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Part 1 of the Mashup Monograph Series

An Executive Perspective on the Strategic Value of Enterprise Mashups:

How Enterprise Mashup Platforms are Streamlining Decision-making and Enabling Agility in Hyper-Dynamic Environments

Strategic Enterprise Mashups:

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Executive Summary:

There was a time, not long ago, when success was defined by understanding a market opportunity (or public policy challenge), and then developing a plan of action that was executed in a disciplined manner over a period of time. Today, however, a growing number of executives – and public officials – are questioning the efficacy of this model because we live in a hyper-dynamic environment in which the minute grand strategies are developed, critical underlying conditions change.

Most organizations operate in an environment in which things are constantly changing at an ever-increasing pace. Moreover, these changes have an immediate impact on all other elements that are related to the changing event. In other words, things are not only changing quickly, entire systems of things are changing quickly, and they are affecting all aspects of the decision-making process. In this hyper-dynamic environment, decision-cycles are compressed and accelerated in an increasingly complex context.

As a result, we have seen that the concept of "agility" has emerged as the new name of the game. The ability to quickly identify new patterns in the market, tap different information sources (from within and outside of the organization), and then respond to new inputs based on an ongoing understanding of how critical issues are changing, is what increasingly determines success or failure in today's environment.

The key to succeeding in this hyper-dynamic environment revolves around managing complexity and making decisions quickly. After decades of building systems that were dedicated to solving discrete problems with point solutions – one for customers (CRM), another for suppliers (SCM), and yet others for senior executives (ERP) – a series of silos emerged that have become difficult – if not impossible – to integrate.

In recent years, the technology community has gone through several iterations of technology management to manage complexity by bringing information together from different places. In some cases, initiatives focused on aggregating all data into a central repository. In others, the effort focused on writing middleware to integrate data through a series of well-defined system integrations. Ironically, more complexity was created in the wake of these initiatives.

To address this growing complexity, and provide a more effective tool for integrating disparate sources of information, we have seen in recent years the rise of the enterprise mashup concept.

Enterprise mashups offer a new way to accelerate the process of bringing together information throughout organizations by using Web data standards to access critical information. Enterprise mashups remove much of the complexity associated with developing micro-applications and empowers non-technical business users to construct reports that tap into the real-time sources of information that drive an organization.

Thus, rather than depending on the IT staff to develop a new report, business managers and analysts can mix and match sources to create their own dashboards from which to make decisions.

Enterprise Mashup Platforms, or EMPs, provide executives with an institutional tool for creating mashups and then extending – or projecting – the value generated by each mashup from a single situation into others; this allows it to be reused or built upon as other needs arise.   Moreover, EMPs offer the promise of providing information technology (IT) departments with the security, management and control measures that hold the people, processes and technologies that consume enterprise data resources accountable to appropriate standards and policies of behavior.

The potential of mashups in the enterprise – and Enterprise Mashup Platforms – is great. In an effort to better understand this new technology and comprehend the significant management implications that ensue, the editors of BizTechReports.Com sat down with subject matter experts at Chevy Chase, Md.-based JackBe (http://www.jackbe.com) to explore the strategic, operational, financial and technological issues that organizations should consider to effectively harness this technology-enabled business application in today's hyper-dynamic information environment.

How Executives Make Decisions in a Hyper-Dynamic Environment

When we say that businesses now have to compete in a hyper-dynamic-environment what do we really mean? At a basic level, we are talking about a dramatic change in the pace of change. For years, executives have had the luxury of viewing the pace of change in our business environments as one for which systems can be created to control. And in the past, to a great degree, organizations have been able to do that.

What is different today is that the pace of change has accelerated so much – due to the converging trends of globalization and digitization – that executives no longer have the luxury of putting a plan in place and waiting for it to work. They need to be able to do more than act. They must anticipate and respond to actual and potential events proactively.

Addressing the need for speed, however, is hampered by another challenge. As the decision-making timeline has been compressed because of operational acceleration, the volume of information required to make informed business decisions has exploded. Most executives are quick to admit that too much information is required to make decisions in real-time. Moreover, the challenge is complicated by the fact that the exploding amount of information they need in order to make effective decisions is everywhere – internally, externally, publicly, with partners, etc.

Take, for example, the common scenario of a large multinational bank in which every division basically has its own enterprise architecture comprised of a number of unique applications. This system disparity might have grown up organically, because of mergers, acquisitions, or simply a misguided enterprise architecture plan. The bank needs to manage and reconcile this wide range of enterprise architectures to support executive decision-making processes, stakeholder communications, and even basic corporate reporting.

The disparity makes it nearly impossible to use traditional data integration strategies (business intelligence solutions, for instance) to consolidate and integrate this information. And it is unfeasible for the bank to manage and share and reconcile all the information manually – it simply takes too long to aggregate the information. This is particularly true for transaction processing intensive operations. On a trading floor, for instance, no broker wants to execute orders behind the market.

This conundrum is not unique to the banking industry. Consequently, a growing number of organizations are looking for ways to harness enterprise mashup technologies to complement traditional ways of managing disparate enterprise architectures and sources in real-time without having to move data from one legacy system to another. Mashups are turning out to be an efficient and cost-effective way to drive critical parts of the processes that must have very fast, real-time data aggregation.

Defining Enterprise Mashups

Forrester projects that the enterprise mashup market will reach nearly $700 million by 2013, and that the mashup trend will have an impact on nearly every software vendor as the industry looks for ways to help organizations across all sectors of society operate in today's hyper-dynamic environment.

An enterprise mashup is an application that combines data from multiple sources to create new more useful information. It typically uses browser technology as the primary user and development interface while the actual "mashing" of the data is done on efficient, secure servers.

The term "mashup" itself suggests that they:

- Do not require a tremendous amount of expertise to construct (so that non-technical staff can create and manipulate the mashups); and

- Can be connected and integrated quickly with "source" and "destination" applications by using open/standardized web and data interfaces.

Unlike many information technologies, enterprise mashups allow staffers – who may or may not be in the technology organization – to rapidly develop and field information that provides a real-time view into operations that are driven by a variety of underlying technologies – such as ancient mainframes, newer commercial-off-the-shelf (COTS) applications, and external sources. Forrester Research defines mashups as: "Custom applications that combine multiple, disparate data sources into something new and unique."

The Case for
Enterprise Mashup Platforms

With the quantity of digital content doubling every 18 months, the organizations that find ways to make their valuable data available -- and useable -- across silos and legacy systems, securely and in conformance with corporate governance, will win big. Those that cannot may find themselves out in the cold.

Similarly, government agencies that are not able to quickly and securely share information with constituents and other agencies, will find it difficult to effectively achieve key mission objectives that require cross-organizational collaboration (such as the mashup of departments that must coordinate operations within the Department of Homeland Security).

But for large enterprises and government agencies, it is not enough to provide employees with the ability to build their own applications on an ad-hoc basis. New management imperatives – and in many cases government regulations – require executives to provide a management structure that controls and monitors how these mashups interact with data and applications.

This is why private sector executives and government officials increasingly are looking to Enterprise Mashup Platforms – or EMP – as a way to help them leverage their information resources quickly and effectively across the enterprise

EMPs enable an organization to quickly leverage the value of existing data *securely* across widely disparate sources, bringing information into tailored user interfaces, portals or platforms. The flexibility and the speed this approach offers is critical to helping enterprises move to the future and rapidly build upon the applications they need to keep their business going. EMPs set the foundation for mashups to take all kinds of disparate sources of data, bring that data together and create micro-applications.

EMPs set standards for how enterprise mashups are designed, built and developed in a secure and governed manner. They also provide productivity tools to create mashup "widgets" (i.e. interfaces), that make it

possible for employees to share mashups with peers, and to publish mashups to destinations like portals and websites in near real-time.

While it is possible to create mashups without EMPs, organizations will be hard pressed to unleash the full value proposition of the mashup concept. EMPs allow secure and compliant mashups to be published and shared – in effect syndicated or placed in an enterprise library – in a way that adheres to the security and governance standards of the organization. The platform also provides the tools for executives to monitor and control the data that users are accessing and sharing.

The fundamental tenet of JackBe's approach to EMPs is to build security and solid governance principles into the mashup creation process by having conventions and rules in place that can be monitored and enforced in an automated manner.

Ideally, the integrity of existing security measures present prior to the creation of the mashup is retained after a mashup is developed – regardless of whether lightweight directory access protocol (LDAP), Active Directory, public key infrastructure (PKI) or other practices. Effective EMPs do this and also enforce existing user authentication strategies, such as role-based or attribute-based techniques.

JackBe believes that effective EMP solutions should ensure that mashups adapt to whatever security methodologies are in place, pass credentials to the authenticating source, and then allow the mashup to get to the data. Also, effective EMPs must contribute to the ongoing ability of non-technical and technical employees to build new mashups – or re-use existing mashups in innovative ways.

Enhancing Situational Awareness

In a hyper-dynamic environment where an ever-increasing number of critical situations change more often, executives have to be "situationally aware." This means understanding the constantly changing relationships between internal developments and changes with markets, customers, competitors as well as other external factors that affect key mission objectives. In this environment, organizations need to be more nimble than traditional legacy systems permit. Mashups offer the opportunity to update or enhance (not replace) legacy technologies to enable executives to make better decisions, more often in a constantly changing environment.

Imagine a group of human resources executives in any organization who want to track H1N1 (the swine flu virus) trends to determine the potential impact on their workforce and operations. Mashups can allow this organization's staff to quickly (i.e. within hours) create micro-applications that bring in data from the Center of Disease Control (CDC), match it to key personnel and workforce information in their internal systems, to determine the risk that this flu strain poses to employees, projects and perhaps even key customer relationships and related costs.

A strategically deployed EMP allows those mashups to be:

- Leveraged and re-used the next time a similar situation arises;

- Adapt the key logic in the mashup to quickly address different challenges; or

- Use the mashups as an input to other mashups.

For instance, it may come to pass that an organization must investigate an alleged case of larceny. Executives will need to be able to use many of the same personnel resources – such as bank accounts, accounting entries, etc. – to develop a clear picture of what is in fact occurring – and do it in real time. The EMP facilitates the lessons learned (and data sources employed) by the organization in the H1N1 situation to accelerate the development of a new micro-application to understand the nature and scope of a potential embezzlement scheme.

Empowering Secure, Real-Time Innovation

An enterprise mashup platform enables companies to reduce the amount of work they do in order to get data to business users so that they can make decisions. The platform allows non-technical staffs do a significant amount of work that would otherwise require a company to invest in custom IT development or task the already overburdened IT department to get the job done with cumbersome integration solutions.

EMPs allow organizations to deploy mashups with strong security and governance – attributes that are absolutely critical in an enterprise environment. An effective enterprise mashup platform plugs into existing identity management systems and can automatically adjust and adapt to shifts in the security posture even as new mash ups are being created.

Ultimately, the value of mashups in general, and EMPs in particular, is that they empower organizations to enable the development of innovative ideas from two directions -- from the bottom up and the top down. Mashups can be used to implement new strategies by senior executives. Simultaneously, mashups can be developed by rank and file staff to solve problems that confront them today. EMPs allow a library of all mashups to be built so that they are available to anyone who wants to leverage existing thinking without reinventing the wheel. Mashups, in short, are designed to be used and further reused to generate continuous value over time.

Enterprise mashups can become the building blocks of new major corporate strategic initiatives, leveraging existing data safely and quickly to solve problems that are inevitable in today's hyper-dynamic information environment.

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About JackBe

JackBe delivers a trusted enterprise mashup software platform that empowers government and commercial organizations to create, customize and collaborate through enterprise mashups for faster decisions and better business results. The company's innovative Enterprise Mashup platform, Presto, provides dynamic mashups that leverage internal and external data while meeting the toughest enterprise security and governance requirements. JackBe, Presto, Presto Wires, Presto Visual Mashup Composer, and Mashup Macros are trademarks of JackBe. For more information, visit www.jackbe.com.

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