ADVANTAGES OF IMPLEMENTING A DATA WAREHOUSE DURING AN ERP UPGRADE
Advantages of Implementing a Data Warehouse During an ERP Upgrade

Upgrading an ERP system presents a number of challenges to many organizations. However, many of these challenges can be alleviated by integrating a Business Intelligence (BI) solution during the upgrade process. This is especially true if the BI solution is based on a data warehouse and implemented using a data warehouse automation platform.

Data conversion is one of the key activities involved in upgrading an ERP system. Therefore, it is also an appropriate time to assess the quality of the data that is to be converted. Businesses that decide to implement a data warehouse during the ERP will discover that doing so provides an opportunity to address all their data quality issues.

Traditionally, report conversion is another key activity of the ERP upgrade process. However, when businesses are implementing a data warehouse at the same time, they have an opportune moment to reevaluate their reporting needs to avoid spending time converting obsolete reports.

This document provides a detailed discussion of the benefits of incorporating a data warehouse when upgrading an ERP system.
DATA CONVERSION

When a business is trying to establish the scope of the data conversion from the existing ERP system to the new ERP new system, several issues have to be considered:

- The conversion of master data
- The conversion of transactional data
- The amount of data in the new system seen from a performance perspective

Because the data model in the new ERP version may be different from the old data model, it is often advantageous to only convert relevant master data to the new system.

When estimating the costs of conversion, it is advisable to view master data and transaction data as separate entities. This makes it possible to determine the exact cost-savings of establishing a data warehouse during the upgrade process. Often, the costs of converting transaction data from one ERP version to another may actually cover the entire costs of establishing the data warehouse.

**Transaction Data**

When an ERP upgrade includes a BI solution and a data warehouse, the legacy transaction data are stored in the data warehouse. From this point, the data warehouse will be able to support the business’ reporting requirements. If the conversion has been performed properly, it will be possible to close down the old ERP system as soon as the new ERP system is up and running because all relevant information is accessible from the data warehouse. Businesses realize considerable cost savings when the old system no longer has to be maintained.

Furthermore, when incorporating a data warehouse, it is possible to create an additional database on the data warehouse server. This database can then be used to store an exact copy of the entire data model as well as actual data from the old system. Consequently, the structure of the entire BI solution does not have to be in place right away because the extra database can later be used as a data source in the finished BI solution.

Data Quality

The trustworthiness of the reports that will be created on the new system relies on the quality of the data after conversion. Therefore, it is essential to evaluate the master data quality before conversion. Using a data warehouse automation platform, master data can be extracted from the old system to a separate data warehouse, and the data can then be profiled and analyzed to verify whether or not all the relevant fields on the individual records contain values. All incomplete records will be displayed in an error list. This makes it possible to verify if the data is valid before each record is converted to the new ERP system. Cleansing the master data before the conversion ensures a smoother, faster, and less costly conversion process.

REPORT CONVERSION

When the conversion process has been carried out by establishing a data warehouse and a number of multidimensional cubes, reports from the legacy system must still be converted.

**Converting Reports**

Typically, when companies use the same ERP system for many years, reports are created on an ad hoc basis. Therefore, some of these reports may be obsolete, some may display the exact same data (only in different ways), and some no longer provide the required amount of information. Furthermore, conversion of historic transformations may be carried out only to maintain reporting over time.

While there are a number of ways to convert the reports, a business can save time and money if both the existing and planned reports are evaluated before they are converted, using the following three criteria:

- Reports that have to be obtained from the ERP system
- Reports that are beneficial to obtain from the BI solutions
- Reports that are obsolete

Experience shows that 20% of the reports are obsolete; 40% have to be obtained from the ERP system.
because they concern external documents, such as production papers and picking lists; and the remaining 40% may be obtained from the BI solution based on data in the data warehouse.

ERP reports often require expensive custom programming, and replacing 40% of the reports with data warehouse driven reports will, therefore, result in substantial savings as well as better reports because the data quality will be improved.

**Data Warehouse Driven Reporting**

ERP upgrades are disruptive, and the system, or some of the underlying infrastructure, may change during the upgrade thereby affecting the stability of the reporting. However, if the ERP system is integrated with a data warehouse, the data warehouse will typically handle more than 40% of the required reports - reports that will remain stable and trustworthy during the upgrade process. As a result, employees will continue to have a central point of information and the negative effects of the ERP upgrade will be minimized.

Contrary to standard ERP reports, reports designed in a data warehouse can include information from a variety of data sources, such as Excel budgets, CRM data, manufacturing solutions, and much more. Therefore, automated reporting with a data warehouse can replace the time-consuming, manual process of collecting data from the ERP system, and various other sources, and processing them in Excel before the final reports are ready to be distributed within the organization.

**Common Reporting**

Once the new ERP system is up and running, data from the new system can be loaded into the data warehouse, which also contains the legacy data. The result is a common data set—including historical data—that can be used in any given report without having to take into consideration the origins of the data. The user is able to view data on sales, prices, and debtors, from any period of time.

Furthermore, with a data warehouse it is possible to include data from a variety of other data sources, such as Excel, thereby increasing the value of the reports.

Moreover, data warehouse driven reports also enable a business to move away from static printouts to more dynamic reporting options. With a data warehouse and a BI solution, users are empowered to view and analyze their data from a variety of angles and in a variety of advanced graphs and charts in their favorite reporting tool.

**THE SOLUTION: TIMEXENDER DATA WAREHOUSE AUTOMATION PLATFORM**

Selecting the right data warehouse platform is critical to the success of an organization’s ERP and BI strategy. When a business needs a BI solution based on data warehouse, the Data Warehouse Automation platform TX2014 from TimeXtender Software offers multiple advantages.

TX2014 allows users to take ownership of the report conversion and design process so that the true needs of the business—not the needs of the SQL developers—are reflected in the reports. Businesses that use the TX2014 platform are able to involve the report users in the design of the data warehouse and the data cubes. It is not just another programming task in a new system. This is one of the major cost-saving advantages of TX2014 Data Warehouse Automation.

Furthermore, with TX2014 Data Warehouse Automation it is possible for ERP consultants and customers to cooperate closely during the ERP upgrade and the data warehouse implementation process. In time, customers will then be able to handle the maintenance of the data warehouse and the BI solution on their own.

Moreover, TimeXtender is a true Data Warehouse Automation platform. It enables a business to rapidly implement, deploy, and maintain a data warehouse because the process from data retrieval through data transformation to deployment and generation of project documentation is automated. Simply put, no complicated coding is required. Therefore, businesses that choose the TimeXtender Data Warehouse Automation platform will experience faster data warehouse implementation and lower costs—and they’ll discover that the platform is easy to maintain and change.
Microsoft Dynamics
For users of Microsoft Dynamics, TX2014 Data Warehouse Automation offers adapters that are specifically designed for Microsoft Dynamics AX, Dynamics NAV, and Dynamics GP. These adapters significantly ease the task of handling several companies, enum values, relations, and other types of information that only exist in the ERP system but are important for the creation of a sound BI solution.

Migrating to Microsoft SQL Server
If the scenario includes migrating the organization’s ERP system to Microsoft SQL Server®, the TimeXtender Data Warehouse Automation platform can be used to create the additional database and the copy of the data model. Typically, this scenario would include writing massive lines of code; however, in TimeXtender, relevant elements, such as tables, are selected using a mouse and drag and drop. The complete data model is designed in metadata, and TimeXtender then generates the underlying SQL code and creates the data model on Microsoft SQL Server.

CONCLUSION
The tasks involved in the ERP upgrade process become more straightforward and less time-consuming when a BI solution is part of the upgrade, and more people are able to actively participate in the process. Knowledge of the data sources and the business is central to creating a reliable BI solution; programming skills are not required. TimeXtender places the emphasis on business issues—not coding. It is the right tool when combining an ERP system upgrade with a BI solution implementation.
TimeXtender® is a world leading Data Warehouse Automation (DWA) vendor dedicated to Microsoft® SQL Server®. Our fast and user-friendly DWA platform TX2014 is all about minimizing the time spent on turning complex data into valuable information. Without coding. And without compromising on performance or possibilities.

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