EDGEWATER TECHNOLOGY

Multi-Phased Approach to Achieve Enterprise-wide Data Integration

Edgewater Technology assists an integrated Healthcare provider and payer with the formulation of an Enterprise Data Strategy as well as an Implementation Plan for an Enterprise Data Warehouse (EDW).

Edgewater Technology's Healthcare and Data Services Consultants:

- Identified clinical, business, functional technical, and data requirements;
- Analyzed source systems;
- Created a custom conceptual data model for the EDW;
- Developed a Conceptual Technical System and Data Architecture;
- Prepared an Implementation Roadmap to realize the EDW vision; and
- Completed a detailed Implementation Plan for the first phase of the EDW.

The Challenge:

A progressive and integrated regional Healthcare provider, which also operates a large health insurance plan, has embarked on a strategic program to deploy an Electronic Medical Record (EMR) system across multiple facilities and several key areas of both their in-patient and out-patient operations. The initiative promises to introduce transformational improvements in the degree of integration and the homogeneity of operations across various facilities and functional areas. The organization recognizes that this initiative represents an almost unprecedented opportunity to position its operations and technology infrastructure to exploit the new and existing sources of critical data that will result. Furthermore, it provides the impetus to integrate data across the enterprise and to vastly improve processes and decrease cycle times and costs, while providing enhanced reporting and analysis capabilities to the enterprise as a whole.

The envisioned solution consists of an integrated EDW, a multi-subject-area repository that will hold all of the critical information needed by various stakeholders, decision makers and analysts across the organization.

To achieve this goal, the organization realized that it needed to coordinate and integrate the definition, collection, processing, management, analysis, presentation, and dissemination of various sources and formats of data pertaining to numerous functional and subject areas. Data pertaining to clinical, patient, operational, and business outcomes had to be combined with quality and safety data, as well as with health plan data on claims, reimbursements, enrollment, policies, providers, and members. These must eventually be combined with performance and compliance data, patient and physician satisfaction data and data on market share, revenue cycle, cost management, and various financial metrics.

Such a high level of integration presents enormous challenges, requiring a comprehensive strategy to drive the technological, operational and organizational resources necessary to realize the promise of an Enterprise Data Strategy and Warehouse. Despite prior attempts to launch such a program, they were unable to overcome the barriers and sustain the momentum necessary to achieve its vision. Edgewater was engaged to develop an Enterprise Data Strategy, Technical Architecture and Phased Implementation Plan to achieve their goal, to maximize the value of the EMR, and to achieve and sustain a competitive advantage.

The Solution:

Edgewater conducted a two-day workshop to understand the high-level requirements and challenges of the key decision makers and stakeholders, and to identify an initial area of focus for a proof-of-concept. At the start of the strategy engagement, interviews were conducted with over 40 representatives from clinical, operational, and financial management, and Information Technology (IT) groups across the enterprise to obtain more detailed requirements.

From the requirements, a Conceptual Data Model was created using Edgewater's industry baseline model for Healthcare. The model was extended to address the additional needs of the health insurance operation, as well as the Finance, Human Resources and other departments. The resulting model addresses the needs of the enterprise from clinicians and their patients through senior management.

Next, Edgewater completed a Conceptual Data Architecture. Based on Edgewater's Business Intelligence Framework, the architecture covers all aspects of an EDW solution beginning with analysis of the source systems through the delivery of information to end users in a secured environment. Edgewater identified gaps between the framework and the current environment, highlighted risks and provided recommendations on a strategy to move forward.

An Implementation Plan to realize the full EDW vision was developed, outlining phases covering the multi-year roll-out. For each phase, the rationale of its selection and placement, the capabilities to be realized and a high-level estimate of tasks, resources, costs, and timeline were provided.

For the initial phase, focused on surgical services, an in-depth analysis and a detailed workplan were completed. This phase will establish the foundation for the technical architecture, which will benefit all future phases. Immediate and significant cost savings and process improvements are expected upon the completion of this phase, which will create the momentum for future phases to realize the full benefits of the EDW.

As a result of this project, the organization has the framework and a roadmap to move forward with this important initiative and to realize the benefits of data integrated across the enterprise.