The Continuous Innovation Advantage of Software-As-A-Service

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Executive Summary

SaaS vendors have long promised “better, faster, cheaper” innovation than their on-premise Enterprise Resource Planning (ERP) counterparts. Has recent history, though, proven SaaS is a more compelling advantage for ERP solutions? Over the past few months, Knowledge Infusion reviewed some of the leading SaaS and on-premise ERP vendors to assess functional innovation, deployment, upgrade efficiencies, and return on investment over the past five years. Knowledge Infusion interviewed some of the leading companies using both traditional and modern ERP solutions.

The result: SaaS-based ERP solutions now offer a compelling advantage for companies looking for a more flexible and innovative path to managing their workforce. Today, shrinking budgets combined with great demand for workforce insight make it difficult and economically unfeasible for companies to continue to invest in legacy ERP systems.

The next-generation ERP systems have arrived. These next-generation ERP systems center on a modern, web-native architecture utilizing a single human capital system-of-record. These new systems provide a more economical service delivery model that is integrated to HCM processes, designed to rapidly adapt and change to the needs of the modern business climate, and built to better support real-time integration with other systems. Most importantly, these systems support decision-making across all employees and users within the organization through a simple, consistent experience.

This report defines the next generation system-of-record, outlines the changes and challenges with current technology, and discusses how continuous innovation has now become critical for any “new” system-of-record.
Software-as-a-Service (SaaS), also known as cloud computing, has emerged as the next generation of technology that supports today’s modern applications.

Introduction

In the current economic climate, companies, managers, and employees are challenged to do more with less and looking to human resources (HR) for support. Unfortunately, many HR organizations continue to be challenged with some of the most remedial HR administrative tasks (e.g., defining the total number of employees, calculating the significance of people costs within an organization, and consistently measuring key HR and workforce costs). Many global companies recognize “people costs” as significant to the operational performance of their organization, but they are unable to calculate the actual value.

Business climate is changing on a monthly basis. Merger and acquisition activity in many industries is accelerating. Laws and regulations are becoming variable and constantly changing in real-time. Many companies that have already downsized a significant portion of their workforce are downsizing even more while other companies are slowly beginning to hire again. Workforce flexibility has become just as critical as the key materials that make up a physical product.

The technology demands that support an organization’s workforce decisions are changing rapidly. Monolithic ERP systems of the past lack the flexibility to make critical workforce adjustments. Managing, updating, and maintaining these systems has become cost prohibitive.

Software-as-a-Service (SaaS), also known as cloud computing, has emerged as the next generation of technology that supports today’s modern applications. In fact, SaaS has become mainstream and companies of all sizes and industries are embracing business applications based on a SaaS foundation to meet the fast-paced, ever-changing needs of the business.

Based on Knowledge Infusion research and ERP customer interviews, not only are decisions about SaaS solutions based on technological advantages, they also have real cost savings opportunities. Many customers that are either considering the migration to SaaS applications, or have already made the switch from an existing on-premise ERP application to SaaS, are recognizing cost savings greater than 50% over a five-year period. SaaS is also enabling companies to move toward more predictable planning through scheduled product release updates and payment models that reduce the dependency on large capital expenditure budgets that are more at risk than ever.
Substantial cost savings doesn’t always justify making the difficult decision to switch vendors to support a core HR system-of-record. Long-term innovation and value creation are essential for companies to maintain a competitive advantage in today’s market. Companies need to know where their employees are located, on which projects they are working, the value they are creating for their organization, and how the overall people costs are affecting the financial performance of a company. And this needs to happen in real-time so companies can quickly make product investments, acquisition decisions, and critical workforce adjustments.

Over the past three months, Knowledge Infusion interviewed over 25 companies using various ERP systems, from legacy “green screen” systems to traditional ERP solutions and next-generation SaaS-based ERP systems. Based on this research, Knowledge Infusion believes every organization has an opportunity to re-think how they are approaching their ERP technology investments and, more importantly, shape those decisions now to impact their organization today and into the future.
Today’s ERP “Innovator’s Dilemma”

Over the past 15 years, traditional ERP systems such as Oracle, PeopleSoft, SAP, and Lawson have unlocked considerable value to companies by automating static back office processes. The highly customizable natures of traditional ERP systems have allowed companies to modify the software and adapt the applications to meet the unique business process needs of the organization.

Since unlocking that value, many traditional ERP systems deployed by leading companies have reached a breaking point. The highly customized natures of traditional ERP systems, once a competitive differentiator, have quickly become an Achilles’ heel. Making process changes, or even deploying new enhancements, have become cost, resource, and time prohibitive. Custom code and third-party interfaces that work in one version often don’t work in newer releases. In fact, many experts believe companies should treat an ERP upgrade as a whole new implementation, which should include re-evaluation of technical needs, skill requirements, and the extent of system customizations.

The dilemma is not attributed to a single flaw in traditional ERP systems. A look at a timeline of product releases of the major ERP vendors would suggest the path to innovation requires new approaches in technology and service delivery models (Exhibit 1).

Innovation is defined as the introduction of new things or methods. Innovation is not only relevant again but a necessity in business today. In comparing traditional ERP systems such as Oracle, SAP, and Oracle-PeopleSoft versus modern, SaaS-based ERP systems such as Workday, innovation is continuous, frequent, and palpable. SaaS-based ERP solutions are innovating at a pace unmatched by traditional ERP vendors and changing the definition of what ERP should be to an entire organization.
Confronting the Traditional ERP Value Proposition

Product upgrades have always been a long-standing commitment by traditional ERP vendors and something for which customers pay handsomely in their maintenance fees. Annual maintenance can often exceed 20% of the original license fee and is often a significant single line item in any HR or IT budget.

According to a recent article in Barron’s, “…maintenance fees account for more than 51% of Oracle’s total revenue of $23.49 billion and boasts gross margins, including support, north of 90%. Oracle consistently gets 90% of its customers to renew their maintenance contracts each year. At SAP (SAP), about 50% of the company’s fiscal 2009 projected revenue of 10.65 billion euros ($15.64 billion) comes from maintenance fees.”

Recently, ERP vendors’ healthy maintenance fees have come under fire. Many global companies are choosing to terminate their maintenance contracts due to the escalating costs and unrecognized value. Other companies like Chiquita Brands and Flextronics are switching to more innovative and cost-effective solutions such as Workday.

Recent Knowledge Infusion research suggests a minority of traditional ERP customers are actually taking advantage of the technology upgrades with their core HR systems. Knowledge Infusion estimates less than 25% of companies have deployed PeopleSoft Enterprise HCM 9.0, the most recent release of their HCM product (see Exhibit 2). In addition, Knowledge Infusion estimates only 30% of Oracle Enterprise Business Suite (EBS) customers have deployed version 12.0 and approximately 40% of SAP customers have deployed ERP HCM 6.0, their most recent HCM product release.

In fact, a majority of companies today are running ERP versions more than five years old. Based on customer interviews, Knowledge Infusion attributes the lack of customers running the current versions of their traditional ERP systems to the following:
Traditional ERP upgrades are costly and complex
One customer interviewed, a global professional services company, attempted for two years to migrate to PeopleSoft 9.0 and eventually outsourced the technical development to a third-party that required an additional four months to complete the project. Other companies had over 10,000 customized objects in their ERP instance.

In research published by Webster Buchanan Research, “…Wells Fargo estimated it will spend a total of 44,000 hours migrating to PeopleSoft 8.9 in two phases, due to managing a high volume of customizations and building an internal customized link between Enterprise Recruiting Solutions 8.9 and HCM 8.3 after phase 1.” Even the most advanced companies, such as California State Automobile Association (CSAA), handled the core PeopleSoft 8.9 upgrade in five months, while still implementing several 8.8 modules. For CSAA though, many of the extended ERP modules deployed back in 2006 have since been replaced by best-of-breed talent management solutions. Lastly, as one consumer goods company suggested the complexity of the product compounded as they adopted new upgrades.

Upgrades do not occur frequently enough
In Exhibit 1, traditional ERP vendors can go upwards of three years without a significant release or enhancement to their products. In today’s fast-paced business environment, customers expect continuous innovation and the ability to update or change their solutions as with consumer-based technologies such as Amazon.com. Most major SaaS vendors are releasing three to four new enhancements on an annual basis. In comparison, traditional ERP vendors are releasing new functionality every two to three years.

Upgrades are becoming more risk than reward
During our interviews, Knowledge Infusion spoke with a number of companies that deployed extended talent management modules from their ERP vendor, such as employee performance management or e-recruiting, only to decommission the solutions shortly after go-live because the solutions did not meet the business needs. HR executives are at risk of losing internal political capital when technology decisions fail. More recently, the lack of clarity around Oracle Fusion and the continued delay of upgrades such as PeopleSoft Enterprise HCM 9.1, originally slated for release in 2008, are making it risky for companies to commit capital budget for undefined enhancements.

Significant upgrades often require reimplementation
In speaking with some customers planning an upgrade to PeopleSoft Enterprise HCM 9.1, Knowledge Infusion found they are planning a complete re-implementation of the product. Many customers that have significant customizations with their existing ERP system are opting to essentially start over and re-implement the next release of the product due to the complexity of updating, testing, and validating. Unfortunately, most companies that re-implement existing ERP systems do not take advantage of the opportunity to transform and streamline business process, which often renders the upgrade useless.

Upgrades lack business value
Due to the highly customized nature of traditional ERP systems, many companies often leverage little new functionality in updated product releases. Many companies interviewed are dependent on their IT organization when choosing to upgrade to the most recent version of their ERP solution. Those IT decisions are often focused on technical improvements (i.e., database consolidation) instead of new functionality that can actually impact the business. In addition, many companies have become dependent on third-party implementation firms to deploy their ERP solutions. As a result, these companies have little internal knowledge of how the product actually works, which makes change management or upgrade decisions difficult.
SaaS Has Reached Mainstream Adoption

It used to be that SaaS was only for small-to-medium size business that could only afford to “rent” what was previously known as “expensive” software. Today, SaaS has become widely accepted as a key delivery model for companies of all sizes and industries, including public sector and even government entities.

SaaS solutions are built on the premise that the vendor is running a single code base and that all customers are running the same software utilizing the same, shared infrastructure, otherwise defined as multi-tenancy. These traits provide significant long-term benefits to customers. Some of the benefits include:

**Easily consumable upgrades**
Unlike traditional ERP systems that require significant time, cost, and resources to upgrade their systems, SaaS solutions are essentially updated seamlessly. Since all customers are running the same software “stack,” the core software cannot be modified or customized, which allows the vendors to push new updates quickly and efficiently. One customer interviewed, an international consumer goods company, suggested it took less than 300 total hours to migrate to Workday 8, the most recent version of their product. Approximately 10 hours, or less than 5% of the resources required to update, was dependent on IT; most of the time was dedicated to testing and running scenarios by HR users. Additional interviews with Workday customers estimate the upgrades took less than 10% effort (time and cost) than with their pre-existing traditional ERP systems.

**Continuous innovation**
SaaS as a delivery model allows vendors to innovate continuously and rapidly. Vendors focused on SaaS as the sole delivery model have a mind shift that prioritizes research and development investments on new functionality and platform enhancements on a single product versus supporting multiple legacy versions of various products. Today, Oracle is supporting over 10 versions of the HCM products, either through existing support or sustaining support. Updates are no longer just about adding new functionality to the products. SaaS innovation must occur in its purest sense, without the baggage of on-premise complexity. While the hybrid model offers customers an option of either on-premise or SaaS delivery model, hybrid solutions still place the same harness on the respective vendor to support various customers with distinct infrastructure complexities, limiting the vendor’s ability to innovate across all customers.

**Configurability versus customization**
Many companies are opting into SaaS-based solutions due to the configurable nature of the product. Many companies that have deployed traditional ERP systems spend considerable effort planning and designing process flows for the new upgrades based on the necessary customizations. Through a configurable approach, as one customer suggested, “…configuration forces [them] to focus less time required for planning and process design.” Configuration also affects change management. Changes can be made simply though an administration console instead of modification or customization to source code.
Total cost of ownership advantage
When considering a switch from traditional on-premise ERP systems to SaaS-based ERP systems, most companies stated that they completed formal total cost of ownership analysis to assess the best decision moving forward. Based on Knowledge Infusion research, SaaS-based solutions can often be 50% the cost of an on-premise equivalent solution. One company interviewed, a consumer goods company, suggested an internal total cost of ownership analysis between PeopleSoft and Workday concluded PeopleSoft would ultimately cost twice as much over a five-year period. The total cost of ownership includes license/subscription costs, maintenance costs, internal resource costs, external resource costs, and infrastructure costs. Interestingly, one Workday customer suggested that migrating to a SaaS-based solution would make “budget line items go away,” and therefore, make capital budgeting and planning easier in the future.

Based on Knowledge Infusion research, most companies plan to either continue their investment in SaaS-based solutions or increase their investment (Exhibit 3).

Interestingly, all traditional ERP vendors have now concluded SaaS is a viable option and are beginning to either plan or offer varying SaaS-based solutions, although mostly in a hosted-delivery model (where a third-party hosts and maintains the software). While this hybrid delivery model is certainly plausible for traditional vendors with a heritage of on-premise software delivery, the model lacks the scalability, consistency, and economic value of those vendors singularly focused on a multi-tenant SaaS architecture.
Innovating ERP

Beyond the technology infrastructure and delivery model, one of the biggest challenges with ERP systems today is the data. The data challenge—getting data into and out of the system to make critical business decisions—is less a technology issue and more of a consistency and confidence issue. The mechanisms for managers and employees to input information must be easy to use in order to ensure data quality and integrity. While traditional ERP systems capture lots of employee information, the static data can become outdated quickly with no easy way to update. As a result, users lack confidence in the data, typically blaming the system of record for its inability to provide accurate information.

Instead, systems must support ongoing data entry from multiple users to keep information fresh and updated, while ensuring information is easily accessible in a useful manner. This also ensures that specific information requested by the CFO or other business leaders is readily available real-time—not hours or days (Exhibit 4).

Exhibit 4 The Concepts of "Systems" Are Changing

Traditional HRMS
- Employees communicate targeted messages for transactional operations
- IT uses offline forms as data source
- Data become perishable, outdated, not trusted

Next Generation ERP
- Managers and employees become the trusted source
- Data always “fresh”
- Systems become collaborative and team-focused
- Systems generate actions

Source: Knowledge Infusion, 2009
Over the past two decades, organizations implemented a traditional ERP system to capture information around employee demographics and employment status, organizational and department structures, and other HR data related to benefits, compensation, diversity, compliance, etc. Over time, many of those same organizations accumulated additional ERP systems and other systems of record due to global expansion the required specific, unique solutions as well as mergers and acquisitions that added even more information silos and complexity of information access.

During many of these implementations, processes were designed solely by and for HR users and deployed by HR with IT support, resulting in an HR-centric perspective. Once organizations had begun to deploy self-service and portal-based applications on top of the HR-centric data model, they quickly realized the challenge of driving user adoption within the greater organization. Since the data model is HR-centric, much of the supporting data used to support direct access transactions became confusing to non-HR users.

In addition, the highly customized nature of traditional ERP systems creates serious data integrity issues. With traditional ERP systems, data entry is often limited to a few individuals with little to no validation and little ability to add or change existing systems. As a result, users cannot get the necessary data or reports out of the system, or the resulting queries are often corrupted by bad or invalid data.

Today, both HR and business leaders want and need “one source of the truth.” Consistent, accurate, and timely data is needed more than ever as organizations seek to streamline the data entry process across the myriad of systems now in place. These include identity management systems, talent management systems, single sign-on solutions, global security systems, data warehousing solutions, portals and intranets, and other global solutions. Companies today are dependent on their core HR system to make critical workforce decisions (Exhibit 5).

The world has changed dramatically since many traditional ERP solutions were deployed. As Internet technology has become an everyday part of live, it is imperative to rethink how data flows and is shared throughout the organization in order to support the core systems in place. In order to avoid fragmentation, inaccurate data, and user abandonment, there needs to be a single version of truth integrated across all systems. In most cases, this requires a renovation of the system-of-record.
Rethinking the New ERP System of Record

The new system-of-record should serve as a foundation for an organization’s core HR system, enabling solutions and applications throughout the enterprise to leverage a unified data source. Innovation is critical to “data in, data out” within the ERP system. Those ERP systems that continue to find new, innovative ways to get data in a standard, consistent model while getting timely information out will prevail as the system of record. True innovation can only happen when utilizing a modern ERP system that leverages synergy across applications, infrastructure, and customers.

While there may be multiple points of data entry, information is collected and stored in an integrated manner. This enables users across the organization to access, view, and retrieve updated, accurate information for better workforce analysis and decision-making. Today, ERP solutions should not be considered “HR systems”; rather, they should be considered “business systems” designed to support and extend the capabilities of your workforce.

When rethinking a system-of-record, it’s important to acknowledge the value of technology advancements versus simply modifying existing, obsolete systems. This is particularly true in cases where older technology is deployed, but the original purposes change and the technology never evolves. Modern ERP systems do not require “bolt-on” applications or upgrades; rather they enable integrated solutions supported by a common, or shared, system-of-record.

Six key attributes for any new system-of-record and important questions organization should ask themselves to ensure they are getting the maximum value out their ERP system include:

**Usable**—Is it easy to use? Can it be deployed seamlessly to the entire organization with limited training? Does it encourage users to spend time there? This is important to extend usage and value across the organization at all levels. The more time people spend in the application, the more the system can help them make better, more informed decisions; maintain compliance and process adherence; and better manage the performance and development of the workforce.

**Configurable**—Can you easily modify the system without major customization? Is the system flexible to allow changes frequently and on-the-fly? This is important to cost-effectively adapt to changing business requirements.

**Web-Services Enabled**—Is it easy to integrate? Does it support “cloud computing”? Can you access data anytime from anywhere? This is important to provide immediate access to valuable information shared among systems.

**Upward Compatible**—Is it upward compatible? Can you obtain the latest release without a costly, intensive upgrade? Does the technology provide access to innovation? This is important to keep your system fresh with system updates, fixes and new functionality.

**Embedded Analytics**—Does it include embedded analytics and robust reporting capabilities? This is important to ensure it is delivering useful information to support strategy development and rapid decision-making.

**Actionable**—Does it deliver actionable information that users can quickly apply to their decision-making? Can the system go beyond traditional views of HR automation and think about supporting the management of the performance of the whole business? This is important not only to support critical business decisions, but also to gain users’ trust in the data and ensure business decisions are supported for accurate information.

Business is moving faster than ever, as are user expectations for online collaboration, information access, and the ability to “get things done.” Consideration of future technology investment should ensure that 1) the technology is open and integrates easily with other business systems that exist today and are coming in the future, 2) the technology is easy to take advantage of new capabilities without a major re-investment/upgrade, and 3) the technology can scale and adapt quickly and efficiently as your business needs and strategies change.
Conclusion

As organizations consider their strategic investments in 2009 and beyond, the future of your organizations ERP should no doubt surface at the top of the list. After all, in today’s challenging and uncertain economic environment, companies are looking to gain more from their existing workforce.

Over the years, ERP systems and the data that resides within them have become a key ingredient to any organization’s success. However, for many companies, existing ERPs have quickly become legacy systems due to the inability to innovate, update, or change their investments. Ongoing maintenance costs are quickly become vulnerable due to the lack of new capabilities that are being demanded by their organization to make efficient and effective business decisions.

New and evolving technology is creating the opportunity for organizations to rethink their ERP strategy to ensure that information can be accurately captured and shared across the business to support strategic decision-making. Organizations that take advantage of more cost-effective delivery models and innovative technologies to establish an integrated system-of-record will drive greater collaboration, trust, and usability among users, ultimately delivering better results for the business.

Recommendations

Organizations seeking to establish a new system-of-record must go “beyond the database” and consider how it is deployed and used across the enterprise: Knowledge Infusion recommends enterprises consider the following when researching their next generation ERP as a system-of-record.

Analyze Your Current ERP Cost Structure as a First Step. Many companies choose not to invest in new technology because they have already budgeted their maintenance spend and are unable to justify new investments in technology. When considering the additional costs for support resources, technology infrastructure, and potential upgrade costs, justification for new technology can quickly be rationalized due to the cost savings.

Reassess Your Business Needs and Understand How Your Current ERP Fits. Many companies deployed their ERP over 10 years ago when their business was very different. As business accelerates and changes more dynamically, those ERP systems have been able to adapt because of their rigid nature. Companies should evaluate how their current ERP systems meet the business demands of their companies today and evaluate how it, or other alternative solutions, can meet the anticipated changing needs in the future.

Usability Must Be Key to Considering the Future of Your ERP. The user experience and usefulness of interactions will determine not only the relevancy of the data, but also increase the confidence of the data and ensure the right information is getting out of the system to be leverage for effective business decisions.

Configuration Will Be Key to Long-Term Success. Highly configurable administration can significantly accelerate deployment of the solution, reducing cost and resources and ensuring changes in business climate or process can be easily adapted.

SaaS Enables Continued Innovation. SaaS as a delivery model not only allows companies to innovate through process change, but also leverage continuous enhancements and product updates that increase business efficiency and effectiveness while reducing overall operational costs. Through SaaS, integration becomes highly valuable and enables companies and business systems to seamlessly connect and share data.
Notes & Resources

Methodology
The thesis, conclusion, and recommendations provided in this study are based primarily on the expertise of Knowledge Infusion consultants and their work with clients in the various sectors. Companies interviewed and incorporated into this research include CRA International, Chiquita Brands, SAVVIS, CDW, California State Automobile Association, McKee Foods, and BAE Systems. They are also supported by our work with the human capital management technology vendor community as well as research cited in the ‘Secondary Sources’ section of this document.

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About Knowledge Infusion

Knowledge Infusion is the recognized consulting authority on human resources and talent management technology solutions that drive human capital management business value. Formed in 2004, the firm provides strategic management consulting services, together with thought leadership, trends, market intelligence and analysis from the newly formed Center of Excellence. Complementing each other, the on-site consulting and Center of Excellence offer an unparalleled source of services and information for the HCM Community with a common goal in mind—maximizing the strategic direction HR has on an organization. Knowledge Infusion is the recipient of the 2007 IHRIM Partner Award, given for significant on-going contributions of time and effort in leading activities that add direct and immediate value to IHRIM and the field of HR information management. To learn more visit: www.knowledgeinfusion.com.