EXECUTIVE OVERVIEW

In 2009, IDC undertook a unique study of enterprise application buyers — decision makers and key influencers — to help application providers understand what their prospects are looking for when they purchase applications that are critical to their business today. This study was intended to help providers understand whether there are certain features or functionality they can embed in their applications to differentiate themselves and drive greater value to customers. The study found that end users are in dire need of much more flexible and interoperable solutions that can adapt with them into the future, especially as that future becomes more unpredictable in the face of rapid change. Incorporation of embedded integration and real-time business intelligence capabilities not only can address some of these critical buyer needs but also can be used as a source of competitive differentiation for application providers.

The key findings of the study include:

- Vendors must enhance the flexibility of their applications.
- Applications must interoperate easily with the existing infrastructure — including internal and external applications — and must be easily adaptable in the years to come to protect the enterprise’s investment in them.
- There is an increasing demand for transactional applications to have embedded real-time business intelligence technology.
- By embedding core integration and business intelligence features within applications, vendors are creating solutions that are more highly valued within the end-user enterprise.

This paper was written to offer insights for providers of software applications across a range of industries. It discusses key findings from an IDC survey as well as other pertinent industry trends relevant to application providers as they consider embracing embedded integration and real-time business intelligence capabilities.
Drivers for Application Purchases Within the Enterprise

Adapting to Changing Conditions While Controlling Costs

One of the key findings from this study is that in today's volatile business world, IT departments are more pressed than ever to support rapid change. By leveraging innovative software technologies, enterprises are looking to acquire greater flexibility, connect software more readily to stakeholders, and provide users with the right tools and timely information.

In parallel, the current economic climate has intensified the need to reduce costs, and IT is certainly feeling the brunt of this imperative. This particular finding was evident in the study when respondents were asked about their top strategic goals for the next 12–24 months. The number 1 goal, cited by 50% of respondents, was improving cost management, followed by improving technology infrastructure and increasing process efficiency (41% each).

Focus on Maintaining and Future-Proofing Enterprise Applications

When respondents were asked which IT efforts were consuming their organizations' time, the leading response was maintaining custom code. Respondents stated that maintaining/enhancing existing custom application code takes 16% of their organizations' time, followed by integrating existing applications and processes, which takes 15% of their organizations' time. Despite the attention often placed on new systems and development projects, these statistics show that enterprises continue to rely heavily on existing applications and processes. Over 30% of IT's time is spent on maintaining or enhancing existing application code and integrating legacy applications within the IT environment.

While maintaining existing systems takes significant time in IT, valuable hours are also spent evaluating new technology and applications. New applications need to fit seamlessly within the existing framework, and they need to be "future-proofed" so they can be adapted as systems and processes change. Considerable time was spent in the study to learn exactly why end users purchase one particular packaged application over another and to discover what features they look for most when making buying decisions.

Creating an Interconnected Application and Use Experience

When decision makers were asked which features will be most important to their application selection process over the next 12–24 months, two of the top 3 considerations dealt with the flexibility of the solution: ease of integration with existing systems (cited by 45% of respondents) and ease of customization to adapt to changing needs (cited by 33% of respondents). It's notable that "easy to integrate with existing systems" ranked higher than "most cost effective." In contrast, strength of vendor reputation was relatively low on the decision criteria list, a fact that should come as some comfort to smaller/earlier-stage application vendors (see Figure 1).
Application Decision Criteria

Q. Which of the following features will be most important to your application selection process over the next 12–24 months (aside from specific business logic functionality)? Select top 3.

- Easy to integrate with existing systems
- Most cost effective
- Easy to customize to our changing needs
- Ease of use
- Scalability and high performance capabilities
- Runs on our preferred platforms/technologies
- Faster to implement
- Provides industry specific configurations
- Strong vendor reputation
- Ability to use existing skill sets with IT department
- Ability to handle complex data types

Source: IDC, 2009

Embedded Capabilities Within Applications

Application buyers want to understand what is transpiring across their business and to trigger activities in a timely fashion to respond to events as they occur. This can be realized through embedded real-time business intelligence capabilities and integration technology. To achieve this goal, businesses need applications that support integration at many different levels — data integration, process and message integration, user interface, and more.

By providing integration capabilities embedded within their applications, vendors can ensure that their products will be more easily interoperable within enterprise environments. This can also serve as a point of differentiation for the application provider. Our study has shown that when enterprises are evaluating packaged applications, the integration challenge is a concern. Vendors that provide integration capability within their applications have a competitive advantage in this respect.
Embedded Application Integration Enables Cost Efficiencies

Survey respondents were also asked about the benefits of purchasing applications with embedded integration capabilities, and once again the cost imperative came through. The top benefits of applications with embedded integration capability were the ability to provide greater cost efficiencies and the ability to support more efficient business processes (each cited by 37% of respondents).

This reflects the fact that lack of interoperability drives real costs, including the cost of lost opportunities when systems don't connect to each other. Embedded application integration drives out these costs. This study shows that the primary driver for application integration continues to be about driving greater efficiencies across enterprise business processes.

Timely, Focused Business Intelligence: Information in the Application Context

The ability for transactional data to be easily extracted, understood, and utilized is critical to the value of the applications and systems themselves. Yet most businesses IDC talks to say they don't capitalize on the full breadth of data they are collecting and storing in their systems. To break through this roadblock, businesses are looking to create efficient mechanisms for navigating and delivering information at the right time, to the right hands, and in the right context.

The Value of Real-Time Business Intelligence

When asked about the importance of embedding certain capabilities within applications, survey respondents once again listed integration capabilities as the most important feature, reinforcing the need for deep-level integration within applications. The second most important capability was support for real-time business intelligence (see Figure 2).
FIGURE 2

Importance of Certain Embedded Capabilities Within Applications

Q. Please rate how important it is to your organization that each of the following features be embedded within your application vendors’ transactional applications.

- Native integration capabilities to easily connect with other applications and systems
- Real-time business intelligence (i.e., views of current operational data)
- Configurable business rules engine to easily change policies and parameters
- Configurable custom or role-based views for users
- Configurable workflow engine to automate and optimize processes

Note: Percentages represent the proportion of respondents who answered 8, 9, or 10 on a 10-point scale, where 1 means "not at all important" and 10 means "very important."

Source: IDC, 2009

In response to a question about the benefits of applications that provide real-time business intelligence as an embedded feature, respondents said the two most important benefits were the ability to speed up operational decision-making capabilities (cited by 39% of respondents) and the ability to improve operational efficiencies (cited by 37% of respondents).

Just as with integration, businesses consider real-time business intelligence to be a key facilitator of core business processes and a way to reduce operational cost. Getting critical information into the hands of the right people at the right time, and doing so in a way that is easily embedded within the applications themselves, allows businesses to streamline their operational efficiencies and make more informed decisions.

Speeding up operational decision making and improving operational efficiencies are the top benefits of embedded business intelligence.
**Information Search, Data Mining, and Business Activity Monitoring**

When asked which particular business intelligence features they would like to see embedded within operational applications, respondents listed information search and mining (rated 8.2 on a 10-point importance scale), business activity monitoring (rated 8.1 in importance), and event-driven notifications based on business rules (rated 8.0 in importance) as their top 3 items of interest. This reinforces the point that enterprises are focused on exposing the data locked up in their applications and driving it to desktops. The ability to do this in real time is a key differentiator for operational applications, and vendors that offer embedded business intelligence within their packaged applications can realize a competitive advantage.

Ultimately, enterprises are looking to put actionable information in the hands of front-line managers and populate dashboards to track cross-enterprise operational performance.

**OPPORTUNITIES AND CHALLENGES**

Often, application providers, not their enterprise customers, are in the best position to foresee market trends and determine which new features to incorporate into their future offerings. While it's important not to roll out new capabilities without the proper due diligence, if vendors wait for their customers to articulate a need, they will likely miss the market window.

IDC offers the following advice to application providers that incorporate integration and business intelligence capabilities:

- **Improve interoperability for enterprise legacy systems.** The potential to improve upon enterprises' current conditions is immense. Many firms are constrained by legacy systems that still perform key functions yet are not nimble enough to keep up with today's challenges. By embedding integration capabilities in newer, Web-based and n-tiered applications, vendors can provide an evolutionary migration path to enable customers to extend the value of these older systems while positioning themselves to incrementally replace pieces of processes and functionality when ready.

- **Adapt to future requirements.** Application providers must be prepared for changes in the way they build, package, and deliver business and IT services. The industry is at a point where the groundwork is being laid for the next wave of integrated, intelligent computing. Vendors cannot afford to be caught unprepared when their customer bases and prospects come to expect more flexible, interoperable applications.

- **Address the build versus buy question.** While custom development of middleware technologies may be a good choice for some applications with very specific market requirements, IDC believes that for many application providers, the time-to-market advantages favor buy over build. Often, the time spent writing custom code is a lengthy process, and the market opportunity for selling applications enhanced with embedded business intelligence and integration capabilities may be missed.
**IDC ANALYSIS**

Ensuring ongoing customer success should be the utmost concern for application providers. This means developing applications that can be easily adapted, effectively utilized, and rapidly integrated into the fabric of the rest of an organization's IT environment — both today and in the future.

Vendors that embed application integration capability and real-time business intelligence features can gain critical competitive advantage. Their applications may garner more attention because of these capabilities.

The ability to embed integration and business intelligence into applications provides a wide range of end-user benefits.

**CONCLUSION**

Enterprises are under pressure to adapt quickly to changing market conditions, yet they struggle with the burden of legacy, heterogeneous systems. To help them respond, application providers must incorporate as much flexibility into their solutions as possible.

IDC recently completed a study that examined the most important requirements enterprise decision makers consider when selecting applications. The study found that enterprises seek applications that they can integrate easily with existing systems and that incorporate real-time business intelligence capability.

By embedding application integration and business intelligence capabilities directly into their applications, application providers can provide greater interoperability with existing systems and enhance their value. Embedding, rather than merely attaching, core integration and business intelligence technologies enables vendors' applications to play a greater role in their customers' IT infrastructures, paves the way for vendors to become more strategic business partners, and gives providers a means to gain a competitive advantage.

**ABOUT INTERSYSTEMS**

InterSystems Corporation is headquartered in Cambridge, Massachusetts, with offices in 23 countries. It provides products that enable rapid development, deployment, and integration of enterprise-class applications. Servicing multiple industries, including healthcare, government, financial services, retail, and more, the company offers both enterprises and application providers the following innovative products:

- **InterSystems Ensemble.** Ensemble is a rapid integration and development platform that enables applications to be embedded with new functionality and makes them connectable.

- **InterSystems DeepSee.** DeepSee makes it possible to embed real-time business intelligence capabilities directly into transactional applications built using CACHÉ or Ensemble. Application providers can incorporate drill-down capability into their applications with interactive dashboards that display key performance indicators based on current transactional data.
InterSystems CACHÉ. CACHÉ is a high-performance object database designed to make applications faster and more scalable. CACHÉ combines the benefits of object and relational database technologies.

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