CASE STUDIES

Data Warehouse Portfolio

CASE STUDY:

One of the Largest Electric Holding Companies in the US

Business Problem

Energy trading systems for a variety of submarkets were not integrated. The majority of reporting features were detailed and fragmented. The business needed a consolidated, multi-level aggregation of trading transaction data, as well as a full array of risk measures for Value at Risk and Market-to-Market analysis.

Value Delivered

d-Wise designed and implemented a web-based risk reporting portal. The system was developed based on customer requirements, including aggregated reports with a hierarchical security model. Different roles within the organization were allowed to see different levels of data aggregation. The resulting system provided a single set of reports which rendered a different view depending on the user's job function and line of business focus. At the highest level of summarization, the corporation could see their entire energy portfolio and evaluate a variety of energy trading instruments as well as hedging strategies.

Technologies Used

Java, JSP, HTML, SAS Risk Dimensions, SAS OLAP Server

CASE STUDY:

A Large State Healthcare Organization

Business Problem

There were multiple operational systems in place due to M&A activity.

The resultant lack of ability to see the business comprehensively was impacting actuarial processes, decisions and calculation of plan reserve capital.

Compliance requirements within the healthcare insurance industry makes hand coded Extract, Transform Load (ETL) or traditional integration options undesirable since auditors would have to trace through code and documents to determine the process.

Value Delivered

d-Wise designed and implemented an actuarial data warehouse for the analysis of health insurance claims and membership data using ETL tools that automate the documentation and visualization processes for compliance needs.

d-Wise integrated the disparate legacy source systems from recent M&A activity, and provided a consistent vision of the insurance provider's risk portfolio by integrating data from these legacy systems into a centralized Enterprise Data Warehouse (EDW). d-Wise assisted the customer with the development of OLAP cube and monthly standard reports using the EDW as a data source.

These efforts enabled business decisions with a complete actuarial picture of the business.

d-Wise designed the data warehouse and articulated the technical implementation strategy and assumed the technical leadership of the implementation phase of the project with outsourced implementation resources.

Technologies Used

Oracle PL/SQL, SAS Data Integration

CASE STUDY:

An Independent Licensee for a Large Healthcare Organization

Business Problem

The client housed consolidated data for multiple corporate health plans across the state of Pennsylvania. Benefits administrators from each corporate customer had to rely on the client's staff to create utilization and costing reports. The client requested development of a solution to provide adequate visibility and on-demand reporting for its customer base into their health plan usage. The requirement was to provide their customers (benefits administrators at client companies) a web-based, automated claims reporting system.

An existing Teradata DW appliance was to be used.

Value Delivered

d-Wise designed and developed a web-based report automation solution. Java web technology was utilized to construct the customer user interface and application business logic.

SAS software was used to extract data from a Teradata DW and produce reports in HTML, PDF, and Excel formats. Report delivery was accomplished through an extranet portal.

d-Wise designed and articulated the technical implementation strategy and assumed the technical leadership of the implementation phase of the project with outsourced implementation resources.

Technologies Used

Teradata DW, SAS, Websphere, Java

CASE STUDY:

A Tier 1 Pharmaceutical Manufacturer

Business Problem

The client business included pre-clinical toxicology operations using multiple vendor data collection source systems, with no way to carry out common reporting.

Key Issues

• How do we move to a centralized
  data warehouse to streamline
  reporting and analysis activities
  within toxicology operations?

• What technologies are appropriate
  for an EDW in the pre-clinical
  space?

• What data model accommodates
  today's business and provides
  flexibility for future growth?

Value Delivered

d-Wise defined a data collection repository for pre-clinical toxicology data encompassing 7 domains with multiple collection systems including Xybion, Cerner, ADP, spreadsheet data and standard SAS tables. d-Wise then mapped the existing operational systems to the 7 domains in the EDW data model, and defined the interface for reporting on the new centralized repository. SAS ETL and Informatica technologies were employed in the warehouse build process. The Java-based reporting solution was implemented using DocBook and Arbortext for PDF report output.

d-Wise designed the data warehouse and articulated the technical implementation strategy and assumed the technical leadership of the implementation phase of the project with outsourced implementation resources.

Technologies Used

Oracle PL/SQL, Informatica, SAS, Java, XML, Arbortext, CDISC SEND, C, Fortran

CASE STUDY:

A large Transformational Medical Technologies and Services Organization

Business Problem

The client offered a hosted Electronic Medical Record (EMR) solution and wanted to build a portal for healthcare and pharmaceutical companies to allow access to the data for medical care quality measures and research needs.

Key Issues

- How do we collect data from over 100 different physical sites into a central location for warehousing?
- How do we combine EMR data from numerous organizations with different data collection standards?
- What is the best method to properly cleanse the data such that personal identifying information is removed?
- How do we categorize the data to provide valuable roll-ups for analytical and security purposes?

Value Delivered

d-Wise defined a data model for the organizational and geographical roll-up of data. The data collection and ETL process that d-Wise created de-identified patient data inside the EMR system before it reached the data warehouse for compliance purposes.

d-Wise provided reporting data marts, pre-built analysis tables containing historical details to enable OLAP, and customized the reporting portal technology to offer the solution to clients.

d-Wise designed the data warehouse and articulated the technical implementation strategy; assumed the technical leadership of the implementation phase of the warehouse and reporting components; led internal teams and interfaces to vendors.

Technologies Used

Oracle PL/SQL, SAS, Java, XML, .NET

CASE STUDY:

One of the Largest Advanced Analytics Organizations in the World

Business Problem

The international sales force was unable to get a consistent vision of the business's health due to (i) reluctance to decommission legacy reporting systems, and (ii) reluctance to integrate disparate international operational systems.

This resulted in fragmented silos of sales data, complicated by international exchange rates and regional differences in contract terms.

Thus, sales data silos prevented the organization from having a 'single version of the truth' and introduced challenges when attempting to define sales strategy and compare investments in sales and marketing.

Value Delivered

d-Wise defined the EDW technology platform to support long-term data capture and reporting needs. This demystified the health of the sales organization by offering a single point of data for the entire organization, enabled specialized reporting needs by utilizing data marts built off the EDW, and provided a single source of the truth for international sales data.

Technologies Used

Oracle PL/SQL, SAS Enterprise Business Intelligence, SAS Data Integration

CASE STUDY:

A Global Healthcare Leader

Business Problem

Data within an internal Clinical Data Management System (CDMS) was separated from SAS Drug Development (SDD), an external, hosted clinical data repository. Getting the data synchronized involved a lengthy import/export process that took over twelve hours.

Key Issues

- Many clinical systems within the pharmaceutical industry do not contain a data warehouse but do contain federated data repositories.

Value Delivered

d-Wise designed and developed custom integration software for delivering data from the customer's CDMS into an SDD server. This design included an extraction of data from the customer database on the customer intranet, a conversion of data to CDISC SDTM standard format (a standard for clinical data interchange), and a web service, extranet delivery mechanism to deposit the data into the SDD server at the remote data center location.

The project automated both the flow of data between systems over the public Internet and the conversion of data to the preferred structure for clinical data analysis workflow within the SDD environment. Data for individual patients and clinical data events were extracted based on data record change rules, packaged for delivery to the remote system and match-merged in the target data repository. The system supported incremental data loads ranging from a few patients to tens of thousands per clinical study.

d-Wise designed the solution and articulated the technical implementation strategy; assumed the technical leadership of the implementation phase; led internal teams and interfaces to vendors.

Technologies Used

Web Services, SAS Drug Development, Java, XML, CDISC SDTM