BREATHING NEW LIFE INTO OLD SYSTEMS

The Wacoal Story

WITH XBRL-GL

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THE WACOAL CORPORATION (Wacoal), an apparel manufacturer and marketer located in Kyoto, Japan, recently faced a classic problem—the need to significantly improve the quality of financial data available to key decision makers. They had little time or resources to make wholesale changes.

Wacoal isn't alone in their challenge. Recently, the severe recession in the Japanese economy and new threats from overseas manufacturers, especially from the Chinese, have been forcing the apparel industry to achieve higher levels of operational efficiency both internally and externally throughout the apparel supply chain. Facing intense economic pressure, Wacoal began to look to their information technology system for answers. They ultimately turned to a radically new technology—XBRL-GL. It was the world's first installation of its kind.

We'll first tell you about the company and its IT systems, the options they considered to provide better data, and then why they chose the technology they did.

THE COMPANY

Wacoal manufactures and markets apparel—including lingerie, nightwear, children's underwear, outerwear, and sportswear—and other textile products. It also has other lines of business. According to Wacoal, sales were approximately 164 billion yen for the year ended March 31, 2003, and employees number more than 10,000 worldwide, with 4,700 in Japan.

Most of the company's operations are in Japan, certain other countries in Asia, the United States, and Europe.

With upscale department and specialty stores as their primary customers, Wacoal sells garments in China, Southeast Asia, France, the UK, and the U.S. under the following brands: Wacoal, Donna Karan New York (DKNY), La Vie Aisee, and Wacoal's Natural Up Bra and Micro Hips shorts.

Historically, the Japanese apparel industry has operated in a unique market structure. Suppliers to this industry such as Wacoal bear the risk of inventory and, as a result, put a high margin on products shipped to merchandisers. Most companies in the supply chain haven't been information technology enabled because many are small, and their marketing and manufacturing processes are complicated and difficult to standardize. Although Wacoal uses a great deal of technology, their systems weren't working well together.

In addition, there was a revolutionary change in the accounting world that was forcing consolidated financial reporting and quarterly financial reporting, both of which had only recently been introduced to Japan. Wacoal has 36 subsidiaries throughout the world, but there was no system for consolidated accounting management.

Faced with these environmental challenges, Wacoal launched a project called WARP (Wacoal Accounting Reengineering Project) in October 2001. With WARP, Wacoal aimed at realizing:

(1) Real-time cash management,

(2) Decision support by the managerial accounting system,

(3) Reduction of indirect costs, and

(4) Integrated accounting systems that conform to worldwide standards.

LEGACY SYSTEMS WERE LACKING

When Wacoal analyzed their information technology systems, what they found wasn't very encouraging. Their technology had been growing as the company grew—systems were added on an as-needed basis, which resulted in a patchwork quilt of 32 independent legacy systems. Many of these legacy systems were more than 10 years old.

To improve the quality of business-decision information, Wacoal sought a solution that would connect its disparate systems together in a seamless data flow. These system changes would allow the company to achieve operational efficiency and concentrate on its core competence. The question was how to accomplish a seemingly complex task of system and platform integration in a very short time frame with a limited project budget. The answer came from Wacoal's technology partner—Hitachi—and the freely available eXtensible Business Reporting Language for General Ledger (XBRL-GL), the Journal Taxonomy.

The purpose of XBRL-GL, the Journal Taxonomy is to supply a framework that will facilitate data exchange among software applications the company uses and other financial information stakeholders, such as lenders, investors, auditors, attorneys, and regulators. The XBRL-GL format makes connections between different systems in order to exchange data.

XBRL-GL reports not only the transaction amount, such as cash in the balance sheet, but it also reports business environment details, such as who posted the entry and when; what kind of event happened in the entry; who was involved in the event; who the supplier, customer, and employee were; and what kind of documents (invoice, check, receipt, etc.) correspond to the entry.

As Figure 1 illustrates, Wacoal's legacy system is composed of business systems (purchasing, sales, and wages) as well as the financial system.

The business and financial systems were built independently because the original system architect lacked a strong concept of machine-to-machine connectivity.

The business system is based on mainframe, minicomputers, UNIX, or Windows-based PC servers. The purchasing, sales, and wages management subsystems were introduced at different times and on various platforms,

Figure 1: LEGACY SYSTEM
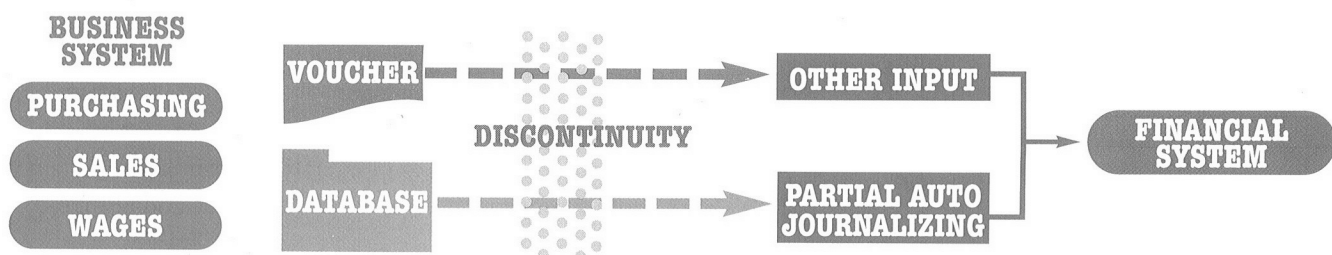
so they lack the flexibility to extract data for the current business climate.

In addition, the financial system is a stand-alone system that requires information feeds from the business system. The biggest source of pain in the old financial system was that the data flow from the business system to the financial system was only partially automated. Most data had to be input manually. This meant IT employees would extract data from vouchers the business system created and then manually feed the data into the financial system. According to Hitachi, which was assisting Wacoal as a technical consultant on project design and implementation, this discontinuity created the following problems:

◆ Multiple uses of the data often required additional input of data to a second or third system. This caused excessive labor cost, loss of data quality, and timing problems.

◆ When problems occurred in the financial system, it was hard to pinpoint the exact cause, which increased the difficulty of the repair.

◆ Several different business rules introduced intolerable errors into the system.

◆ Items extracted from different legacy systems were calculated based on different logic, even though the data seemed to refer to the same item. For example, a customer order number in the sales system might be different from the order number in the customer-returns system.

STRATEGIC OPTIONS

Wacoal was challenged to create a system within a fixed time frame and resource constraints that would be flexible enough to quickly adapt to external changes in business requirements. It considered the following options:

1. Replace total systems with a single package, or
2. Replace only the financial system, and realize connectivity via XML (Extensible Markup Language).

Although the first option of replacing all systems with a single package would create consistency throughout the system, it was coupled with the risk of being locked into a single vendor technology standard. Moreover, the business rules on the systems were so complicated that it seemed almost impossible to integrate them into a new system within a short time period. In fact, it would take much time and many resources to customize the present system as well as add an enterprise resource planning (ERP) system to duplicate the multiple business rules embedded in the current business systems.

The second option had several advantages over the

single-package approach. Wacoal could keep the business systems intact with little or no disruption to the current functionality, and, with the financial systems separate from the rest of the business systems, it would be relatively easy to install a new financial package. Most important, a loosely coupled architecture would enable Wacoal to change the systems as needed, which would be difficult in the first option where all subsystems are tightly coupled and hard-coded.

Wacoal chose the second option. Hitachi suggested that Wacoal use the Oracle E-Business Suite as their new financial system and XBRL-GL as the XML technology connecting the business and the financial systems.

WHY XBRL-GL?

Every new technology brings with it uncertainty in terms of market and technology, but, as far as XML is concerned, we can say that it has crossed the chasm. With numerous visible XML implementation success stories, the shift toward its use is accelerating worldwide. XML works easily with the various Wacoal technology platforms, so there was little risk in the company adopting XML technology.

One uncertainty inherent in the technology is that XML is self-defining, which means that anyone can create definitions for a set of data. At present, there are more than 100 XML standards for vertical industries or horizontal industries in OASIS (Organization for the Advancement of Structured Information Standards), a nonprofit global consortium that drives the development,

Figure 2: **XBRL-GL AUTO-JOURNALIZING SYSTEM**

convergence, and adoption of e-business standards. This consortium of tech firms is working with a United Nations organization to develop a common way for businesses to use XML to exchange data. (For more information on OASIS, visit www.oasis-open.org.)

XBRL, however, is the only XML standard developed for financial and business reporting. It has the backing of an international organization with more than 200 members and is supported around the globe. In addition, major software vendors such as Microsoft, Oracle, PeopleSoft, and SAP have announced XBRL support in their core products.

On the other hand, compared to traditional data traffic on local area networks, tag-based XML files can become bulky. Since each message has to be parsed and converted into an underlying object model for further processing, there's a risk of low system performance.

Taking all the above issues into account, Wacoal agreed with Hitachi that the best alternative was an XML and XBRL core platform for data conversion, which would loosely couple their legacy business systems with the new Oracle E-Business Suite.

XBRL-GL AUTO-JOURNALIZING SYSTEM

Because Wacoal's legacy systems were built without integration in mind, various platforms, such as mainframes, minicomputers, UNIX systems, and PC servers were used to create data that was eventually transferred to the financial system. The conversion of the data to XBRL-GL—a platform-independent solution—permitted Wacoal to concentrate on the data instead of the operation systems and computer platforms that created it. A brand-new software solution—the Hitachi XBRL-GL Auto-Journalizing System—converted the data.

As Figure 2 shows, the XBRL-GL Auto-Journalizing System has two layers: the XBRL-GL conversion engine and add-ons. The conversion engine converts the output documents from the business systems into an XBRL-GL file ready for direct input into the Oracle financial systems. This conversion uses Wacoal's existing business rules, which are implemented as an "add-on."

This double-layer structure of the XBRL-GL Auto-Journalizing System enables developers and customer companies to introduce an XBRL system quickly and at low cost—they only need to describe their unique business rules into the add-on. Easy to construct, the system is also easy to modify when a change in business rules occurs, which is the significant advantage over traditional hard-coded systems.

This project proved to be highly successful. Wacoal uses XBRL-GL to mark up financial data from multiple legacy systems and transmit the tagged data for use in their new Oracle financial system. The system was implemented using standard off-the-shelf software tools (Hitachi XiRUTE), which, to us, proves the maturity of the XML software tools. The system has reduced implementation time significantly as compared to other technologies such as a single ERP introduction.

So how does Wacoal use the system? The company relies on it to convert purchasing, sales, inventory, materials, and workflow. One prime example is in streamlining travel vouchers. Figure 3 shows how travel expense vouchers originating from the business systems transform and reenter the Oracle financial system. Wacoal uses a Windows-based workflow system (Hitachi Groupmax) for managing travel costs. Once line managers approve an expense report, the system generates a comma separated variable (CSV) file, which is the simplest form of file for holding scientific or other data. The XBRL-GL Auto-Journalizing engine transforms the file based on the business rule registered in the add-on, then sends the final file to the Oracle AP (Accounts Payable) subsystem. The add-on not only does simple journalizing, but it also does tax calculation, counterbalancing accounting, and data validation (schema validation).
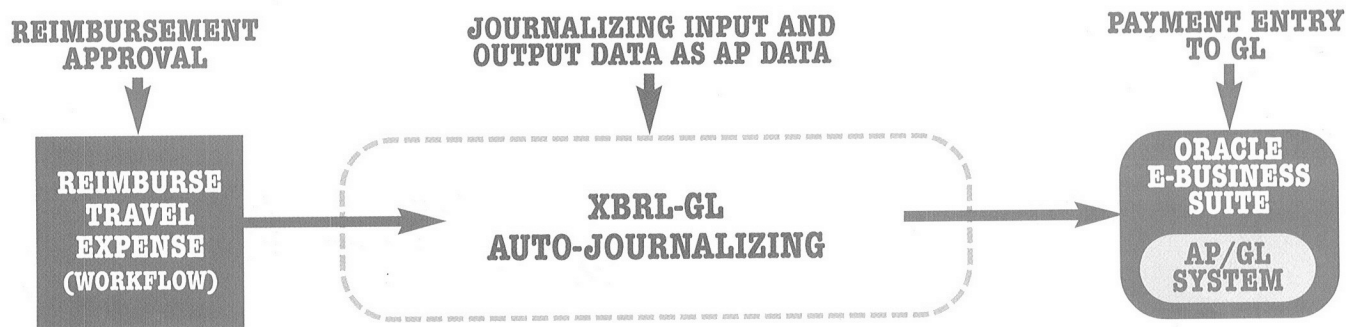
REIMBURSEMENT APPROVAL

JOURNALIZING INPUT AND OUTPUT DATA AS AP DATA

PAYMENT ENTRY TO GL

REIMBURSE TRAVEL EXPENSE (WORKFLOW) → **XBRL-GL AUTO-JOURNALIZING** → **ORACLE E-BUSINESS SUITE / AP/GL SYSTEM**

Figure 3: **EXAMPLE OF XBRL-GL AUTOJOURNALIZING SYTEM**

THE BENEFITS

The new accounting system was launched in April 2003 and continues to streamline processes at Wacoal. It offers the backbone for consolidated financial reporting of 36 subsidiaries, shortens month-end closing time by two days, and improves the quality of managerial reporting by real-time cash management. Before the system, reporting was done once a day.

The system significantly improves the quality of the financial data available to key decision makers. Since a major strength of XML is its ability to transform and transmit data from system to system regardless of the source, destination programs, or platforms, Wacoal's system can now provide up-to-date financial information to aid management decision making. It also provides a fundamental real-time environment for gathering financial performance information from disparate systems such as purchasing, sales, materials, workflow, and inventory. Management can receive interim financial data, which gives them more time for analyzing results.

What else has the new system achieved?

◆ Flexibility has been introduced into the information technology system.

◆ The data quality has improved significantly because of direct system-to-system feeds.

◆ Compliance to the open standard XBRL enables XML compatibility with other data sources.

◆ Implementation time is significantly less than with other technologies such as ERP.

◆ Users can extract data using standard queries and report writers without special training or system expertise because the system tags the data in XBRL-GL and moves it to the Oracle financial system. In the past, the legacy systems typically provided structured data that required skilled report writing and data retrieval. For instance, a question about purchasing would need to be routed to a person who had expertise in extracting data from the purchasing system.

THE FUTURE

The fact that the XBRL-GL system is XML-based provided Wacoal with the ability to plan for additional system enhancements such as an ERP system. For example, a future upgrade to the purchasing system can be implemented quickly because the system's output, coded in XBRL-GL, will automatically be compatible with the present system.

Wacoal will achieve additional business functionality through the use of XBRL-GL. Stay tuned! ◼

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Neal Hannon is conducting an XBRL workshop at IMA's Annual Conference. Visit www.imanet.org/chicago for Conference details.