Warehouse Management can operates through the mobile phones and tablet. Visual Intelligence are business intelligence and data management experts. We provide advanced data visualization and analysis using QlikView and other software products. The tailor-made solutions we offer combined with our business consulting services enables organizations to effectively manage, interrogate and view critical information to aid in key decision making and improving business processes.

## Reference:

[1]Qlikview community by qliktech  
<https://community.qlik.com/welcome>

[2]QlikView Books – Steve Dark  
<http://www.quickintelligence.co.uk/qlikview-data-structures/>

[3]QlikView 11 For Developers – Barry Harmsen / Miguel Garcia  
<http://www.quickintelligence.co.uk/qlikview-books/>

[4]QlikView for Developers Cookbook – Stephen Redmond  
<https://www.packtpub.com/big-data-and-business-intelligence/qlikview-developers-cookbook>

[5]QlikView Scripting – Matt Floyd  
<https://www.packtpub.com/big-data-and-business-intelligence/qlikview-scripting>

[6]QlikView Server and Publisher – Stephen Redmond  
<https://www.packtpub.com/networking-and-servers/qlikview-server-and-publisher>

[7]QlikView, Qlik Sense, and Lego by Steve Dark  
<http://www.quickintelligence.co.uk/qlikview-vs-qlik-sense/>