



Stepping Up to the Application Integration Challenge

Application integration has long been seen as a stumbling block to any new software implementation. However, new tools are making the process easier – and spurring a faster return on investment.

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By Karen J. Bannan

While data should flow seamlessly from application to application, most users are dealing with siloed environments where data stays within a specific application. The fix, of course, is application integration, but this is a process that's typically been fraught with problems such as ballooning costs and duplicate effort if it works, since the process sometimes fails completely. Unfortunately, though, without integration end users are stuck manually entering data into multiple systems and applications, a process that is often haphazard, ineffective and plagued with errors. As a result, business decision-makers don't have the visibility, agility and flexibility needed to make serious and often critical business decisions.

There are options out there that can make application integration easier. Oracle, with investments that span the company's portfolio of applications and middleware technologies, is leading the charge to enable integration.

The Application Integration Challenge

How many applications does the average enterprise have in place? While no firm numbers are available, it's not uncommon for a company to be supporting ten, 100 or even thousands of applications, according to experts. Each application has its own data set, and being able to share that data among multiple applications can be extremely useful. For example, while data from a point-of-sale module can help a company with fulfillment, having the ability to use that same data within a CRM application can create additional sales and marketing opportunities.

Yet integrating such applications and their corresponding data – especially in the age of cloud

computing and virtualization – is challenging to say the least. It's not uncommon to find issues that make integration so challenging that the process can become a major sticking point when IT is considering a single application upgrade or a new implementation.

"If you're talking about integrating three or four applications, it's not overwhelming, but when you're talking about a larger scope it could very easily take many, many hours and quite a bit of work to get it done manually. It's one of the many factors that hold an IT department back," explains Ray Wang, Principal Analyst and Chief Executive Officer at Constellation Research, a research firm.

There are many reasons that application integration is challenging. The first is obvious: It's rare if not impossible for a company to have a single application that provides all its software needs. "Companies want the best business capabilities in their systems: The best ERP, the best CRM, the best data warehouse. And they need those systems to work together and also work with investments they already have in place," agrees Sonny Singh, Oracle Corp.'s Senior Vice President, Industries Business Unit. "So, when it comes to connecting these various systems, companies need comprehensive integration capabilities that can deliver business value at a lower total cost of ownership."

The problem isn't necessarily any easier if a company taps the same vendor to purchase all their applications – ERP for its back-office functionality and CRM for the front-office applications. The IT executive and his or her staff still face the challenge of integrating multiple data models and multiple instances of the application, among other issues. It's difficult to integrate data when you're comparing the proverbial apples to oranges. If you

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sit down with two people who own two systems and ask them to define 'customer,' they will come up with different definitions and criteria. Some characteristics will be similar while others won't be.

For instance, a car dealership's order processing system might have a completely different data definition of 'color' – the parameters might include green, white, or blue – than a

end-to-end business processes. Oracle is the only vendor that can say it owns best-in-class applications and an industry-leading set of tools that can enable sustainable integrations across Oracle and non-Oracle applications. After years of integration work, Oracle understands the challenges, complexities and investment – both financial and time – required during an integration project, and has the technology to make it happen.

Indeed, while there is no one-size-fits-all fix for application integration – even something that works now may not in five years – today it is possible to leverage Oracle tools that provide sustainable integrations over time. Oracle Fusion Middleware, which provides a complete set of tools built on an open and standards-based platform, is designed to meet the needs of various styles of integration.

To be effective, application integration investment cannot happen in one place. It needs to take place beyond just applications. Oracle is investing across applications and middleware tools and technology to deliver a comprehensive, sustainable integration solution and simplify the integration experience for customers.

Oracle has acquired and continues to acquire industry-leading technologies and applications so it can provide customers with best-in-class applications and technologies that streamline and enable integrations. With every new acquisition, Oracle better understands how data model differences, functional configuration differences, and business process differences directly influence the cost and complexity associated with developing and maintaining integrations.

With Oracle Fusion Middleware customers will find there is a right tool for every applications integration scenario (see Figure 1). "Oracle has also introduced Application Integration Architecture (AIA), which provides a rich set of methodologies, standardized models, and packaged integrations, each intended to orchestrate a specific business process across multiple applications," explains Singh. "Oracle Fusion Middleware tools and technology combined with AIA can help companies realize significantly more business value from their enterprise software, while lowering their integration costs, ongoing maintenance and risks."

Oracle AIA, one of the many tools in Oracle's integration arsenal, is built on top of Oracle



Application integration projects are among the most difficult for CIOs to deliver and maintain.

decorator's system, which might define 'color' as hue or saturation. This synchronization of data or the process increases in complexity as applications change with each new release. Once you complete your integration, you may have to start all over again if there is a new release for your financials application, but not for your CRM application.

Finally, there are business considerations that affect integration. Often the business users are not involved with application integration decisions since both IT and business executives mistakenly think the process is all about technology. But there's a flaw in that thinking. IT, for example, may not know exactly how a department is using an application or which functionality is most important for the continued growth and success of the business. IT may waste time integrating the wrong set of applications or processes, or even make a unilateral decision to hold off on a project completely.

That's the biggest problem with all of these disparate challenges. IT managers, overwhelmed with the prospect of having to mitigate these problems, may choose to do nothing, sticking with the status quo, or will integrate applications on an ad-hoc basis using a variety of integration methodologies. Meanwhile, the reality is business and IT leaders need to work together to define, design and test end-to-end business processes, and decide on the scope, priority and investments. By working together to make application integration investment decisions, they ensure that they are addressing the right business problems or processes.

A Round Peg for a Round Hole

Oracle has the experience and expertise to help users integrate their applications and orchestrate

Fusion Middleware’s SOA and BPM products. It provides open-standards-based, packaged solutions to help you jumpstart integration efforts across all applications including those from Oracle, third-parties and in-house, custom-developed programs. Understanding that business requirements vary from customer to customer, Oracle has identified the most common business problems and developed the needed content and methodologies to address integrations in a repeatable fashion. Also included under the Oracle Fusion Middleware umbrella are:

- Oracle Data Integrator (ODI) and Oracle Golden Gate, the two primary products used to address data integration
- Oracle SOA Suite and Oracle BPM Suite for integrating and orchestration of process-centric integrations
- Oracle Web CenterSuite, Oracle’s solution for creating portals and composite applications based on Web-based user interface integrations

Each technology addresses a different integration style. In addition, Oracle AIA contains a value-added package of prebuilt content, meth-

odologies and integration accelerators designed to provide customers with a starting point to develop and deploy integration solutions which meet their specific requirements.

Popular shoe manufacturer Crocs Inc. took advantage of these tools with excellent results. The company recently used Oracle SOA Suite 11g and Oracle Application Integration Architecture Foundation Pack 11g to ensure access to real-time data from its order management, strategic sourcing and supply chain systems that support its global, multi-channel distribution system. Using Oracle, Crocs was able to seamlessly integrate six disparate enterprise applications, including warehouse and order management systems, retail point-of-sale and merchandising systems, e-commerce and Oracle’s JD Edwards EnterpriseOne.

“With Oracle, Crocs now has a state-of-the-art integration system that has radically changed the way we support our business, providing near real-time access to data across our enterprise applications,” says Paul Lanham, CIO, Crocs. “This is invaluable to Crocs and how we will do business moving forward.”

Oracle Provides a Choice of Components for Application Integration

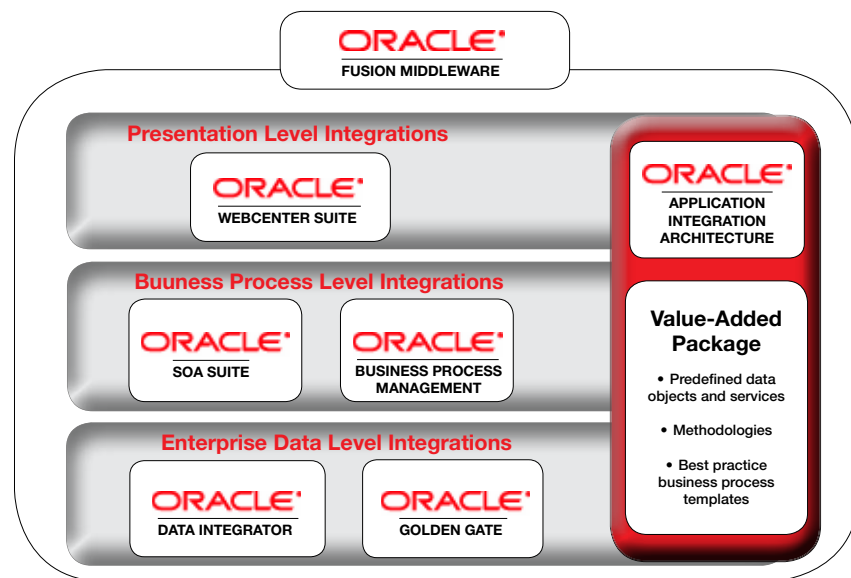


Figure 1: Oracle’s offerings cover a wide variety of integration styles and needs.

LEVERAGING ORACLE, NAGRAVISION IMPROVES SALES OPERATIONS

Digital security and convergent media provider Nagravision, a Kudelski Group company, has offices and subsidiaries all over the world. Until 2008, most had their own legacy applications, which were siloed internally as well as between offices. For example, some of the company's most sensitive financials were created and tracked using Microsoft Excel.

"We were using Excel as our pricing tool — a really complex Excel file released once per quarter, sent to all the salespeople everywhere in the world without a lot of maintenance capacity," explains Christophe Arn, Vice President of Corporate IT at Nagravision. The standard problems of lack of control, poor forecast quality and potential errors due to multiple entries made us realize that we needed to make a change."

Forecasts were a problem, says Arn, which led to procurement of components that were not necessary. And then there was the issue of manpower. Employees were responsible for consolidating data every month taking them away from other more forward-thinking work and strategic activities. "It was a clear time-consuming effort without any kind of real analytical value," says Arn.

To support its expanding business and improve enterprise operations, Nagravision decided to standardize its software portfolio, while at the same time integrating applications and data to gain a clearer view into its revenue pipeline. After the RFP process, Nagravision narrowed it down to three potential vendors, and short listed two. Integration was an important consideration, says Arn, since data quality was so crucial to future growth.

Already an Oracle E-Business Suite customer, Nagravision decided to upgrade to the latest release of Oracle E-Business Suite and install Oracle's Siebel CRM, and

leverage Oracle Application Integration Architecture (AIA) to automate and integrate its financial operations with its sales lifecycle. The ability to utilize AIA was a key deciding factor since it would streamline the process and allow data sharing and integration between the disparate applications. The company also leveraged the Oracle User Productivity Kit to train its users.

The implementation—which included business process development, testing, implementation, and training—spanned 11 sites including Paris, Madrid, Los Angeles and Singapore and 25 mostly virtual servers. In addition, Nagravision brought in a committee of ten people spanning multiple departments including sales, product management, and services to help identify key business processes.

Almost immediately Nagravision saw significant benefits, says Arn. From a software perspective, using Siebel CRM boosted the rate of new sales opportunities almost exponentially, "Before implementation we had a small number of new opportunities per month," he says. "After the production, we jumped to another order of magnitude with almost 200 of new opportunities per month."

From an integration perspective, by using Oracle's solutions, sales quote revisions have been slashed across the board. Now, when a customer gets a quote it contains the right pricing information from the start, says Arn. "Before integration, we had almost ten percent of sales orders that were modified more than five times," he explains. "Now we have 83 percent of orders with one unique version – never modified. Before, that number was around 60 percent. It's really linked directly to data transparency and alignment of data references. Our on-time delivery performance has been also dramatically improved at the same time."

A Three-Pronged Approach to Integration

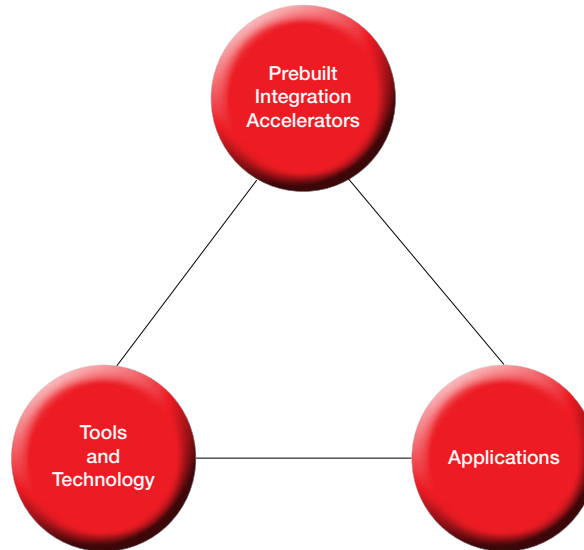


Figure 2: Oracle is committed to simplifying the integration experience. Oracle's investments include modifications to applications, enhanced tools and technologies, and prebuilt integration accelerators.

What's Your Style?

Integration starts not with software, but with business processes, explains Constellation Research's Wang. Companies must explore how each application maps to the business processes that the company is looking to enable. "Most people don't see the big picture when it comes to integration," says Wang. "They see the immediate – they have two applications that need to be brought together – but they don't understand that good integration requires a very specific, calculated approach."

Companies should match the complexity of the solution with the problem they are looking to solve. When requirements change, the end result is different. "It's not, 'I have a hammer, and every integration of the solution is the nail,'" explains Wang.

Companies must also consider which style of integration they need to use to solve their business requirement. Is the integration happening at the presentation layer, the business process layer, or the data layer? Oracle has a specific solution for each option, says Singh.

From the business process perspective, Oracle's Reference Process Models work as blueprints for the best practice tasks and activities

that orchestrate a specific business process. Once processes are modeled, users can decide which capabilities they want to mix and match from their application portfolios. This allows IT to give the business access to the best of each application, combining those capabilities into a new, composite business process. The best part is that IT can not only kick-start its current integration project, it can also capture these defined services as reusable components for future integrations.

Global server, storage and cloud computing solutions provider SGI recently used Oracle AIA's Process Integration Pack (PIP) to implement part of a new implementation of CRM On Demand. The company, formally Rackable Systems Inc., acquired Silicon Graphics in 2009. At the time, Rackable Systems already had Oracle's CRM On Demand along with its E-Business Suite. However, Silicon Graphics was running a legacy, on-premise CRM system that was in desperate need of upgrading.

Deciding Oracle CRM On Demand offered better functionality, uptime and ease of use than Silicon Graphics' existing on-premise solution, SGI began an integration project that included Oracle CRM On Demand, Oracle E-Business Suite, and Oracle Lead to Order Integration Pack for Oracle CRM On

Demand and Oracle E-Business Suite, an Oracle Application Integration Architecture solution.

“We had two choices for integration. One was Oracle’s Application Integration Architecture with the PIP or a custom home-grown solution that was previously in place,” explains Dominic Martinelli, SGI’s Chief Information Officer. “We quickly determined that Oracle-supported technology offered the best total cost of ownership. There is a significant reduction in ongoing maintenance as well as any sort of headaches we might run into as CRM On Demand goes through its regular upgrade cycle.”

Today, the entire sales lifecycle flows smoothly, and the company’s sales force has easy access to the entire sales pipeline — from opportunity, to quote, to order — which allows it to operate more efficiently and boost sales. “Our integrated system has three primary benefits. One, we have a standardized system, which includes CRM On Demand, Oracle E-Business Suite and Oracle’s lead-to-order integration pack to create a unified sales process,” says Martinelli. “Two, we unified the sales team processes to allow for a single process to manage our forecast and pipeline and increase productivity and reduce the amount of time spent looking at spreadsheets. Most importantly, SGI’s IT team has increased management’s confidence in the pipeline by having a unified system rather than a mixture of manual reports and data from multiple systems.”

The Oracle Advantage

Integration projects are among the most difficult for CIOs to deliver. Despite best efforts, customers will be faced with the challenges of integrating systems and maintaining those integrations over time. Oracle is committed to making pragmatic investments targeted at simplifying the integration

experience for customers. These investments range from modifications to applications, enhanced tools and technologies to prebuilt integration accelerators.

Integration cannot be tackled with a single tool or solution. Trying to do so not only drives up the complexity, it ultimately creates new challenges. Based on years of experience, Oracle has identified additional opportunities to improve the integration experience for customers. All of Oracle’s Applications are certified on Oracle Fusion Middleware technology. All of Fusion Middleware tools leverage a common infrastructure, are 100 percent standards-based and are certified with Oracle and non-Oracle applications. Still, Oracle has and continues to make enhancements to increase customer value across Oracle Fusion Middleware tools and technologies, and Oracle Applications.

In addition, Oracle has created prebuilt integrations for specific solutions that work across applications and industry-specific solutions. These integrations benefit from Oracle’s experience working with a variety of vertical markets, such as communications, retail, high tech, manufacturing, consumer goods, banking, utilities and public sector. These prebuilt integrations accelerate integration projects and provide sustainable business process templates between specific applications.

These reasons are why in the end, no matter which Oracle application integration tool a company selects, Oracle Fusion Middleware and AIA help IT executives avoid constant custom integration development and the challenges and expense that come along with it, according to Constellation Research’s Wang. “One of the benefits of AIA is that all the ongoing upgrades and connectors are being managed by Oracle,” he says. “AIA is a harness that lets you connect multiple applications without spending as much time thinking about integration.” ♦

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