

The Business Imperative:
Build versus Buy

A Pervasive Software White Paper

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Executive Summary

An organization that wishes to integrate disparate computing resources can either build an integration solution in-house or buy a packaged integration software application. While building a custom application may seem the most cost-effective route, this approach is fraught with problems. Bloor Research notes, “There are clear downsides to Custom Code: can you easily integrate data cleansing, is documentation automatically generated, and can you prove the lineage of your data for compliance purposes? These would be just a few of the questions that can not typically be answered in the affirmative when it comes to Custom Code.”* Packaged integration software applications now offer a compelling alternative to the expensive, time-consuming quagmire of in-house development.

Introduction: Confronting the Build vs. Buy Dilemma

Merger and acquisition activity. E-commerce initiatives. Application integration. Compliance requirements. Business intelligence. Supply chain management. XML Web services. Access to high volumes of data. All these demands drive the growing need for integration across an organization.

Today, highly functional and flexible enterprise integration applications are available as ready-to-go software packages. Yet many organizations are unsure whether they can rely on a “store bought” package, particularly if they’re accustomed to handling complex application development in-house.

This paper covers the “build versus buy” considerations of an organization faced with the need for an integration application. The first section posits preliminary issues and the due diligence required to start the decision process; the second section presents more in-depth challenges related to the build option. Section three explains the benefits of buying an application integration package.

Preliminary Considerations and Due Diligence

Whether or not to build an in-house integration solution boils down to an honest assessment of the needs of the organization and what it will take to meet those needs. Sometimes the nature of the project dictates the necessary direction. Does your organization require a solution involving a highly specialized business function for which no commercial software exists? Then you should build that solution in-house.

Or do you need to integrate order-entry or another standard SaaS or on-premises application with established applications across the enterprise? In this case, you should give the option to buy a solution a closer look.

Evaluate the following factors in regards to your proposed integration project:

- Availability of in-house resources, including development staff
- Complexity and purpose of the project
- Particular needs of the organization
- Time to deployment

Also, consider these issues:

- Can your project's time-to-market strategy support developing the integration infrastructure component in-house?

*“Comparative costs and uses of Data Integration Platforms,” by Philip Howard, Bloor Research, August 2008.

- Is your development staff large and skilled enough in the technology and standards to build an integration engine in-house?
- Are your resources best spent developing homegrown data and application integration software? Is data integration your core competency?

Still considering a custom-built solution? The next section details some of the problems you might encounter with developing an integration application in-house.

The Challenges with Custom Integration Solutions

The complexity of today's computing environments only magnifies the difficulties of implementing custom integration applications. Problems inherent in building these solutions from scratch include:

- Too expensive to develop
- Too expensive to maintain
- Too time consuming
- No real process improvements

Too Expensive to Develop

If a check isn't directly earmarked for your integration project, it may appear to have no real cost. Your in-house programmers' time is already paid for, after all. In-house development can be much more costly than it appears though—far more so than that seemingly expensive software package. Developers must be trained and code must be carefully tested. Think about the salaries of your development team, the downtime in user departments during all phases of development, and the opportunity cost of not putting developers on other worthy projects that would propel your business forward. The bottom line: Labor costs dominate custom coding projects, which require significant investments.

Too Expensive to Maintain

Maintaining a custom-built integration application and keeping it running on the current platform or a succession of platforms can be an expensive proposition. And what happens when the programmers who developed the original application move on to other projects and other jobs? The maintenance of custom integration applications is complex, time-intensive and fraught with undocumented functions. Unless the integration application is well documented—another complex and expensive proposition—you will end up throwing more money into maintenance than you ever planned.

Too Time Consuming

Traditionally, in-house application integration projects have involved long learning curves and slow deployment schedules. Time consuming custom development requires considerable due diligence to scope and plan the entire integration project. Once again, your developers' time is better spent—and time is money.

No Real Process Improvements

One danger of in-house development lies in the tendency to fall back on tried-and-true methodologies. Unfortunately, following the old ways of doing things won't necessarily yield the optimal solutions. Development methodologies are always changing. Unless your programmers are versed in the latest integration best practices, you risk ending up with something that's less than what you hoped and planned for. Even if your organization's business processes have evolved over time, they may still not be refined enough to reflect best practices.

The Benefits of Buying an Integration Solution

In most cases, a packaged integration application can overcome the challenges presented by custom-built solutions. Packaged toolsets leverage existing expertise and technology and offer the following compelling reasons to buy:

- Low total cost of ownership (TCO)
- Faster time to market
- Flexible, scalable implementations
- Higher level of integration with third-party technology
- Integrated, cross-functional processes
- Automated, standardized design processes
- Optimization of development resources
- High reliability through proven performance
- Self-documenting

Low Total Cost of Ownership (TCO)

As stated in the previous section, high costs remain the primary drawback to developing in-house integration applications. Development and especially maintenance costs are often underestimated. Integration costs in general continue to skyrocket as enterprise-wide computing environments become ever more heterogeneous and complex.

The most comprehensive packaged integration products keep integration costs down through:

- **Automation and standardization of the design process**, which eliminate the need for costly custom coding.
- **Optimization of development resources**, as programmers can plug into new, more exciting development projects that will further organizational capabilities and efficiencies.
- **Fast implementation and deployment**, which reduces the cost of the entire integration process.
- **Broad range of connectivity options** for standard messaging schemas and disparate platforms, for leveraging of existing protocols and formats.
- **Project scalability**, which allows the organization to start with smaller integration projects before investing in the whole enterprise.

Faster Time to Market

The long development cycle of a custom-built solution isn't an option if your organization needs to deploy an integration application quickly. Packaged software can offer some or all of the following features that speed the time to value of your integration solution:

- **Easy to learn**, so developers can immediately begin working on integration projects after a short training period.
- **Easy-to-design integration processes and transformation maps** for faster implementation.
- **Short deployment period** on fundamental projects.
- **Easy to use**, for IT staff at the company-wide deployment level as well as end users who simply need to port data into other applications.

Flexible, Scalable Implementations

Instead of leaving your organization to its standard old methodologies, the best integration packages provide maximum opportunities for flexibility. Most include customization features for fine-tuning the integrated computing environment as it changes with business needs. Logic and business rule definitions, for example, can be customized to work with native data formats and schemas through user-friendly interfaces. Open architectures accommodate emerging applications, allowing new technologies to plug into the enterprise. Through all this adaptability, the integrated application can remain up to date with best practices.

In-house integration applications are often developed to meet the needs of the moment, without taking into account rising user demands and data volumes. Integration packages, on the other hand, meet growing levels of user requests and transaction loads with real-time, event-driven, scalable solutions. The most cutting-edge packaged integration applications will also maximize flexibility by providing *project* scalability. Proven, successful project design components can be reused in other departments, and departmental integration projects can be linked across divisions and built up to a global implementation.

Higher Level of Integration with Third-Party Technologies

When an organization sets out to develop an integration application in house, it may not consider additional technologies that may be adopted after the fact. In effect, the new integration application may not end up offering enough in the way of integration.

Fully functional packaged integration applications provide a broad range of connectivity options to SaaS applications as well as data sources such as message buses, Web services and common ERP and CRM applications. Support for standard document schemas—including XML, EDI, SWIFT, EDIFACT and HIPAA—saves integration time and improves data accuracy. Transport-independent solutions allow you to choose the data transport model that best fits your business, and the appropriate APIs make the integration seamless.

Integrated, Cross-Functional Processes

Custom-built integration applications may only address a limited spectrum of integration issues, including hooks into other processes. The best packaged options go beyond application integration to aid in managing data workflows, including third-party processes. For example, even with several applications linked together, users might get one point of view on the organization's process flows—they don't have to toggle between applications.

Automated, Standardized Design Process

When it comes to application integration, most organizations have similar needs. So why reinvent the application integration wheel when it already exists in the form of packaged applications? Integration packages automate and standardize the application design process. While there's plenty of opportunity for customization—as described above—the basic implementation is ready to go.

Optimization of Development Resources

A custom integration application project pulls programmers away from an organization's regular development work. After the fast deployment of a packaged application, on the other hand, you can focus development resources on your business's core competencies. Developers can get to work on exciting new projects that will further organizational goals and add to the bottom line.

High Reliability Through Proven Performance

Building an integration application in-house is only the beginning. Next comes a time-consuming iterative testing process, during which developers fine-tune the application and hope for the best in terms of reliability. In contrast, a good packaged integration solution offers high reliability by definition, right out of the box. The vendor and other users can attest to its proven performance.

Conclusion: Buy Trumps Build

In today's complex IT landscape and competitive business environment, custom-built integration applications can't stand up to road-tested packaged software. Quick-hitting, cost-effective packaged solutions meet your organization's integration demands by leveraging existing applications and technologies while taking the burden off of internal development resources.

Where custom-built solutions present expensive development and maintenance considerations, packaged options counter with proven lower total cost of ownership. Where in-house integration involves long deployment cycles, easy-to-learn and easy-to-use software packages speed time to value. Where custom applications can get mired in old methodologies and lack scalability, available integration software offers the flexibility of customization options and the scalability that meet your organization's needs—now and into the future.

Packaged software integration applications offer other compelling advantages over traditional custom-built approaches. Reusable components, high levels of integration with third-party technologies, integration with cross-functional processes, automated and standardized design processes, and high reliability through proven performance—all of these make it easier to maintain a highly functional, organic integrated computing environment. Instead of “reinventing the wheel,” your developers can focus on the organization's core competencies and help to propel the business forward.

Even though a custom-built integration application may seem to offer control and flexibility, it will only lock your organization into a suboptimal solution. Is integration really your organization's core competency? Can you spare the programming resources? Do you have several months to develop, test and fine-tune your application? If like most organizations you answered “no” to all of the above, buying a highly reliable and functional packaged integration application is your best option.

The Pervasive Integration Solution

Pervasive integration software solutions help reduce the complexity, costs and risks associated with traditional integration deployments by providing a versatile and configurative integration architecture for rapid implementation, superior scalability, low total cost of ownership and high ROI. The software leverages 20+ years of industry expertise and features a comprehensive set of easy-to-use visual design tools that allows organizations to rapidly build and test integration processes—regardless of size and complexity—across 150+ data formats and applications, within and outside of the enterprise.

More information about Pervasive Software is available at www.pervasive.com.

... What our customers are saying

"We had many data feeds and data types that needed to be quickly implemented in order to be able to assess our overall portfolio's adherence to risk exposure guidelines. Custom code couldn't meet our need to quickly get policy data into our data warehouse and analysts' hands. Pervasive integration gives us cost-effective, wide-scale connectivity that complements our move to support greater automation and analysis."

Andrew Wild

Head of IT

Scottish Re Holding Limited

"Pervasive's software has allowed Eloqua to focus on our key value proposition without having to develop custom code, so that we can bring up new customers with complete CRM integration in a fraction of the time formerly required. The integration agent is a very elegant solution for reaching legacy applications behind the firewall."

Steven Woods

Chief Technology Officer and Co-founder

Eloqua

"Pervasive has helped us move from manual data conversion to a quick-hitting embedded software solution, and I next see Askesis using Pervasive's integration engines in helping us automate formatting and compliance processes."

Devendra Rao

Vice President, Development

Askesis

"Pervasive Data Integrator is now fully employed, really narrowing the time window I would have found in a back-out custom-code rebuild. Cost-wise, Pervasive has saved us significant outlays. We saved in what we paid an offshore vendor to write and maintain code, the costs associated with correcting data that was mangled by bad code, and the costs associated with delaying data transfers by using Pervasive over custom code."

Bill Seay

Director of IT

Revenue Recovery Corporation

"With the Process Designer embedded within Pervasive Data Integrator, we have reduced the processing steps from 75 to only 6. Previously with this customer, if we wanted to change a file format, we had to manually change it in 75 different places. The Process Designer enables us to make changes in only one place. Using Pervasive Data Integrator, we have reduced our maintenance times by more than half and the customer receives more usable data much faster and with far less risk of error."

Jay Graves

President

SmartDM

"Pervasive has enabled us to far surpass our existing data gathering capabilities. Pervasive Data Integrator offers out-of-the-box connectivity and instantly improves productivity, which directly benefits hospitals and their patients."

Kevin Conway

Vice President of Health Information

Nebraska Hospital Association

“Pervasive software eliminates the need for our developers to spend time manually coding and recoding each data transformation and writing applications to move data. Instead, developers can create and reuse a single map that can be minimally modified for separate transformations. Once the original map is developed, the majority of the data transfers will be automated, saving us hundreds of hours of coding and writing.”

David McMath

*Database Administrator and Software Engineer
Payment Processing, Inc.*

“I can say that Pervasive allowed us to achieve results in considerably less time than it would have taken to build our own integration engine. The cost of Pervasive’s solution is far less than what it would have cost us to build and maintain our own.”

Claire Annechini

*Chief Information Officer
MEDecision, Inc.*

“We considered several tools for data transformation and some were asking \$70,000 to \$100,000 to do a simple conversion. We looked at the functionality Pervasive could provide for a lower price and the decision was easy. Pervasive supports many different formats and with the merging of different systems, that versatility has been very valuable for us,”

Ted Sabino

*Senior Network Consultant
Northrop Grumman*

“I looked for an integration solution that would give the company exactly what Pervasive provided: direct connectivity to numerous legacy systems, extensive mapping capability and fast processing. In terms of value, there was no comparison.”

Peter Murdock

*Senior Database Designer
AEGON Equity Group*

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