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XBRL Implementation Strategies: The Deeply Embedded Approach

In the final column of the XBRL Implementation Strategies series, I will discuss in detail the "deeply embedded" approach, the third approach to XBRL implementation introduced in the March 2009 column, "How to Make Your Data Interactive."

XBRL has proved very successful in its adoption by governments and regulators worldwide. The drivers behind its success are related to the process efficiencies and the information transparency that it enables as well as the significant cost savings that it generates in data integration, dissemination, and analysis. These drivers are key, not only for regulators but also for businesses and other entities—whether they are subject to an XBRL mandate or not. The deeply embedded approach to XBRL implementation is about leveraging those XBRL benefits within a corporate information system. It moves beyond the concept of XBRL as just another format to represent financial information with no real added value for adopters apart from immediate compliance with a regulatory mandate.

The enabler of a deeply embedded XBRL implementation is the use of the XBRL Global Ledger taxonomy (XBRL GL) to standardize the detailed data—from which end reports and regulatory filings are created—and the rules of aggregation/summarization that determine their creation. Instead of generating the end report under whatever process is currently in place and then mapping to the appropriate XBRL taxonomy, the whole process is standardized in the deeply embedded approach, including the source data.

The main purpose of this approach is to leverage the benefits that XBRL brings in terms of automation of corporate processes that are currently manual, resource-intensive, and error-prone. Compliance with XBRL mandates is only one of the benefits—and certainly not the main one. Significant cost savings in key and pervasive corporate processes can be achieved, and the extent of those savings grows the deeper XBRL is embedded within the information system—from the trial balance level down to the general ledger, journals, and, ultimately, documents and transactions.

The result is a sort of "logical"—as opposed to physical—data warehousing approach where consistent business rules and controls, templates for visualization, and analysis can be applied to the standardized data no matter what data store or software package the data was created in or where it currently resides within the corporate information system. This also enables the data to be accessed in its original format and location.

Use Cases

Use cases for deeply embedded XBRL implementations typically are geared toward internal data handling and reporting. They usually aren't discussed publicly as often as implementations focused on external reporting or compliance. The two main use cases that have been publicly disclosed are the Wacoal Group (see "Breathing New Life into Old Systems with XBRL GL," *Strategic Finance*, March 2004) and, more recently, the Fujitsu Group (see http://18th conference.xbrl.org/sites/18thconference. xbrl.org/files/hanaoka.pdf).

Costs and Benefits

Because the scope of a deeply embedded XBRL implementation is much broader than compliance with an XBRL mandate, the costs and benefits aren't comparable

to the alternative approaches discussed in the previous columns of this series.

It's very difficult to provide an estimate of the costs since they depend on many factors that can vary significantly from one implementation to the other, such as the size of the organization, its structure, and the overall purposes of the implementation. Both Wacoal and Fujitsu faced the challenge of an information system distributed in a large number of units and multiple software packages. Both companies considered two possible solutions: (1) replace the existing infrastructure with a single ERP installation or (2) use XBRL to integrate each component of the existing systems. There are consistent indications in both cases that the cost and time required for completion resulted in a fraction—around one-third—of the "single ERP instance" solution.

Again, these numbers shouldn't be taken as an exact estimate, but they are an indication that the cost reductions of an XBRL deeply embedded implementation are significant and have an order of magnitude that makes them difficult to ignore. More indirect evidence of the "double-digit" savings that XBRL enables

come from two implementations that aren't internal but have comparable features that provide additional insight on the significant savings generated: Standard Business Reporting (SBR) and U.S. FFIEC/FDIC XBRL.

The *Standard Business Reporting* project is reducing the compliance burden for businesses in The Netherlands and Australia. In The Netherlands, where SBR is in its most advanced stage of implementation, the cost savings for businesses and the government have been conservatively estimated to be €350 million. Similar benefits can be achieved in the corporate environment by using XBRL to create a standardized view of internal business data and information as well as by using it as the foundation for an interactive, actionable manual of internal policies and auditing procedures/controls.

The *U.S. FFIEC/FDIC XBRL*-based implementation and deployment of standardized validation rules has achieved overwhelming benefits as a direct consequence. Errors in data received from banks went from 68% to 5%, processing time of the quarterly call reports that banks must submit to the FDIC was reduced from 45-60 days to two days,

and the number of personnel involved in the process went from 1,000 to 200. This same model applied to internal business rules and controls in a corporate environment will accomplish even more significant efficiencies and cost savings given the pervasive process issues that it can address successfully.

Efficient and Effective

The efficiency in the use of XBRL that the deeply embedded approach to implementation brings is much greater than and not comparable with the bolt-on or built-in alternatives. At the same time, it's a more complex approach that requires careful planning, particularly if the goal is to leverage XBRL beyond the simple achievement of regulatory compliance.

In general, the internal use of XBRL enables:
◆ The elimination of one-way interfaces between systems,
◆ The elimination of manual reconciliations at all levels of data integration and summarization,
◆ The seamless traceability of any information to its source—a seamless audit trail—and

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◆ The reusability of consistent templates for visualization, validation, and analysis across applications and business units.

These are key features in virtually every process that deals with corporate data, and this is why a deeply embedded XBRL implementation can easily expand to cover complex processes and issues. It's important to note, however, that this approach is very suitable to being implemented gradually. The use of XBRL for internal purposes doesn't replace the existing IT infrastructure; rather, it complements it by filling the gaps that are usually handled through manual processes. This means that its implementation can be gradual and initially address one single process deemed particularly significant or appropriate for this kind of approach. That process can be used as a pilot to test the technology, promote internal awareness, and build skills, and then implementation can be gradually extended to other processes or business units in the corporate environment. **SF**

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