Business intelligence systems assignment

Touro University International ITM501 – Management Information Systems and Business Strategy Module 2 Case Assignment: Business Intelligence Systems 04 June 2010 Business intelligence: Definition Business Intelligence (BI) is defined by IBM as, “ the discipline that combines services, applications and technologies to gather, manage and analyze data, transforming it into usable information to develop insight and understanding needed to make informed decisions. ” (IBM. om, 2006) In its most basic form, BI is an umbrella principle that synergizes the core understanding of your business, including all of its facets, and acting on what that foundation is made up of. The quality of your BI traditionally depended on the experience of your people. However, recently it has become a “ stand-alone” discipline in the realm of Information Technology management. With the advent of computing and computers, the amount of useful and usable data in business has skyrocketed.

Complex analyses have become common-place and the turn around for information products are expected in far shorter time than even the most capable human analyst could provide. These two factors have led to building up the branch of IT focused on storing vast amounts of data and more importantly, making it usable to businesses. Information and Analyses Provided BI software is available in as many colors of the rainbow. Some software is very problem specific and some generic and adaptable. The common thread that ties all this BI software together is data storage and extraction.

Most important to the software’s usefulness is how the presentation / representation to the end user; the analysis of data, modeling, and finally

how that data can be visualized. The most basic analysis will provide trend indications, such as an increase of profits for retail activities toward the Christmas holidays. This type of trend analysis is available from common programs such as Microsoft® Excel. More complex, multi-variable analysis requires relational database software scaled for the size of data and frequency/complexity of analysis requested.

Applications can specialize in bookkeeping, inventory control, human resources management, and other processes. The advanced applications can link and correlate – for example – number of customers to profits and personnel turn-over. A successful BI application will also handle mixed workload, balancing complicated, long-range analyses with simple, immediate queries, and make information available on schedule (e. g. quarterly reports) and on demand (e. g. how customer purchase patterns changed after an unexpected change in interest rates).

It’s important that the software be responsive and customizable to allow users to, “ formulate their own questions and rapidly get answers. ” (Imhoff, 2007) System Requirements (Hardware and Software) To run a successful BI program (as a whole) it’s best run as an enterprise-level solution (not on individual PCs). Server hardware is available from most major computer manufacturers (IBM, Dell, HP, Apple, and others) online, via computer consultants (including consulting services from the various computer companies) or at computer retailers.

Servers typically run operating systems from Microsoft® or Unix-based (variations of which are Linux, Solaris, and others). Choice of hardware and

software may be made independently (sun. com, 2007), though some hardware is “ optimized” for use with certain applications (IBM. com, 2007). Many times a company can buy a BI “ package” – hardware / software / installation and most importantly – training. Major Vendors IBM® provides both hardware and software to manage companies’ business intelligence (BI) needs. They offer a range of hardware in three major categories directed at small, mid-sized, and large businesses.

IBM’s hardware solution focuses on the “ Balanced Configuration Unit”, modular / customizable building blocks which include data storage, processing power, and memory. Because these blocks each contain all three components, the system is scalable as a business grows and changes. IBM’s solution offers a reasonable starting point for low cost startup and growth planning. Data Base 2 (DB2) Warehouse is IBM’s BI software. The BI software focuses on data warehousing, consolidating data from unrelated sources and forms a “ single version of the truth” (IBM. com, 2007), available to users through a variety of analyses.

DB2 Warehouse is built to manage mixed workload, run queries concurrently, and also pre-aggregate related data for improved query performance. DB2 Warehouse capabilities include modeling, data mining and visualization, and embedded analytics and database management tools. DB2 has an integrated compression that has proven a savings of 45-69% disk space, and a workload control that automatically prioritizes and schedules queries. In addition to basic data warehousing and mining, IBM has prepackaged solutions for specific industries: banking, retail, insurance, healthcare, telecommunications and law enforcement.

DB2 Warehouse will serve clients running Microsoft® Windows® XP or 2000, and run on servers with any of the following operating systems: IBM AIX® 5L™, Red Hat Enterprise Linux® 3 and 4, SUSE Linux Enterprise Server 9, Sun Solaris 9, Microsoft® Windows® Server 2003. It is compatible with two web browsers: Microsoft® Internet Explorer and Mozilla Firefox. Microsoft® offers BI built around the already widely used Microsoft Office® suite. The primary BI component is Excel Services, a high-powered, server-side version of Excel (for the desktop), coupled with their SharePoint technology, run on a Microsoft SQL Server operating system.

Excel Services incorporates all features of Excel 2007, including new PivotTables™. A major advantage of Excel Services over desktop computing is increased ability to share spreadsheets, without compromising on security and control (user-specific permissions are a primary element of SharePoint). Excel Services also integrates with back-end systems, importing data from its source for immediate, up-to-date information displayed in a meaningful way based on used-specified visualizations, color coding, etc.

The web interface output eliminates the need for intensive user training or additional client software. Excel Services also helps reduce repeat work and errors created by manually cutting and pasting between applications. As with all server-run software, Excel Services takes advantage of the reliability and availability of mainframes versus PCs; businesses can efficiently schedule workload, data backup, and sustainability for servers in a way that individuals can not do on their workstations.

Excel Services and SharePoint are only compatible with the Microsoft Server operating system. SAP NetWeaver® platform focuses on providing customizable, scalable business applications. SAP provides a set of basic IT practices which can help the company organize requirements to IT processes, and incrementally and flexibly built, change, and grow the business processes. NetWeaver is based on open standards, allowing greater interoperability than proprietary competitors, and its configurable nature helps IT professionals respond quickly to changing business needs.

NetWeaver incorporates data consolidation and management, collaboration, works to combine different systems and data together for clear understanding, and includes components for web interfacing and wireless connectivity (SAP NetWeaver Portal and Mobile, respectively). SAP also has introduced business software targeting companies by size. Business One for small businesses, and Business on Demand or Business All-in-One for mid-size companies.

Business All-in-One includes features for accounting, budgeting and reporting, relationship management, operations and distribution, human resources management, and other specialized reports in its customizable dashboard. SAP products are available through their business partners, which can be found at http://www. sap. com/smallbusiness/partners/index. epx. SAP software can run on servers operating, Microsoft Server or Unix-based operating systems. Oracle Business Intelligence provides powerful data warehousing, analysis, and reporting, with the option of OLAP and data mining.

Oracle BI stores data for use in creating a full set of statistical functions, to include the ability to customize applications for specific business use. To convey the completed analysis, OracleBI uses a variety of visual outputs to include gauges, graphs, and conditional formatting. One powerful outcome of data mining is uncovering correlation between seemingly unrelated data points (such as marital status and shopping habits). Through the use of historical data, Oracle BI can also predict trends and allows users to input " what-if" scenarios.

Data analysis can then be shared in a variety of ways, including web portal (dashboard or interactive), print, e-mail, saved in XML or RTF format, or exported to Microsoft® Excel. Oracle BI can be run on hardware with operating systems from Microsoft Windows and several Linux or UNIX varietals. Hardware must have a minimum of 1 GHZ processor, 2GB RAM, and 2 GB of storage space (additional 2 GB temporary storage). References Data Warehousing and Business Intelligence. Retrieved 01 June, 2010, from http://www-306. ibm. com/software/data/db2bi/ Imhoff, C. (2007). Dynamic Warehousing. Retrieved 01 June, 2010 from ftp://ftp. software. ibm. om/software/data/pubs/papers/DWBIawp_Intell_Sol. pdf Oracle Applications (2007). Retrieved 01 June, 2010, from http://www. oracle. com/applications/home. html Oracle® Business Intelligence Concepts Guide (2005). Retrieved 01 June, 2010 from http://download. oracle. com/docs/pdf/B16378_01. pdf. SAP Business One information. Retrieved 01 June, 2010, from http://www. sap. com/usa/company/index. epx. SAP NetWeaver Solution Overview (2006). Retrieved 01 June, 2010, from http://www. sap. com/platform/netweaver/pdf/BWP_OV_SAP_NetWeaver. pdf.

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