

What's Wrong With Application Software? Business Processes Cross Application Boundaries



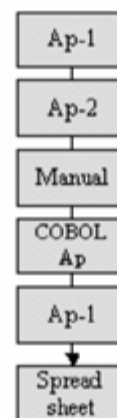
Featured Author - Jim Brown - February 27, 2003

Introduction

Application boundaries are artificial walls created by the software industry, not businesses. Business processes and the people that execute them shouldn't have to care about application boundaries. It shouldn't matter to them that taking an order from their customer starts in the CRM system, accesses the custom pricing algorithms in the legacy COBOL application and then finalizes the order in ERP. The reality is that it shouldn't matter, but it does. A lot.

For businesses to most effectively use enterprise software, the applications need to be pulled together into common, cohesive business processes. As part of the series "[What's wrong with application software](#)" we will discuss the challenges of today's multi-application software portfolio. The reality of today's application environment is that no single application meets all of the needs of a business, or frequently even the needs of a single business process, so multiple applications must work together to support the business

The Reality of Business Processes



Multi-Application Software Portfolios

Let's face it: every company would like to have a single, integrated enterprise application that meets all of their needs. Business processes would be seamlessly supported because they would be contained within a single application. Users would never need to leave the comfort of their favorite application.

The existing legacy applications in the business could be phased out and replaced with functionality from the single, integrated enterprise application. Many business executives, particularly the CIO, would love to have this luxury. This was the vision that many people were following when they bought and implemented their ERP

systems in the 1990's. Unfortunately, that dream has not materialized for most companies and it probably never will. In fact, with the advent of new enterprise suites such as CRM, SCM, PLM and others – there is more heterogeneity now than ever. One only has to look at the number of Enterprise Application Integration (EAI) vendors on the market today to realize that the typical business is still running multiple systems, and a lot of them.

Co-existence Is Not Enough

The current generation of enterprise applications was designed at a time when simple "co-existence" with other applications was considered enough. But, co-existence is not the same as integration. While vendors all preached co-existence, most application vendors still believed that they would support the majority of the business processes directly within their application, but that they would need to co-exist with smaller, specialty applications. This was before vendors became aware of the true nature of the integration challenge in the late 90's and beyond and made efforts to improve their integration capabilities. The reality today is that the core enterprise system must work within a diverse application footprint comprised of multiple enterprise applications.

What is needed in this heterogeneous application environment is not just co-existence. What is needed is a way to dynamically use the different applications to support a common business process. And it must be done in a way that the combination of the applications provides more value than the individual applications can provide on their own. In short, applications don't need to just work together – they need to work better together.

Maybe we were trying to solve the wrong problem with large ERP systems. Maybe instead of trying to build the mega application, we should have been focusing on making smaller, highly functional applications that work well together.

Composite Applications

There has been much discussion recently about composite applications, applications built by assembling the required functionality from multiple systems. There are two primary camps that are attempting to address the composite applications problem. The first school of thought focuses on the fact that the business process drives the applications. By focusing on the business process first, applications can then be

aligned to support them. The second focuses on the integration of the data and the applications themselves.

Composite Applications – It's About The Business Process

One category of vendors trying to address the problem is the Business Process Management (BPM) provider. These vendors focus on the business processes that are needed to support the business in the most effective way. The challenge in the past with the business process focus was that the business processes were often well thought out, well documented, and then placed on a shelf for future reference. BPM was an island disconnected from the operational applications. There was no tie to the actual execution of the business process or to the applications that support it. In an effort to make business processes more valuable, BPM software applications have been evolving into execution-oriented software that is used in day-to-day operations.

While the BPM vendors have addressed the execution of the business process, they have not fully addressed the need to actively tie multiple applications back to the execution of the business process. In addition, they typically do not supply the required integration to ensure that the context of the business process, the data, is properly passed between the applications.

Composite Applications – It's Not Just About The Business Process

Even with the promised panacea of web services, application integration is still not a trivial matter. Another category of vendors trying to address the composite application problem is the Enterprise Application Integration (EAI) provider. The EAI vendors have gone a long way towards addressing the technical challenge of integrating multiple applications. Through adaptors and message-oriented architectures, they have made interaction between systems easier to manage.

While the EAI vendors have addressed the technical challenges of composite applications, they have not addressed the challenge of pulling the applications together into a coherent business process.

What Is Still Needed

The BPM vendors and the EAI vendors recognize both the opportunities and the challenges of composite applications. To address this, the BPM vendors are beginning to focus more on integration and the EAI vendors are beginning to focus more on business processes. Both are providing value and heading in a direction that supports composite applications.

What neither class of vendors has adequately addressed, however, is the reality that there are often areas of the business process where there is no underlying application to support it. There is a manual process, some form of workaround, a spreadsheet, or some other solution that keeps the business process from being fully supported by applications. What is required from an ideal solution is the ability to integrate the business process, integrate the applications and data, and supply additional functionality to "fill the gaps" to produce a cohesive, composite application that ensures transactional and contextual integrity across the entire business process.

	Business Process Integration	Data and Application Integration	Application Extension "Fill the Gaps"
EAI	O	X	-
BPM	X	O	-
Next Gen	X	X	X

X - Available

O - Future Direction

Summary

The next generation of application architecture must address the reality that business processes cross application boundaries. The architecture will need to provide business process integration, application integration, and application extension in order to allow companies to realize the full potential of their current applications. With all of these capabilities, the new architectures will initially be used to pull together diverse applications in a way that the resulting composite application is better than the sum of its parts. Eventually, the next generation of enterprise applications will also embrace these architectural capabilities in the application itself.

About the Author

Jim Brown has over 15 years of experience in management consulting and application software focused on the manufacturing industries. Jim is a recognized expert in software solutions for manufacturing and has broad knowledge of applying ERP, Product Lifecycle Management, Supply Chain Planning, Supply Chain Execution, and e-business applications to improve business performance. Jim served as an executive for software companies specializing in PLM and process manufacturing solutions before starting his consulting firm, **Tech-Clarity Associates**.



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