

Kyowa Hakko Kirin Increases Maintenance Productivity for Cloud-Based Applications by building a Transaction Hub with the help of CA ERwin® Modeling

KYOWA KIRIN Business Impact Summary

CUSTOMER PROFILE

Organization:

Kyowa Hakko Kirin Co, Ltd.

Industry:

Pharmaceutical

Employees:

Approx. 7,500 employees

BUSINESS:

Kyowa Hakko Kirin Co., Ltd. is engaged in the manufacturing and marketing of medical products and pharmaceuticals. As the parent company of the Kyowa Hakko Kirin Group, it manages the business activities in the Bio-Chemicals and Chemicals segments with the Pharmaceuticals segment as its core business. Founded in 1949, it has grown to become an organization with over \$3.3 billion in revenue.

CHALLENGE:

In moving to a cloud-based, SaaS information management system, Kyowa Hakko Kirin needed to achieve a consolidated view of information across the organization including manufacturing control, sales and logistics, and cost accounting. To enable this new system which was integrated with SaaS, they needed a centralized source for both transactional and reference information.

SOLUTION:

To create a 'single version of the truth' for Kyowa's core information assets, the team created an award-winning transaction hub, which consolidated transaction and reference information for reuse across the organization. Using CA ERwin's data modeling and metadata management capabilities, they were able to create consistent standards that promoted increased reuse among systems and teams.

RESULT:

The ability to reuse a consistent set of data definitions and standards increased the data quality of the information provided to the business via cloud-based applications. Not only was the resulting data of higher quality, but development and maintenance costs were significantly reduced through increased efficiency from reuse of core data assets and structures.

Business

INNOVATION THROUGH INFORMATION-BASED TECHNOLOGY

The researchers and scientists of Kyowa Hakko Kirin are working to discover and create new ways to improve wellness and treat disease with a special focus on cancer, kidney and immunological diseases. Their unique expertise and experience, combined with state-of-the-art technologies, allows them to create innovative and effective drug development capabilities. The staff at Kyowa Hakko Kirin utilizes their technology and intelligence in every step of the process from research and development, to the manufacturing and marketing of pharmaceuticals.

In the fast-paced and innovative world of pharmaceutical development, information is a key strategic differentiator. Access to accurate, consistent information is crucial to the design and manufacture of the complex pharmaceutical and chemical products produced by Kyowa Hakko Kirin. In order to provide real-time access to strategic information, the IT experts at Kyowa Hakko Kirin created a single Transaction Hub, with cloud-based application access, so that all departments across the organization could have easy access to quality information, while reducing the costs and effort of maintaining the back-end systems to support this information sharing.

Challenge

CONSOLIDATING INFORMATION SILOS

The information technology team at Kyowa Hakko Kirin was faced with a large volume of disparate systems that each stored data in a different way on different platforms. Some data was in Oracle databases, other information was in ERP systems such as SAP, and still more was in legacy mainframe systems and data transformation repositories like Informatica's PowerCenter. And the interfaces between each system were complicated and needed to be managed as well. In order to consolidate information into a single hub, the team needed to create an accurate inventory of the organization's data assets, and then standardize the metadata definitions and data structures before migrating the information into a consolidated system. Not only did the technical data structures need to be standardized, but at the same time the team needed to ensure that the data definitions met the requirements of the business as well. The team has a long history of understanding this business metadata and many have been dealing with these metadata definition since the 1980s.

An additional challenge was that the data in existing systems was tightly coupled with applications, making data standardization and reuse difficult. In order to achieve efficiencies and standardization through data asset reuse, the team needed to create a loosely-coupled architecture where the data architecture could be optimized and standardized as an independent infrastructure.

Solution

A SINGLE HUB FOR TRANSACTIONAL AND REFERENCE DATA

In migrating information into Transaction Hub which was held in a single transaction Data Warehouse Hub (DWH), Kyowa Kirin made extensive use of CA ERwin Data Modeler to create reusable data standards. To create a roadmap of the existing information assets that existed in the organization, Kyowa Hakko Kirin used the Logical and Physical modeling capabilities of CA ERwin Data Modeler to create a visual design of the database infrastructure. These designs were stored in a common repository, so that they could be reused by the team, which increased productivity for system maintenance. Indexes and foreign keys were created to optimize the performance of the databases. Naming standards and domains were used to ensure that data was defined the same way across all systems, so that information was easier

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Mr. Nakayama
Kyowa Hakko Kirin

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to identify, consolidate, and access. Kyowa Kirin also implemented a process that stores and extracts them in/from the transaction DWH using the PowerCenter ETL tool from Informatica.

In addition to the technical infrastructure that was created in the data models, business requirements needed to be captured as well. Business definitions and rules are defined as metadata definitions in levels of Logical data models and are stored in neutral, central repositories unlike EAI or physical repositories, named The Repository which is provided by Data Research Institute. “Having a single enterprise model helped us understand what data existed in the organization”, said Mr. Nakayama of Kyowa Hakko Kirin.

Results

INCREASED EFFICIENCY AND HIGHER DATA QUALITY

With the successful migration of information into the Transaction Hub, Kyowa Kirin was able to create a consolidated view of information, and successfully roll-out a new cloud-based, SaaS application that was based on high-quality data. As a result of these efforts, the team was given the Japan IT Award in 2009. With this single source of reference, data management was centralized and more efficient, as reuse of assets led to reduced maintenance and development effort. Kyowa Hakko Kirin was able to save \$1 million by eliminating their functional test period due to this new architecture. In addition, they expect to save an additional \$5 million per year due to reductions in system development and maintenance costs.

With the introduction of this new system, the quality of the information was trusted by the organization and met the core business requirements that are needed to help maintain Kyowa Hakko Kirin as a leading-edge pharmaceutical organization that continues to drive innovation and efficiency through best practices in information management. An additional benefit was that systems were easier to use and implement, resulting in reduced time to implement new services (3 months).

Risk was also reduced due to this new architecture. With its heterogeneous nature, dependency on a single system or vendor was reduced. New mission critical systems such as sales & logistics and cost accounting have already gone into full-scale production system and they have improved the maintenance productivities dramatically. In the future, they will expand their scope to include a new production control system and an accounting system.

Figure 1:
Collaboration between Transaction Hub and SaaS

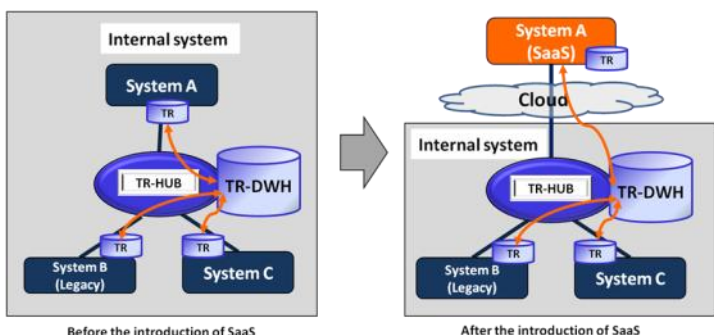
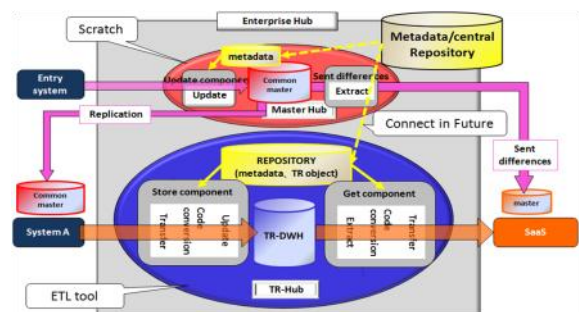


Figure 2:
Architecture of the Enterprise Hub



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