

THE PROS AND CONS OF SAAS ERP

2014 EDITION



The hype cycle surrounding Software as a Service (SaaS) has been building to a crescendo over the past several years. Enterprise Resource Planning (ERP) holds a special place in the grand scheme of SaaS. While companies seemed willing enough to let the applications that surround and extend ERP reside in a SaaS environment, they were less willing to place their systems of record in a cloud they did not specifically own or control. Today that is changing and as many weigh the pros and cons of SaaS ERP, the advantages appear to be winning.

IS IT “SAAS” OR IS IT “CLOUD”?

In spite of, or perhaps because of the huge volume of discussion around SaaS and cloud computing, there remains much confusion over the terminology. Many use the terms “cloud” and “SaaS” interchangeably, but there are some important differences. So let’s distinguish between the two up front:

Multi-tenant versus Single-tenant SaaS

Multi-tenant SaaS:
Multiple companies use the same instance of hosted software; configuration settings, company and role-based access personalize business processes and protect data security.

Single-tenant (or Multi-instance) SaaS:
Each company is given its own instance of the (hosted) software, but may share common services, such as an integration platform, and security.

- Cloud refers to access to computing, software, storage of data over a network (generally the Internet.) You may have purchased a license for the software and installed it on your own computers or those owned and managed by another company, but your access is through the Internet and therefore through the “cloud,” whether private or public.
- SaaS is exactly what is implied by the acronym. Software is delivered only as a service. It is not delivered on a CD or other media to be loaded on your own (or another’s) computer. It generally is paid for on a subscription basis and does not reside on your computers at all.

All SaaS is cloud computing, but not all cloud computing is SaaS. Traditional on-premise or hosted solutions might (or might not) be accessed via the cloud, although this is more likely to be a private cloud.

The confusion over terminology is only exacerbated by industry observers insisting their definition of SaaS is the only “true” definition. Most that insist on “true” SaaS also insist on a SaaS environment that is multi-tenant. The truth is, most consumers of SaaS enterprise applications don’t necessarily understand the difference between multi-tenant and single-tenant (or multi-instance) and may prefer the latter over the former for a variety of reasons.

Adoption of SaaS deployments of ERP has lagged behind that of other applications. Entrusting a SaaS solution provider with the transactional system

Data Source

In this report, Mint Jutras references data collected from its annual ERP Solution Studies, which investigate goals, challenges and status and also benchmark performance of enterprise application implementations, with ERP at the core.

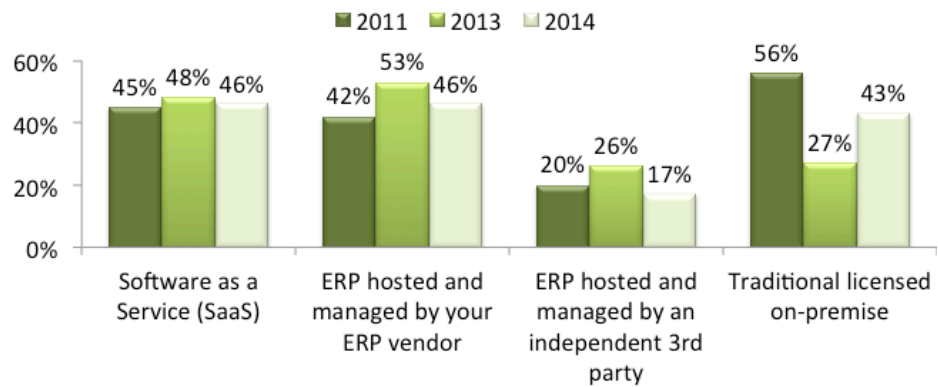
The most recent 2014 study surveyed almost 800 participants from companies of all sizes and a wide variety of industries.

of record of your business requires a higher level of trust than it might to hand over other applications, including those which are often today referred to as “systems of engagement.” This helps explain the relative acceptance of SaaS deployments of sales force automation (SFA) and customer relationship management (CRM) made popular by Salesforce.com as well as the historical resistance to SaaS ERP.

That sentiment however is changing and the barriers to acceptance appear to be breaking down. Each year Mint Jutras asks participants in its ERP Solution Studies which deployment options they would consider if making a decision now. The options shown in Figure 1 were defined as follows:

- **Software as a Service (SaaS):** Software is delivered only as a service. It is not delivered on a CD or other media to be loaded on your own (or another party’s) computer.
- **Hosted and managed by your ERP vendor:** Software is licensed by you but you pay your ERP vendor to manage and maintain (host) hardware and software.
- **Hosted by an independent 3rd party:** Software is licensed by you but you pay another party to manage and maintain (host) hardware and software.
- **Traditional licensed on-premise:** You license the software and are responsible for managing and maintaining it on your own premises.

Figure 1: ERP Deployment Options that would be Considered Today



Source: Mint Jutras ERP Solution Studies

Note: The time span between the 2011 and 2013 studies was about 18 months as Mint Jutras shifted the timing of the study during the calendar year.

This provides us with an indication of preferences for future deployments. For the past few years “SaaS” and “hosted and managed by your ERP vendor” have run neck and neck. Indeed the difference between these two options is often blurry and many equate “hosted by your ERP vendor” to a single tenant SaaS solution. The clear implication is a preference for cloud and interest in

relieving themselves of the burden of simply “keeping the lights on,” so to speak.

But what we find more interesting is the decline in the willingness to consider traditional on-premise deployments. Prior to the start of the global economic crisis (2008), the percentage willing to consider traditional deployments would have been in the 90’s. By 2011 it had dropped significantly and between 2011 and 2013 that percentage literally dropped off a cliff. While it rebounded somewhat this year, it still lags behind SaaS at 43%

And before you assume SaaS deployment is just for small companies, consider Figure 2. The willingness to consider SaaS ERP actually increases as companies grow, with the highest level of interest from large enterprises, which are also the least likely to consider traditional on-premise deployment. More on this as we actually weigh the pros and cons.

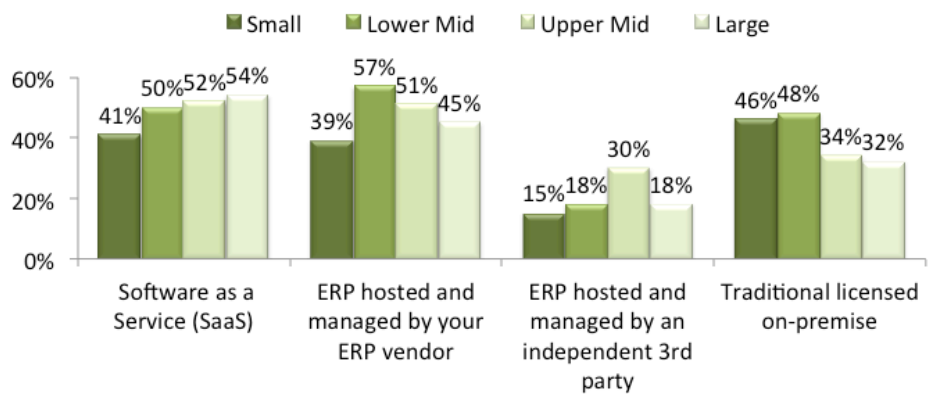
Company Size

In Figure 2, Mint Jutras defines company size by annual revenues.

Survey responses represented in Figure 2:

- ✓ 48% Small (under \$25 million)
- ✓ 28% Lower Midsize (\$25m - \$250m)
- ✓ 13% Upper Midsize (\$250m - \$1 billion)
- ✓ 11% large (Over \$1b)

Figure 2: Deployment Options Considered by Company Size



Source: Mint Jutras 2014 ERP Solution Study

Figures 1 and 2 aggregate responses from all companies, regardless of current deployment models. For Figure 3 we distinguish between those that are actually operating under a SaaS model today and those operating under all other deployment models. Those running SaaS today are clearly “hooked” on the model and extremely unlikely to be willing to go back to an on-premise installation. We point this out specifically because many considering a SaaS solution find the ability to move freely between a SaaS and on-premise environment very appealing. However, once the move is made to SaaS we find little, if any, interest in reversing that decision.

Companies are more likely to take advantage of this type of portability in their transition to the cloud. If a currently installed ERP solution is available as both SaaS and on-premise, it may be possible to lift and shift an existing on-premise solution to a SaaS environment. This will largely depend on the level of customization of the existing solution and the SaaS solution provider’s policy and ability to accommodate those customizations.

Figure 3: Deployment Options Considered by Current Deployment



Source: Mint Jutras 2014 ERP Solution Study

In spite of the past reluctance to consider SaaS ERP, the plus side of the SaaS equation extends beyond the obvious advantages of outsourcing the care and feeding of the hardware and software involved. And yet there are some lingering concerns, some more valid than others.

COST CONSIDERATIONS

When our survey respondents were asked what they found appealing about SaaS ERP, cost factors rose to the top of the list. While half (50%) cited lower total cost of ownership (TCO), 47% also noted lower startup costs.

A Chief Financial Officer of one small company that decided on the SaaS route four years ago noted the estimated up-front investment in an on-premise solution for eight users was \$150,000. This was primarily for implementation services, but also included hardware and software. The actual up-front cost for the SaaS solution chosen was less than \$100,000 and allowed up to 25 users. While software and service costs and even pricing models will vary from one solution to the next, this differential is not atypical.

This CFO explained, "While the up-front costs were lower we also compared the ongoing costs per year. For [the on-premise] solution, we anticipated annual maintenance costs of \$10,000 per year, but we also knew we would have to invest in a data base administrator / programmer. We conservatively projected that cost to be \$75,000 per year. We compared that to the \$45,000 per year subscription cost for the SaaS solution, with no IT staff required. So, on an ongoing basis we would save on the order of \$35,000 to \$45,000 a year. But the advantage of not having consultants living in our offices or an IT department...priceless."

50% see SaaS as having lower TCO



47% anticipate lower startup costs

In fact 34% of our survey respondents mentioned the lower (or nonexistent) cost of Information Technology (IT) staff as an advantage of a SaaS solution. Many simply don't have the internal staff they feel is required to adequately support hardware, infrastructure and software, and are not interested in investing in these resources. And many find themselves in a situation of not being able to attract or retain top IT talent. Some industries and locations are simply not a mecca for IT talent looking to stay on top of their game.

This benefit actually shot to the top of the list of benefits for those already deployed under a SaaS model. Sixty-one percent (61%) of those running SaaS ERP selected this as one of the "appeals of SaaS."

While 12% did indicate they had already invested in IT and were unwilling to reduce staff, in reality it is the norm for these IT staffs to be kept on board after a switch is made from on-premise to SaaS. In fact it is very likely the role of IT will shift to one that is more strategically focused on adding value to the business. This is far less likely to occur if existing IT staff have outdated technical skills or if the IT department cannot transform itself from having a tactical focus to one which is more strategic.

While the perception of lower costs was quite dominant, 17% did express the sentiment that they did not feel SaaS was any less expensive. In fact some industry observers will confirm this belief citing the obvious "rent versus buy" mentality and will point to break even points in the five to seven year range. However, these calculations only take into account the cost of the software and maintenance and usually ignore the cost of the hardware and often the middleware (i.e. database and infrastructure) that supports the application, not to mention the IT staff needed to maintain it.

Certainly if ERP is the only application that moves to the cloud and other applications remain on-premise, hardware (and IT staff) will still be required. However, the power and storage capacity needed will be reduced in your next upgrade, after removing ERP. "No need to purchase and maintain hardware" was the second most commonly cited benefit for those already deployed as SaaS.

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One final cost concern that needs to be considered is that of escalating costs over time. Using the same "rent versus buy" analogy, long gone are the days of "rent-controlled apartments." You sign a lease and take your chances that the landlord will not raise the rent through the roof at the end of the term of

the lease. But once you make a purchase of a condominium or a house, there are no guarantees that your taxes won't escalate out of control either.

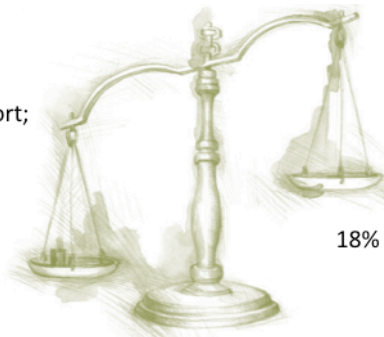
The software equivalent to property taxes is maintenance. However, there are some notable differences between real estate and software. Both maintenance fees and the software that is delivered as a service are governed by contracts. In selecting a solution provider it is important to look at the historical escalation of cost and you may even want to negotiate a limit to allowable price increases.

PRESERVING YOUR INVESTMENT

Second only to TCO, 42% of respondents included the reduced cost and effort of upgrades as an advantage to SaaS. And yet, at the same time, a relatively small percentage (18%) expressed the concern that they were losing control. Indeed in a multi-tenant environment, the customer typically has little control over the timing of the upgrades. However what is the real impact?

Pro

- ✓ 42% see reduced cost and effort;
- ✓ 26% value more leading edge technology through more frequent updates



18% fear loss of control

Con

In many cases "We want to control our own upgrade process" actually translates to "We don't have time" or "We don't want the disruption of an upgrade." And yet by not keeping current on the latest release of the software you are essentially letting your maintenance dollars go to waste.

Of course in a SaaS environment, those would be your subscription dollars. Even though upgrades at first might feel like a forced march, that forced march is actually good for you. All bug fixes and regulatory requirements are in place. When you are ready to turn on the new functionality, it will be there.

If innovation is delivered in such a way that the customer may optionally choose to take advantage of an enhancement – or not – there is no down-side and a lot of up-side. After all, the SaaS solution provider assumes a lot of the burden of the upgrade process.

And more innovation **should be** a significant benefit of a SaaS-based delivery model. The availability of more leading edge technology through more frequent updates was cited by only 26% of survey participants. While this

The combination of frequent updates and this "opt in" capability is an important characteristic by which you should evaluate potential solutions

percentage indicates this potential benefit is under-appreciated, Mint Jutras also recognizes the pace of innovation varies quite significantly from vendor to vendor. Those who offer their solutions exclusively as a multi-tenant SaaS solution have a distinct advantage of only having to maintain a single line of code.

Solution providers that deliver on-premise solutions are forced to maintain multiple versions of the software. Very often the software is offered on a choice of platforms and databases, and the vendor must support multiple release levels determined by their customers' ability to keep pace with upgrades. For every person-day they spend on innovation, they spend another multiple of that day making sure it works across multiple environments. Those solutions that offer the same solution either as SaaS or on-premise must accommodate these choices, while those offering a multi-tenant SaaS solution exclusively can devote their entire development budget on innovation.

There is definitely a trade-off between these two scenarios. Vendors offering a choice of SaaS and on-premise can also offer portability while SaaS-only solution providers can provide far more frequent and apparently seamless upgrades.

CUSTOMIZATION

Heavily customized solutions also may prevent companies from keeping current on the latest release of ERP. At the same time, the *perception* of the need for customization may present a barrier to considering a SaaS solution. In fact 19% of our survey respondents indicated the requirement for heavy customization would prevent them from considering SaaS. Yet there are some very valid arguments that can be made against this as a barrier to SaaS entry.

First of all, don't necessarily assume you can't customize a SaaS ERP solution. Most modern ERP solutions today offer so many options to configure and tailor the solution that users think they are performing customizations, even though they are not touching the code or building barriers to future upgrades. And if the requirement does truly require code modification, some (but not all) SaaS vendors, even some that provide multi-tenant solutions, do indeed support customization. These vendors either

- incorporate the customization into the standard product, possibly with switches and settings that effectively "hide" the changes from other customers or make them optional, or
- they offer the customized solution in a single-tenant (multi-instance) environment

Yet while many individuals may think their business is unique (thus making customization necessary), much of what they do can and should be quite similar to any other business or at least similar to other businesses in the

same industry. Perceived differences often spring from the “we’ve always done it this way” mentality. And those supposedly unique business processes may pre-date the availability of tools and technology that can improve the process.

But if you truly require heavy customization, then it may be time to reevaluate whether you have the right solution for the job at hand. In selecting ERP, fit and functionality has always been the top priority, as it should be. Our survey respondents ranked this criterion at the top of the list at 4.38 on a scale of 1 to 5, where 5 is “extremely important.” But this year “ease of use” was virtually tied for number one, rated (just barely) ahead at 4.39. These two criteria actually can, and should, go hand-in-hand. All the functions in the world are useless if you can’t figure out how to use them. Even with the best fit, if the solution is not easily navigated, if it doesn’t allow you to work naturally, if it doesn’t save you time and effort, then it simply won’t get used and it won’t produce value for your business.

For those with existing ERP solutions that require continued support of heavy customization, it may be time for a replacement and SaaS may help pave the way. In the not too distant past, ERP was thought to be like brain surgery. Don’t do it unless the patient is dying. But today, it should be viewed more like joint replacement. If your knee or hip is not functioning properly, typically you will delay replacing it until you exceed your threshold for pain, or until you are no longer able to function properly. Use this same philosophy in terms of ERP. While it still may require major surgery for your company, recovery may be speedier with a SaaS solution. Survey respondents with SaaS implementations reached their first go-live milestone 19% faster than those with on-premise solutions.

There is still the perception among some of our survey respondents that SaaS ERP solutions do not offer the same level of robust functionality that on-premise solutions provide. But that perception is shrinking; only 15% of survey respondents selected this as a concern. Indeed some of the SaaS-only ERP solutions are quite mature and some very mature solutions that were previously only available as on-premise solutions are now offered through SaaS models. But perhaps the most telling statistic: 0% of current SaaS users have this perception.

So don’t assume a solution that is on-premise necessarily has more functionality. Carefully evaluate each for its specific fit against your needs.

ACCOUNTING FOR COSTS AND RISKS

Before making a purchase (or a replacement) decision, you will want to consider how you will account for the costs. If you choose an on-premise solution, with the purchase of a substantial up-front license, the default

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accounting will be to treat it as a capital expense (CapEx). You may have some alternatives through leasing and some on-premise solutions can be paid for through subscription pricing. But generally all SaaS solutions are paid for through subscriptions, giving you the alternative of treating the cost as an operating expense (OpEx). Whether this is a requirement or even a preference is a question you must answer along with your accountants.

The ability to treat the purchase as an operating expense is often associated with lowering the risk. And in fact the perception of SaaS as a lower risk was cited by 26% of all respondents. Lower risk and “pay as you go” subscription pricing however should not be confused with “Let’s try it and if it doesn’t work, we can just walk away.” Make no mistake, the implementation of an ERP solution, SaaS or otherwise, is a major undertaking. It is the system with which you will run your business and there is a high degree of probability it will introduce change to the way you run it. After all, if you are not going to gain efficiencies and improve your business, why do it at all?

However there is one risk that SaaS might seem to introduce – that of downtime and unpredictable performance. This concern was expressed by 35% of survey respondents. And 34% expressed concerns over unreliable Internet service.

While reliable Internet service is taken for granted in many parts of the world, there still remain, even within the United States, locations where the service from the Internet service provider is unreliable. This is perhaps the single best reason for not considering a SaaS deployment, at least until reliability is at an acceptable level.

But where the problem does not result from poor service from the carrier, here is another example where due diligence is required. Ask for historical performance including outages and down-time and consider asking for guarantees. Expect a higher level of commitment than you yourself could make to your own constituents. SaaS solution providers’ very livelihood depends on this and as a result they build in redundancies that you as an individual company could probably never afford. Companies that have experienced any one of a number of natural disasters can attest to the value of alternative plans for business continuity provided by SaaS solutions.

One such company running a SaaS ERP solution in Louisiana lost the roof of their facility during Hurricane Katrina, but we are able to securely access all systems the day after the winds and rain subsided even while their manufacturing capabilities were shut down.

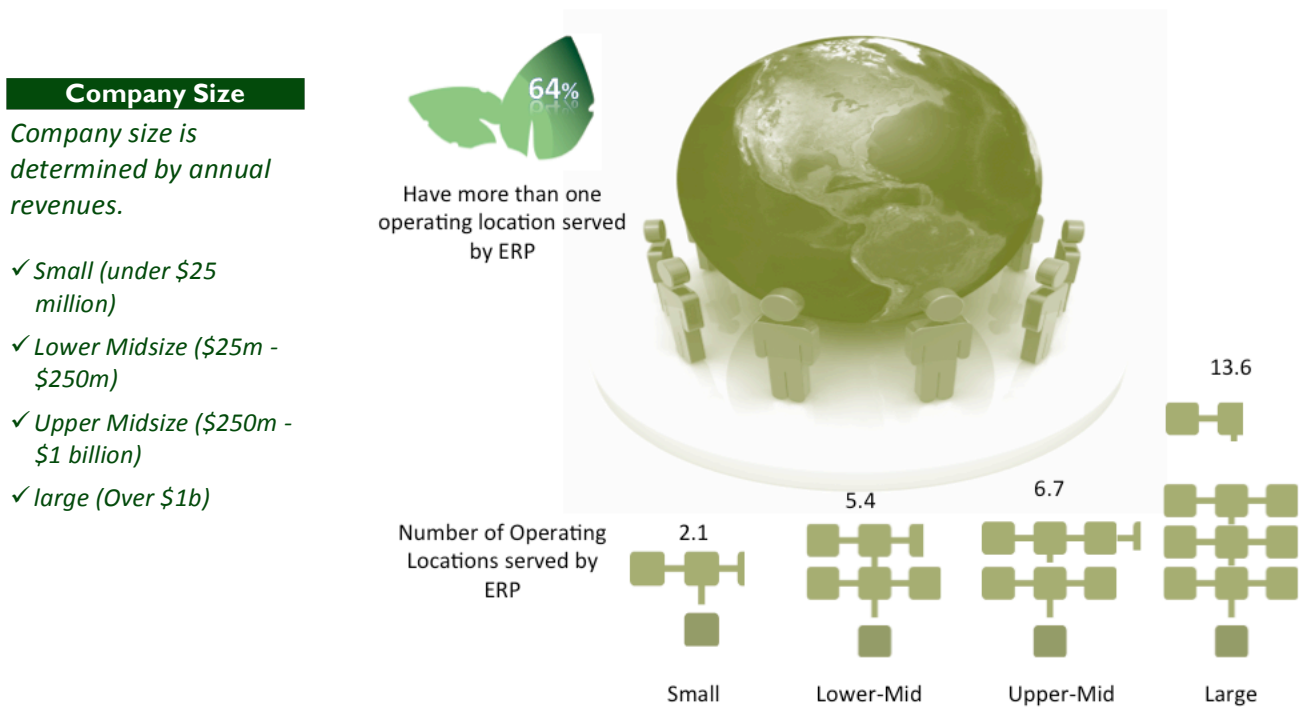
DISTRIBUTED ENVIRONMENTS

This redundancy is often achieved through backup facilities in different parts of the country or even the world. Yet operating across a distributed

environment has become a way of life for a large percentage of businesses today, even smaller ones, and this may provide additional incentive to consider SaaS ERP. In fact 64% of all our survey respondents had more than one operating location served by ERP even though our survey sample included companies of all sizes from very small to very large (Figure 4). Even small companies (those with annual revenues under \$25 million) averaged 2.1 operating locations. This average escalated to 13.6 in companies with revenues over \$1 billion.

This level of distributed environment helps explain, at least in part, why large enterprises are so ready to consider SaaS ERP (refer back to Figure 2). What better way to control the standardization of solutions and processes than through SaaS deployment?

Figure 4: Distributed Environments are the Norm



Source: Mint Jutras 2014 ERP Solution Study

While 23% of all survey respondents cited the ease of remote access for a distributed workforce as a key advantage of SaaS, this percentage jumped to 33% for those actually running a SaaS solution. Only 16% (off all participants) noted the ease of bringing up remote sites, but again, this percentage jumped to 26% for SaaS users. Of course these distributed environments don't necessarily rule out other deployment options. Centrally hosted environments

... everyone **should be** concerned over security. But they should be concerned regardless of deployment option. Don't make the mistake of thinking an on-premise implementation is necessarily any more secure than SaaS.

SAS 70 Type II certified

[Statement on Auditing Standards No. 70: Service Organizations](#), commonly abbreviated as **SAS 70**

The SAS 70 certification was developed by the American Institute of Certified Public Accountants (AICPA) to annually audit the effectiveness of operations, controls and safeguards to host and process data.

might accomplish the same goal, but again the burden of installation and upgrades must be born either by the host or the company itself, whereas the SaaS solution provider can bear much of that burden of responsibility.

AND FINALLY...WHAT ABOUT SECURITY?

The final and often deciding factor in considering SaaS ERP is one of security. It's one thing to put your sales contacts in the cloud, but quite another to put your system of record someplace where you can't see it or control it yourself. And yes, the number one barrier to SaaS deployment is concern over security, with 53% of survey respondents expressing this fear. And yes, everyone **should be** concerned over security. But they should be concerned regardless of deployment option.

Don't make the mistake of thinking an on-premise implementation is necessarily any more secure than SaaS. That is unless your data center is completely contained with no possibility of access from outside the four walls of your building. That means no VPN

access. It means no external consultant or guest ever connects their laptop to your network. It means no laptop ever leaves the building to be potentially connected to any other network, then brought back and connected to yours. There aren't too many installations, if any, like this in the world today.

In fact, if you are a small company, without a dedicated IT security expert on board, chances are you assume **more** risk than you would in a SaaS environment, particularly one that has successfully completed an annual SAS 70 Type II audit. While 53% of respondents expressed concerns over security, another 25% of all survey participants, and 43% of those deployed as SaaS, admitted that part of the appeal of SaaS was the comfort of leaving security and other IT issues to the experts.



CONCLUSION AND RECOMMENDATIONS

On balance the advantages of a SaaS environment for ERP seem to outweigh the disadvantages. Cost savings, including TCO, startup costs and cost of IT staff can be substantial. Even if the subscription cost equals the cost of software and maintenance over time, there are still the savings achieved by eliminating the purchase or continued maintenance of hardware. If you have no IT staff today, there is no need to hire any. If you have good IT staff on board, let them engage in more strategic, value-add activities than routine maintenance.

Whether you choose a solution that is multi-tenant or multi-instance, carefully evaluate the solution provider's approach and track record in terms of delivering innovation. Look for those that update frequently, but provide "opt in" enhancements. And don't build roadblocks to keeping current with excessive customization. Configuring is good. Modifying code and then having to continue to maintain that code is bad. If you still think you need to customize, ask yourself if you have the right solution.

If you operate in a distributed environment, consider the advantages a SaaS environment can bring in terms of standardization across the enterprise, providing access to remote employees and in bringing remote sites up quickly.

The accounting advantages of OpEx versus CapEx may or may not be appealing to the office of the CFO. But ask the question and make a conscious decision, rather than letting your choice of solution dictate your accounting.

And finally assess your risks. Do you have risks today in terms of existing software and its ability to help you manage your business? What new risks does new software add or eliminate? Assess your current level of security. When considering SaaS solutions, look for data centers that have passed a SAS 70 Type II audit and ask yourself if you yourself could pass such an audit today?

The depth and breadth of choice between solutions and deployment options have never been greater. Look for these choices to continue to expand. But with more choice comes the requirement for better due diligence and good decisions. Don't be held back by pre-conceived notions and misperceptions about technology that is rapidly advancing. Not all SaaS ERP solutions were created equal; don't treat them as a commodity. Make a careful choice that is right for your business.

About the author: *Cindy Jutras is a widely recognized expert in analyzing the impact of enterprise applications on business performance. Utilizing close to 40 years of corporate experience and specific expertise in manufacturing, supply chain, customer service and business performance management, Cindy has spent the past 9 years benchmarking the performance of software solutions in the context of the business benefits of technology. In 2011 Cindy founded Mint Jutras LLC (www.mintjutras.com), specializing in analyzing and communicating the business value enterprise applications bring to the enterprise.*