



Orchestrating Business and IT With Collaborative Applications:  
Ensuring That All Relevant Systems Know When You Close Your Biggest Customer  
— Vitria Technology, Inc.

► Hurwitz Report



## Orchestrating Business and IT With Collaborative Applications: Ensuring That All Relevant Systems Know When You Close Your Biggest Customer — Vitria Technology, Inc.

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Hurwitz Group recommends adopting a collaborative application solution that is built on a foundation of business process management, offers out-of-the-box connectivity into existing IT and operational assets, and provides the analytical visibility and power to optimize all collaborations for maximum benefit at a minimum cost.

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## EXECUTIVE SUMMARY

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Building a business on lasting relationships with customers and partners includes harmonizing the processes that make internal operations run smoothly, and making interactions with these customers and partners successful and profitable. This process harmony is best achieved through well-orchestrated collaboration among the various participants in any given business process. These participants include people inside and outside the organization and the applications that provide them with needed information and transaction processing power. When sales lands a strategic deal, how quickly can your business update its customer relationship system, the order management system, the billing system, the warehouse management system, and the logistics provider that a key order must be filled? When marketing needs to launch a campaign, coinciding with the availability of a new product line that is supported by the sales department armed with new information about the line, are all your resources coordinated? When critical data from multiple sources must be shared across departments to deliver answers to customers and partners, can your business and IT systems work in synch? Accomplishing these types of challenging enterprise business tasks is difficult because of the multiple resources needed and the precise timing required to make a collaborative work effort effective.

Companies continue to invest in software applications that help fulfill these kinds of collaborative business goals; unfortunately, in many companies these assets are not always in line with each other. The results create business process breakdowns that cost companies time, money, and effort to resolve. Keeping great customer relationships

while achieving the desired bottom line is a difficult challenge when work is carried out in a disjointed, noncollaborative fashion. By no means, however, is collaboration a new idea for business; but to date, most enterprises have struggled to leverage software assets effectively to support collaborative work efforts such as updating a customer support system with new customer information from an order processing application.

Given the current maturation of software solutions, the shift toward standardized technology foundations, and the rising need for more collaborative business models, the time is right to readdress building collaborative applications with the tools available today. Collaborative applications are business process-driven applications that leverage existing business and technology assets and create improved efficiency for optimal business fulfillment. This means that collaborative applications are out-of-the-box integration solutions to specific enterprise integration problems. This paper outlines the key components of collaborative applications, the challenges enterprises face when building collaborative applications, and the value that comes from collaborative applications.

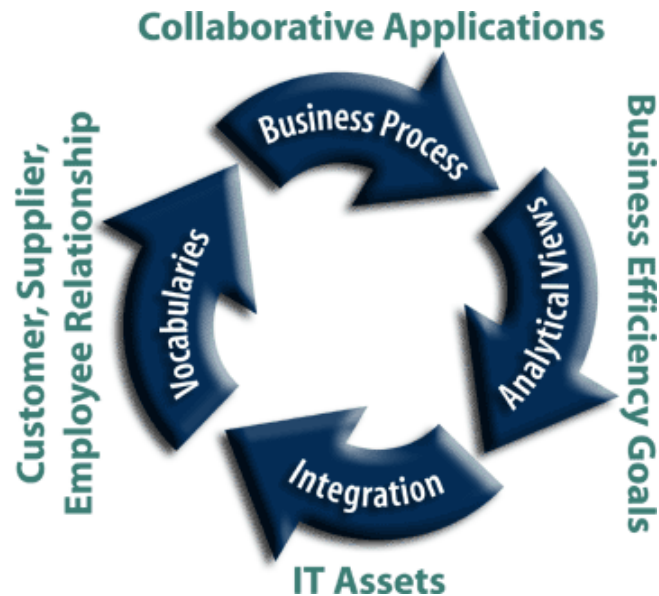
## Introduction: Toward a Collaborative Model

Collaboration is a success model that works time and again in nearly all business affairs. Workers collaborate in teams to generate ideas, create products, and build companies. Collaboration hones ideas, creates a learning environment, and coordinates efforts toward a common goal. But all too often, businesses are thwarted from achieving effective collaboration by relying on software applications that cannot support a collaborative work model. Consequently, parts of the business act without knowledge of the effects on other parts of the business, leading to disjointed activities and goals. Businesses make decisions without knowledge of their partners' resources or intentions, and they quickly find themselves without much needed support. The very nature of most applications stops businesses from achieving the benefits of collaboration among concerned parties. Most applications are designed to provide a finite set of functions to a finite set of users and are not extensible to new users and new business problems. This leads to multiple silos of applications, each with unique functionality, but none with effective coordination with each other. At this point in the history of business, companies need to develop a collaborative application fabric that can unite disparate parts of the business as well as disconnected partners and suppliers. Stovepipe mentality no longer serves effective strategy. Collaborative applications are the key to the future of business success.

Collaborative applications are process-driven business applications that leverage existing assets and create improved efficiency for optimal business fulfillment. A collaborative application is akin to a conductor in an orchestra — a person who knows the big picture or end goal and understands how to combine the instrumental components together at just the right time and with just the right sound to make a complete and fulfilling piece of music. A collaborative application combines the underlying technologies present in an enterprise with a defined set of business processes, shared vocabularies, and analytical insight. It is a single, interlocking application coordinating all of the underlying applications and data to build a solution. Most importantly, the collaborative application acts independently of underlying applications. A collaborative application is a packaged integration solution ( see Figure 1) designed to deliver functionality for:

- ▶ **Integrating existing, underlying technology.** This can be existing integration technology, software components, Web Services, or applications upon which the business currently relies to carry out functions in the business.
- ▶ **Delivering defined business processes.** Common business process maps of how work gets accomplished within the enterprise, its business resources, human resources, system resources, and data resources. These maps must be easily customizable for unique business practices.

- ▶ **Providing shared vocabularies.** A common set of terms so that all participants in a process can interact and share the same data and understanding, incorporating industry standards, as well as customized vocabularies.
- ▶ **Providing analytical insight.** Queries into a process for determining, with both real-time and historical capabilities, the efficiency of the process, meeting of business objectives, and compliance with regulations.



**Figure 1: Collaborative application functionality**

The need for these types of collaborative applications stems from two key trends, coupled with some factors affecting IT. First, with the rising use of standards such as the J2EE platform and Web Services, enterprises are building common technology foundations. From these foundations, platform and data interoperability challenges are more easily solved. This leads to a driving need for improved process management. In other words, some of the early technology problems that integration technology was poised to help solve are moving closer toward commoditization. Witness the changes occurring with the leading packaged application vendors such as SAP, Siebel, and others. These companies are moving toward or already delivering standards-based APIs. This trend creates more of a need for emphasis on solutions that incorporate business processes, shared vocabularies, and analytics.

The second key trend is customer-driven. Hurwitz Group research shows that IT buyers want a high degree of predesigned, out-of-the-box functionality with software packages they purchase. This enables companies to recognize quicker operational impact and to lower the learning curve and skill sets needed to use tools to create business solutions. At the same time, enterprises demand customizable solutions that can meet a variety of business needs.

Standalone or one-off, finite software packages only complicate the enterprise architecture. Enterprises tell Hurwitz Group that they want the best of both worlds: business solutions with ready-made functionality that are customizable and extensible for new projects. These two trends coincide with other factors that have been impacting IT for quite some time.

Collaborative applications, as an idea, are not a new trend. The computing industry has been trying to build collaborative applications for a long time. To date, however, attempts have not fully achieved the ideals of collaboration. The history includes disconnected islands of applications that worked quite well within themselves but brought all kinds of process and data problems to the enterprise when the applications needed to be combined with other applications. There has also been a push to use the Internet as the vehicle for business-to-business collaboration, but unfortunately the application island concept was transferred to the Internet. Marketplaces and exchanges only compounded the gaps among applications, creating a whole new area of isolation for many enterprises. These kinds of efforts have typically suffered detachment from back office processes and fulfillment systems.

What resulted was a series of information pushes — a back and forth exchange of data that carried no long-lived business objects (i.e., units of business functionality) with it for building and maintaining a collaborative work environment. While there have been advances in collaboration techniques and technologies for such things as collaborative development or collaborative design, such specific applications are not extensible to larger business problems. As a result, there is still an acute need for collaborative applications to serve business objectives.

Because businesses are demanding faster cycle times and improved knowledge sharing both inside and outside the firewall, the need for collaborative applications is growing. To have better planning capabilities and for conducting smoother, more automated business operations, collaborative applications need to be blended into the enterprise mix. Businesses are becoming more tightly coupled from an operational standpoint, and yet computing environments are becoming more loosely coupled. Collaborative applications are precisely the missing piece that will enable businesses to work more collaboratively over the Internet or mobile devices with countless entities and yet preserve a loosely coupled, service-oriented architecture.

To date, most businesses haven't solved their B2B collaboration problems. There is still more value to garner from B2B relationships by having tighter collaboration with back end fulfillment processes and by taking better advantage of knowledge sharing with partners and even customers. The objectives and maturation of business and IT are symbiotically linked at this point in time. Computing advances and business advances must coincide or else businesses stand to either build faulty business models based on inventive technology or inventive business models will fail because of stilted technology. With the further proliferation

of standards-based computing, the prevalence of a variety of integration technologies (everything from message-oriented middleware to Web Services) and the ability to perform process-based integration, now is the optimal time for enterprises to increase collaboration by building a collaborative application architecture.

## The Challenge of Building Collaborative Applications

While this is an optimal time to build collaborative applications, there are still several key challenges that must be met along the way. The following five business realities set out the basic challenges that enterprises will face when building collaborative applications. With ample knowledge, planning, and the right technology solution, these challenges can be brought under control and woven into the collaborative application fabric.

- ▶ **Enterprise heterogeneity.** Computing environments are only becoming more complex in type and number of platforms, languages, protocols, and applications. Even with a greater adoption of standards-based computing, there is still a significant amount of legacy, custom, and proprietary infrastructure in nearly all enterprise computing ecosystems. This fact is compounded by the growing complexity of applications. From seemingly bottomless, legacy applications to vast, proprietary ERP applications to increasingly complex COM or Java applications, IT has many fronts to maintain and extend. As a result, a collaborative application must have the ability to integrate into this kind of heterogeneity and make use of the spectrum of computing assets.
- ▶ **Business process sprawl.** Today's business processes typically span multiple departments in an organization and include a number of participants. They also extend out to partners and suppliers and require precise coordination of business events. Business processes cross the desks of many workers in the enterprise and require long-lived management of states of business objects as well as change within business objects. Today, many people, applications, and types of data must be coordinated into a single business process. Geographical separations of people and businesses are breaking down because of the use of the Internet and mobile devices. Logical separations of applications and data have proven to be ineffective toward achieving collaboration. Today's real-time business processes demand more from business participants and from computing assets.
- ▶ **Volatility.** If change is the only constant, then business needs to meet this constant with sufficient tools to leverage and redirect assets and capture new opportunities. Having a more tightly linked community of businesses means that decisions to change can happen at any time from any point in the community. The contingencies

of change ripple to all participants in a community — all participants in a collaborative community. As stated earlier, business and IT must be more symbiotically linked to handle the volatility of today's business environment. Collaborative applications provide this needed symbiotic layer between business and IT. Collaborative applications are the foundation from which business processes are implemented and streamlined to realize business opportunities.

- ▶ **Partner variation.** Building collaborative applications with a partnering organization presents a challenge on two fronts. First, both businesses need to agree on set, shared business practices and terminology to effectively align collaboration goals. Next, variations in technological capabilities need to be accounted for. Quite simply, some partners aren't as technically ready to participate in a collaborative endeavor. Often a range of technology options from phone calls to EDI to Web Services must simultaneously be part of a B2B relationship to make the relationship feasible.
- ▶ **Obscured vision into the collaborative community.** Business decision makers often don't have the visibility into running processes and into IT and line of business investments to accurately gauge collaboration. With more tightly coupled businesses, decision makers need a real-time information window into IT systems and current states of running business processes. This will support good decision making when sharing information with partners or changing relationships or launching a new revenue model.

These challenge areas often stall or limit the effectiveness of collaborative applications and point out the precise problems that the latest generation of applications must be able to solve.

## Collaborative Applications in the Enterprise: Where Are We Going?

If collaborative applications are the vehicle, then what is the roadmap and destination of their value? First and foremost, collaborative applications are the means for enterprises to harness and leverage current and future business and IT investments with the goal of providing new and competitive business services to customers, partners and employees. Whether legacy applications and data, packaged applications, knowledge workers, or Web Services, collaborative applications represent the point of convergence for business assets and their effective utilization. In such a fashion, collaborative applications translate into more productive and profitable interactions among customers, partners, and employees. Knowledge sharing can become a part of all critical business processes and involve any type or number of constituents. Through analytical views and on-the-fly adjustments of the collaborative

application, these processes become optimized and honed to create desired bottom line operations and to yield high value relationships.

This kind of vision requires that collaborative applications reside on a foundation of business process management (BPM) software. Because BPM provides the means to pull together resources and coordinate long-lived business events, it is a foundation for all collaborative endeavors. With a collaborative application built on BPM, decision makers have the means to build sound metrics of accountability for participants and to provide a foundation for optimization and analysis of key performance indicators. These key performance indicators can be used to measure the efficiency and value of partner collaborations, customer interactions, and employee collaborations. Strategic and executive effectiveness translating into real business value can be extracted from a collaborative application environment.

Collaborative applications provide a number of key benefits and can be applied to specific industry problems. One of the biggest benefits from a collaborative application is the time and cost savings that come from having prepackaged integration, defined business processes, shared vocabularies, and analytics. This means that implementers expend less effort creating a working business solution. Business users get quicker results with better utilization of resources and IT departments are less taxed, resulting in higher business satisfaction and lower IT frustration. In industries with regulatory compliance requirements and deadlines, speed and satisfaction can eliminate the risk of paying costly penalties. T+1 mandates in financial services and HIPAA compliance in healthcare are prime examples of ideal business problems best solved by collaborative applications. Specific examples of collaborative applications include:

- ▶ **A collaborative application for Global Straight Through Processing (GSTP).** Defined business processes under this umbrella include: Security trading, trade allocation, and trade settlement. These processes utilize vocabularies such as SWIFT and FIX and require analytical queries about trade failure rates, trade cycle times, and trade status.
- ▶ **A collaborative application for HIPAA compliance.** Defined business processes for HIPAA include: claim eligibility, notification, adjudication, and settlement. These processes rely on vocabularies such as HIPAA, NCPDP, and HL7 and require analytical queries into claims status and time-to-service.
- ▶ **A collaborative application for the telecommunications industry.** Defined business processes include service order fulfillment, service assurance, and service billing. Essential vocabularies are 811, ASR/LSR, and PIC/CARE. Providers need analytical queries into order activation time, network fault management, and service level agreement management.

To sum up, anywhere multiple steps are required to fulfill a transaction, anywhere multiple sources of input from people and applications are required, anywhere multiple departments or businesses must act in synchronicity, these business situations mark the spot where collaborative applications should be found. Some other representative scenarios include: B2B value chain collaboration for improved inventory management, planning, scheduling, and logistics; customer self service portals for tracking, billing, and quality control; government regulated knowledge sharing among businesses; new product planning, design, and introduction; employee time, leave and expense tracking, and new employee hiring. The common theme among these types of business activities is the need to use existing IT assets, coordination of business events, shared vocabularies, and the need to continually change and optimize the processes. Next generations of collaborative applications are being precisely designed to support these activities.

## Vitria: Providing Collaborative Applications

Vitria approaches the collaborative application need with years of experience gathered from integrating complex textures of processes, applications, and people. Hurwitz Group recognizes that Vitria has long been a proponent of collaboration based on BPM. With its mature foundational technology, Vitria has launched new efforts to speed deployment and empower businesses to reach a more developed level of collaboration. The Vitria Collaborative Applications mark the inflection point into the next stage of collaborative applications. Vitria solves the challenges of collaborative application deployment as laid out earlier in this report. The key is that Vitria Collaborative Applications ensure fulfillment from underlying applications and people. For optimal flexibility, they decouple business processes from the underlying fulfillment, and they provide the means to view and manage collaborative application processes. The business value that sprouts from Vitria's Collaborative Applications grows into more efficient completion of business processes, with full accountability and visibility into status and results. As with the well-conducted orchestra, business value comes from accurately and precisely coordinating all participants. The business will realize a lower operational cost, fewer errors and reworks, improved exception handling, increased flexibility to change and higher satisfaction among participants.

Vitria Collaborative Applications deliver these promises by leveraging the company's proven, flagship product, Businessware, a robust BPM solution that serves as the integration platform. Building from the integration foundation and its implementation experience, Vitria Collaborative Applications are packaged, integration solutions that include defined, yet customizable, business process models, shared vocabularies, and packaged analytical queries to provide an out-of-the-box business solution. Vitria delivers this for specific vertical industry Collaborative Applications such as for GSTP, HIPAA, telco service provisioning, and energy outage management.

Vitria also delivers horizontal Collaborative Applications. These applications take advantage of Vitria's Collaborative Information Model (CIM), predefined common business objects, in addition to predefined business processes and analytical queries. This enables customers to have prepackaged integration solutions for such activities as synchronizing SAP to Siebel, including a set of business objects such as customer, inventory, invoice, materials, purchase order, etc. Vitria's experience has enabled it to deliver foundational processes to make this integration successful. Because enterprises inevitably customize their applications, Vitria's processes are all customizable to fit the business. The solution is applicable and effective across multiple current and future business scenarios, making the investment return high in the short term and wise for the long run.

## The Hurwitz Take

Hurwitz Group recognizes that enterprises must extract more value out of current computing assets and keep operations running smoothly with a low cost. These drivers are complicated by the need to work more closely with a host of varied people and organizations that transact business with the enterprise. The need for more collaborative relationships is driving companies to better leverage assets, manage business processes, and harmonize all participants in a transaction. But obstacles including computing heterogeneity, complex, long-lived business processes, internal and external business volatility, and lack of visibility into operations often impede the success of collaborative application endeavors. To overcome these obstacles, Hurwitz Group recommends adopting a collaborative application solution that is built on a foundation of business process management, offers out-of-the-box connectivity into existing IT and operational assets, and provides the analytical visibility and power to optimize all collaborations for maximum benefit at a minimum cost. Across an organization — anywhere that many people rely on multiple applications and sources of data to transact business with customers, suppliers, colleagues, and partners — collaborative applications can hone the process and make an enterprise more successful at delivering the goods and services that contribute to success.



## About Hurwitz Group

Hurwitz Group, an analyst, research, and consulting firm, is a recognized leader in identifying and articulating the business value of technology. Known for its real-world experience, consultative style, and pragmatic approach, Hurwitz Group provides strategic guidance to its clients by delivering analysis, market research, custom content, and consulting services. Clients include Global 2000, software, services, systems, and investment companies.