

# Smart Adapters: The Key to Effectiveness in B2B Integration

## The Business Environment

The constantly evolving business environment requires in-depth knowledge of what technology can and cannot offer. In the past, all that was important was having the better mousetrap and customer satisfaction. In today's Internet economy, companies need to be fluid and flexible enough to meet not only their customers' needs but also the needs of their employees and suppliers. Employees require information from other departments to make better decisions and suppliers want to be part of an automated supply chain to reduce costs and increase profits. Enterprise Application Integration and adaptive technology is helping make that communication and performance possible and currently, there are a number of solutions available. To effectively participate in this Internet centric world, most companies today must have an e-Business strategy and must strive for an automated and integrated environment. Their success in achieving these goals begins with application-to-application integration (A2A) or internal integration. It then moves to business-to-business integration (B2B), which typically focuses on supply chain related efforts. And finally, they move on to the more complex goal of business community integration (BCI) where information flows freely between enterprises customers, suppliers, and internal systems are all electronic, automated, and in real-time. Those responsible for reaching these lofty goals only have one problem - sifting through everything and discerning the "nice-to-haves" from the "need-to-haves."

Since the early 1990s, the "need-to-have" has been to implement and maintain an ERP solution with an emphasis on internal business process and back-office reduction in costs. To achieve ROI on the ERP investment, companies first need to convert data from existing systems and then need to integrate their ERP applications, such as Oracle Financials, to legacy systems, disparate systems, and best-of-breed applications. The starting point is with A2A integration. A2A integration allows ERP systems to communicate between departments, multi-organizations, different sets of books, and transfer data from legacy and other systems to a destination application. Today, most

companies are still concentrating on this task but some are ready to move onto their next adventure - B2B integration. And while there are those companies that are truly ready to move forward, (meaning those companies that already have A2A complete and working), many companies in this "day of the Internet" are rushing to have B2B integration without the A2A foundation securely in place.

This foundation of inter-company information system integration is crucial for any forward-thinking company because before a solution can be developed to integrate systems across companies and allow customers and suppliers to transact, companies have to be 100% confident that their internal systems can handle the demand of these transactions. Other aspects that should concern companies are system scalability and long-term total cost of ownership. For instance, can their operation upgrade Oracle Financials and how would an upgrade impact their current integration strategy? Or in other words, can their systems handle the growth that comes with success? Planning for organizational growth is normally taken care of in the business plan but it can be difficult to foresee what technological requirements are needed to actually deploy a flexible solution. This obstacle makes it imperative that the IT departments within companies have a deep understanding of the business goals and can translate that into an infrastructure solution that enables ERP system flexibility and connectivity in A2A, B2B and ultimately BCI.

When speaking of true automation through electronic communication, the new buzzword or acronym 'BCI' will undoubtedly enter into the conversation. BCI facilitates the communication between all parties, from customers to partners, vendors and suppliers. In fact, companies are hearing more than ever about how companies like Ford and Wal-Mart are integrating their supply chains to compress their operating cycles and turning the ability of having just in time inventory and the like into profits. These BCI success stories are causing companies to sit up and take notice. Companies now know that successful business community integration will result in more profitable business decisions and could easily turn into increased market share and market value, but a whole new set of problems can arise when opening the value chain to more entities. The challenges faced here include security, differing data formats, lack of communication protocols, real-time requirements, currency changes, and bandwidth issues. As more and more application vendors subscribe to such standards as XML, the challenge of BCI will become easier but until that happens, careful planning is needed to allow

organizations to take advantage of increased application interoperability in the future.

## **Determining Your Integration Strategy**

One of the first steps in determining an integration strategy is evaluating where your organization is today.

- Have you addressed your inter-company integration requirements and enabled automated data integration between systems? Sometimes you have to go outside of your current solution to meet your needs. For instance many companies, who use Oracle Applications, have decided to invest in other best-of-breed solutions, such as human resources modules or purchasing systems, to meet their specific needs.
- Have you made an effort to deploy an integration solution that will allow growth and intra-enterprise integration? This effort takes place in the A2A stage of integration, so it is important to determine what data needs to be converted or interfaced from each system now and into the future.
- Does the company require a one-time conversion to a destination application or does it need on-going interfaces? This question will also allow you to assess your current and future needs.

Once those questions are answered, it is important to determine how the company is going to evaluate the different methods available for integration. There are a couple of different options that most companies look at to fulfill their integration needs - custom coded solutions or EAI software with adapter solutions. Companies may use one or a combination of these solutions depending on their business requirements, but it is important to know what the advantages and disadvantages of each type of integration solution and what EAI vendors can and cannot provide.

First, let's examine custom-coded and adapter solutions. Custom-coded solutions are probably the most prevalent integration today but, as every CIO and developer knows, custom-coded solutions are resource intensive and have significant drawbacks. Custom coded solutions require long-term maintenance and impose challenges during applications upgrades. In addition, depending on the number of interface points, this solution may turn into what's known as "spaghetti" - many point-to-point connections that eventually become unmanageable. In addition, a custom developed solution requires a team with deep knowledge and experience in Oracle Applications. If

your consulting team is not experienced with Oracle Applications and does not understand the underlying data tables, you run the risk of delaying the project or running over schedule, while they try to figure out the complex application. If you choose this type of integration solution, make sure you choose a high quality qualified consulting team, a team that understands Oracle well enough to know the business logic and rules necessary to accurately address Oracle Applications and the value in validating the data before it enters the Oracle tables. Data validation is a must prior to posting to the database to avoid costly time in the troubleshooting and maintenance process down the road. A qualified team will save you time in this area but it should be pointed out that this method is costly in terms of time, resources and consulting dollars. And no matter how knowledgeable the consultants are, custom-coded solutions do not upgrade smoothly or as easily as one might expect. In fact it can cost up to 75% of the original integration project to simply upgrade to a new version of Oracle or add another instance that needs to be converted!

### **The Adapter Decision**

The risk and expense of custom code has led companies to explore adapter technology. Adapters decrease the high-level resources needed as well as reduce the time needed to develop interfaces between disparate information systems and applications. There are low-level and high-level adapters to choose from and your specific needs determines what solution will work best for your company.

Low-level or thin adapters simply link applications to each other or to an integration broker. They normally have very little intelligence built-in, often use the standard API to integrate applications and do not transform incompatible data between disparate applications. In most cases, companies need additional functionality that the thin adapter or API does not provide, so some custom-code is necessary. These situations require "wrappers" or custom-coded business rules and data validation routines that have the same disadvantages of a completely custom coded solution. Beware that many vendors do not explain that their solution of thin adapters still need custom coding in order to meet a company's specific needs and this could leave the company vulnerable to the risks associated with a custom-coded solution.

Low-level adapters offer the benefit of not needing to hire a database expert because information regarding the databases is normally incorporated with the design of the adapter. This saves a company time and money but

unfortunately, an application specific expert is still needed in order to complete the data validation. And because integration is a manual process with thin adapters, it runs the risk of having invalid or inaccurate data.

Another concern that affects not only thin adapters but also some limited high-level adapters is that they can only handle a limited number of transactions because they are only focused on one part of the application. For instance, some EAI vendors only concentrate on specific transactions in Oracle Applications and neglect the numerous other transactions in Oracle Applications, which would cause a problem to a company who wants to integrate their Oracle Applications with their Supply Chain Management applications. This limitation should be a "red flashing light" to those companies that are planning an expansion of services, sales growth or possibly even a merger or acquisition because using thin adapter technology will not allow them to meet their business objectives.

When implementing high-level adapters, companies can assign functional technicians and still be assured that the project is completed accurately because the business logic and rules are built into the adapters and also the adapters automatically validates the data entering the tables. It is important to point out at this time, that no matter what your specific needs are you should include in your selection criteria the ability to guarantee data validation. Some high-level adapters do offer this process and some even have the benefit of executing a report to show the implementer exactly where a discrepancy is and how to correct it. One of the most compelling reasons to look into these intelligent adapters is that they have the ability to simply pull out those discrepancies without stopping the entire run - meaning no valid orders lost or stalled because of an error in the data.

According to Ross Altman, a research director for the Gartner Group, intelligent adapters have become increasingly important for most types of integration projects. "You need intelligent adapters for almost every type of integration except the simplest," he says. "If all you need to do is move a message from one file to another, then you're not that concerned with what the adapter can and can't do. But the more points of connectivity you have to maintain, the more messages you have to move and transform, the more elaborate the process and the more frequent the changes to the environment, then the more you'll want to use intelligent adapter technology."

## The Isix *i*Dapter

If you have decided that intelligent adapters are the right solution for your integration needs, you now have to research and select the right partner. Understanding the scope, the pain, and the need to smooth the integration process is why and how Isix Software was developed. Isix is concerned with meeting companies' evolving concerns and growing with them to meet their future needs. Isix Software offers intelligent high-level adapters, or *i*Dapters, that require no custom coding, upgrades when your applications upgrade, and translates, synchronizes and most importantly, validates your data before it enters your destination tables and integrates seamlessly into most Enterprise Application Integration and E-Business infrastructure frameworks.

Isix accomplishes all of this with its revolutionary, patent pending, software integration solution and intelligently paves the last mile of integration with a powerful, pre-packaged software that drives down integration time, cost and risk. Isix delivers a robust integration server technology and over 50 plug-and-play intelligent *i*Dapters—a complete and supported solution that goes far beyond mere data transportation.

*i*Dapters are intelligent components in the Isix topology that contain application-specific business logic and translation rules for integrating with the various array of enterprise applications. Through the use of a GUI configuration wizard, Isix *i*Dapters can be applied to solve each customer's unique integration requirements.

- As enterprise application vendors upgrade their technologies (i.e. Oracle upgrading to 11*i*), Isix provides upgraded *i*Dapters and support for the new versions, which eliminates the problems and risks associated with traditional custom integration and minimizes the total cost of ownership of the enterprise system.
- Companies that need to implement instance consolidation (i.e. because of Mergers & Acquisitions or organic growth), Isix integrates disparate applications globally.
- When forward-facing solutions need to communicate with back-end infrastructures (i.e. e-businesses need their web site to integrate with their supply chain or other Oracle application), Isix uses XML to facilitate and implement the integration.



- When installed, many EAI vendor frameworks will not support the required Oracle Application adapters but Isix will seamlessly integrate with most messaging environments to provide a complete integration solution.

In addition to these benefits, Isix also translates data from one application before it enters your Oracle Applications. This ability saves time and globally reduces risk because with Isix *iDapters*, you can translate the information once and it prevails through all of the modules and arrives at the destination application correctly. This feature also makes integrating disparate systems faster and easier because it allows the implementer to define fields in one instance and have that information permeate through all of the modules.