State Employment Department

Overview

Oracle Business Intelligence (BI) is a portfolio of technology and applications that provide the industry's first integrated, end-to-end Enterprise Performance Management System. The technology includes BI foundation and tools; an integrated array of query, reporting, analysis, alerting, mobile analytics, data integration and management and desktop integration. Also included is category-leading financial performance management applications, operational BI applications and data warehousing.

State Employment Departments support economic stability for individuals and communities during the country's time of high unemployment through the payment of unemployment benefits. The Departments serve businesses by recruiting and referring the best qualified applicants to jobs, and provide resources to diverse job seekers in support of their employment needs. The Departments develop and distribute detailed workforce and economic information to their government officials, upon request.

This State Employment Department identified the need to build an Enterprise Data Warehouse to help them report this multi-tiered and detailed data to the Department of Labor. The Department was looking for an Enterprise Data Warehouse (EDW) and Reporting solution that would enable them to integrate data from the many transactional systems they use to manage the widespread diversity of data that supports their mission. This data includes information about employed and unemployed individuals, and their associated demographics.

Challenges:

The Department needed to merge and analyze data from multiple source systems within their enterprise. They needed to report on multiple aspects of each category. For example, how many unemployed individuals live in this county, are African American and have been involved in job training? Challenges to this solution include:

- Many systems within the Department including wages, taxes, claims, unemployment files and job training requests needed to be merged together to analyze all information from within the Department's purview.
- There was no single access point for all of the Department's existing information, so accessing this data took time and effort.
- The Department needed to provide data aggregated in a way that had previously never been done.
- Identifying and linking Master data records from multiple source systems was difficult because some were missing unique attributes.

Technology Stack:
Oracle Database 11g
Oracle Business Intelligence 11g
Oracle Application Express

Solution Details:

The Department looked to Zirous to architect and implement the EDW and Reporting solution. A strategy was developed that would create multi-dimensional reporting marts for each of the transactional source systems identified to source the EDW. Required characteristics of the reporting marts were:

- The reporting marts would be dimensionally modeled, ensuring the data is easily reportable when employees need to provide multi-tiered data to their local government.
- The reporting marts would be loaded on a scheduled basis, determined by characteristics of the source system. Automatic scheduling will allow employees to spend time on other tasks, rather than inputting the reporting marts themselves.
- Reports could be moved off of the transactional system to the reporting mart, ensuring ease of access, quicker response times and reduced load on the source system.
- Attribute changes to the transaction system would be audited in the reporting mart, allowing the ability to historically report on any point in time, while keeping all of the information correct and up-to-date.
- Extraction, Transformation and Load (ETL) processes would be able to be scheduled and monitored through a dashboard application, ensuring ease of use and accessibility.
- Dependencies for single and groups of ETL processes could be defined.
- Oracle Business Intelligence (OBIEE) subject areas would be built for each dimensional star in the reporting mart.
- OBIEE Subject Areas would be cross reportable when they are linked by common, dimensional data.

Reporting marts would be used as the source for the EDW, and the EDW would hold the Master Data for the Department. The same strategy for modeling and loading the reporting marts would be used to load the EDW. This structure is explained in Diagram 1.

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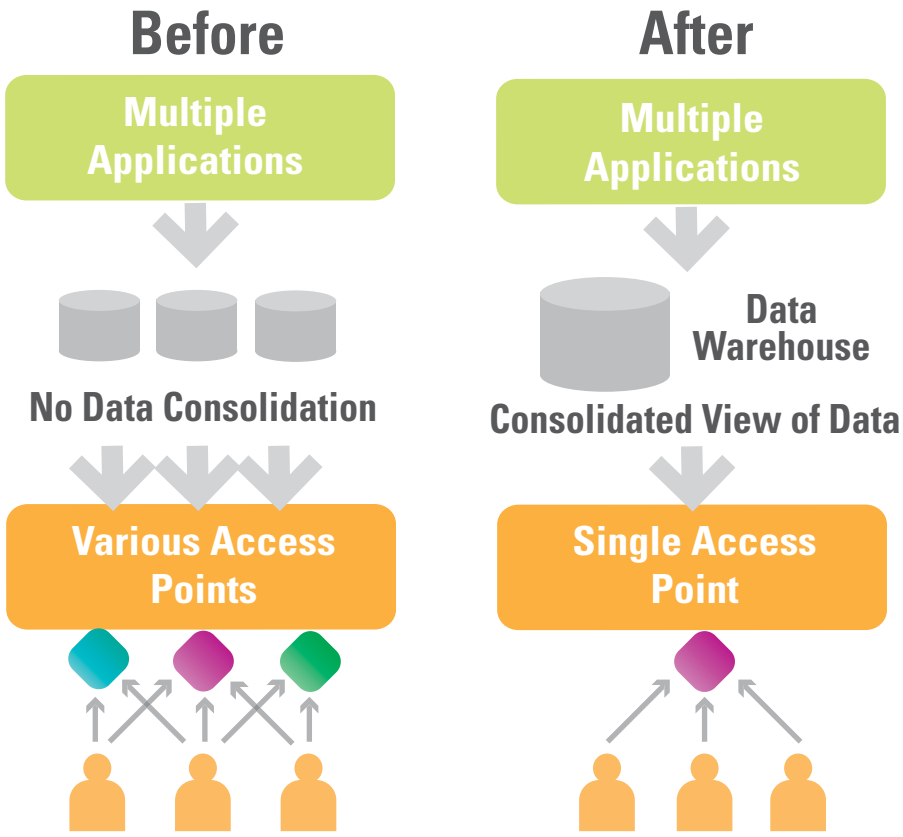
Diagram 1



This EDW and Reporting Solution lead to enhanced opportunity for program evaluation and ensured accurate information for beneficiaries, employers and program providers. Instead of manually accessing the data, the Department can now report through a single, consolidated and consistent Data Warehouse.

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