LPA SYSTEMS

Designing & Building a Data Warehouse

Business Overview

Our client, a large manufacturing company ("LFSC"), has a large field service force to help maintain and fix equipment across North America. Some of the force is direct employees, and some are agents. Customers call LFSC when their equipment is broken and place a work order. The field service force calls back to LFSC when they are done with the current job to get their next job assignment. Both groups need visibility to the work orders and their status in the queue. Management needs access to where, how and why costs are incurred.

Business Challenge

While LFSC has a call center and software to handle both incoming (customer) requests and outgoing (field service personnel) requests, a logistics group to ship and receive parts, a refurbishing center for returned parts, a financial invoicing group to analyze contracts for what's billable, analyzing the whole operation for efficiency and for responsiveness requires all of this information in a single view: Service call data (parts used, time spent, broken calls) from the call center, contractual data (terms and conditions about service levels) from the headquarters Contract system, asset configuration and location from the Asset system, and financial data (part costs, personnel costs, transportation/freight costs, storage location fees) from the back-office billing systems.

Optimizing such a complex operation is difficult. And, there are huge costs associated with not being effective: for example, service level agreements with penalties for not having the right part and trained resource in the right place at the right time.

LFSC understood it needed a consolidated environment that could provide a complete view of the environment with daily (but not necessarily real-time) data to be used for analysis. They turned to LPA to design and build the data warehouse to be used by internal management and analysts, and by customers, for SLA conformance and status.

Solution

While LFSC engaged in an RFP process to choose the right toolset(s) for the data warehouse, LPA created a team to review the several hundred mappings from the dozens of systems to bring services data from the diverse sources to the to-be-built data warehouse.

LPA then gathered requirements for data security and senior management reporting, combined those requirements with the analysts' needs and started the design of the data warehouse. Knowing that this warehouse would have many distinct parts and would evolve over time because of the many different types of users and needs, LPA partitioned the work into small steps. Each step focused on providing new reporting capabilities to the users combined with the ability to retire legacy systems that were providing some of the same functionality.

LPA designed and built the first several sections using the data warehouse and BI technology selected by LFSC. Having established a pattern for successful deployments we then started a transition to LFSC's off-shore development team, with LPA designing the next few sections and the off-shore team developing and testing the code. After several successful off-shore development sprints LPA performed knowledge transfer of the entire design to the off-shore team where they could continue to develop and maintain the data warehouse.

Results

LFSC was able to transition from a loose collection of legacy, stand-alone reporting environments to a best-practices, integrated, near-real-time enterprise reporting environment for their North American Service organization.

- From an operational standpoint, they are now able to look at trends and determine critical cost drivers such as personnel training issues and parts usage issues.
- From a sales standpoint, they are now able to provide to their sales/account team a better view of the problems a customer had and LFSC's performance so the sales team can walk in and manage the discussion.
- Financially they were able to retire many point solutions with their associated hardware and software licensing costs.
- From a technical standpoint, the data warehouse has been the cornerstone of LFSC's migration to state of the art systems and business processes.