



Adopting Enterprise SaaS

A Strategic Approach for CIOs

Abstract

Software as a service (SaaS) is emerging as an attractive alternative to legacy-laden IT landscapes. Organizations across the world are increasingly choosing SaaS as it is easy-to-administer and easy-to-use. The IT department finds it easy to manage, allowing its personnel to focus on core needs rather than routine maintenance and support work. SaaS enables business users to be more agile, cutting time to market. Moreover, the organization as a whole reduces costs and improves efficiency.

However, moving to a SaaS set-up can be challenging. Effecting appropriate changes in business and IT processes and structures is crucial to the success of a SaaS deployment. Chief information officers (CIOs) need to evaluate the trade-offs between the risks and the opportunities, identify sand-traps, examine impact areas, gauge vendors, and plan for the transformation.

This paper details the CIO's approach when considering SaaS adoption. It offers guidelines on when a CIO should consider SaaS and how to evaluate the suitability of SaaS for an organization's business processes.

Overview

As the pace of business accelerates and competition gets fiercer, organizations need to adopt technology solutions that are innovative, cost-effective and rapidly delivered.

However, many organizations are saddled with complex IT landscapes - comprising several legacy applications and platforms. Coupled with increasingly stringent IT budgets, this scenario makes it difficult for companies to leverage change to their advantage. This is driving many organizations to look for solutions that allow them to seamlessly outsource their IT pain areas with minimal business impact and cost for greater efficiency and speed.

Involving application delivery over the Web, SaaS is transforming the way software is built, delivered and consumed. SaaS is fast emerging as a vital and compelling option for CIOs to cost-efficiently reduce the complexity of their IT landscape while reaping the benefits of commercially licensed software.

A blend of business and technology innovation, SaaS offers the following advantages:

FUNCTIONAL	With working SaaS models up and running, what you see is what you get. Organizations can experience the available functionalities and know what to expect.
TIME	Since SaaS eliminates the need to assess hardware through its end-to-end develop-host-deliver-and-operate model, time to market is reduced significantly. Further, enterprises using SaaS can leverage new best practices, upgrades and releases virtually in real time
CAPEX	As there is minimal upfront investment in hardware and software, capital expenditure is vastly reduced.
OPEX	In a SaaS model, the onus of operating, supporting and maintaining applications resides with the SaaS vendor. This allows companies to realize cost and efficiency benefits. The 'pay-as-you-go' model also provides companies better visibility into their operating expenses.

When should a CIO consider SaaS?

SaaS is proving to be a disruptive sourcing option, providing CIOs the much-needed agility to expand and maintain IT at the same time. There are multiple tipping points at which a CIO can consider SaaS as an outsourcing option. Key among these:

- 1 *Increasing business demands in the face of reduced IT budget*
- 2 *Internal IT unable to respond quickly to business needs*
- 3 *Systems approaching end of life*
- 4 *Need for extensive collaboration with partners and suppliers*

1. Increasing business demands in the face of reduced IT budget

CIOs squeezed by the growing pressures of new business requirements and a shrinking IT budget can deploy SaaS since it is a 'pay-as-you-go' model. This opens up possibilities of aligning vendors as partners in place of the conventional model of long-cycle implementations.

2. Internal IT unable to respond quickly to business needs

Enterprises are looking at leveraging the internet to better connect with customers and employees, expand into new markets and comply with multiple regional regulations. With users' demands increasing and their Web expertise keeping pace, existing applications are proving less agile - their systems must be re-architected to support user needs. Net-native SaaS providers, developing technologies around the Web, are building solutions specifically for the connected environment.

Moreover, in most enterprises, standardization of IT systems and business alignment are among the most time-consuming steps. SaaS eliminates the need for standardization of technology, thereby reducing the time for technology infrastructure to support business processes. SaaS is easy to implement, integrate and use. Companies can leverage the new system quickly,

ensuring reduced time to market and an accelerated payback.

3. Systems approaching end of life

With technology evolving continually and quickly, IT systems require complex, expensive and frequent upgrades to keep obsolescence at bay. Without a major high-cost upgrade, enterprises may be unable to ensure technology-driven business innovation. An organization also needs to spend extensively on ongoing and long-term support and maintenance, thus stretching the IT budget.

SaaS addresses all these issues: Upgrades are centrally taken care of by vendors, allowing users to enjoy state-of-the-art software without the associated maintenance costs and support headaches.

4. Need for extensive collaboration with partners and suppliers

To respond to market dynamics and ever-changing customer demands, organizations need to collaborate closely with partners and suppliers in real time even as they focus on delivering value to the customer. Existing systems and applications may lack the flexibility for cross-platform integrations across diverse IT landscapes.

Since most SaaS technologies are natively built for the web, they work smoothly at the edge of the enterprise IT ecosystem to address these collaboration needs.

Choosing the right enterprise SaaS option

Enterprise SaaS is typically consumed in two forms - on-demand or on-premise. On-demand services are provided out of the vendor's data center, outside the enterprise firewall. The on-premise option provides the same service within the customer data-center and therefore within the enterprise.

CIOs looking at SaaS need to evaluate the option most suitable for a particular business process and context. The key is to look beyond the obvious cost advantage to ensure that the value is longer term. CIOs should first evaluate the business process under the following dimensions before determining which SaaS option to pursue:

1. **Couplability**: Can the process under consideration be loosely coupled with other processes within the application?

If the process tightly couples with other processes, there will be chatty interfaces between these processes which may not be desirable. This may also lead to offline data moving back and forth between the applications.

2. **Re-usability**: How re-usable is the service being consumed?

Can it be standardized and adopted across multiple areas?

3. **Data security**: Does the data owned by the process need to be kept within the enterprise at all times due to the nature of the information?

4. **Data integrity**: What is the extent of replication of master or reference data that is needed for the process to function effectively?

5. **Proprietary nature of the process**: How specific and proprietary are the processes to the company?

Does it mandate a significant amount of customization to the SaaS service?

6. **Need for incremental innovation**: How often does the process need to be altered to support changing business needs?

Processes that are highly coupled with existing enterprise processes could be candidates for an on-premise SaaS option. However, these processes can be made further coarse-grained to ensure that they are appropriate for an on-demand SaaS option. Re-usability will provide a good view on how the process can be leveraged across business units. The higher the reusability, the greater is the benefit from SaaS. Note that business processes that are very proprietary and which require significant customization may not be best suited for SaaS adoption.

Approaching enterprise SaaS adoption

CIOs need to approach SaaS adoption by aligning a SaaS vendor's offerings across the following three dimensions:

1	Business alignment
2	Technology alignment
3	Operational alignment

1. Business alignment

Business alignment is one of the foremost aspects CIOs should be concerned about. It is critical that a CIO's roadmap is aligned with the enterprise's business roadmap and its desired outcomes.

While considering SaaS adoption, a CIO needs to consider the following impacts SaaS can have on business alignment:

- **Blueprint alignment:** The SaaS vendor's functional roadmap needs to be understood and validated against the long-term business blueprint of the process under consideration. This has to be understood and agreed to contractually between parties to ensure clear future-proofing
- **Ability to customize:** The alignment addressed through long-term thinking may not always yield desired results due to unexpected business requirements. Thus, the application must allow tenant-specific customization to ensure that ad hoc business requirements can be addressed

2. Technology alignment

CIOs need to ensure that the SaaS applications are consumed effectively by allowing integration of engineering

and enterprise IT architecture. This involves the following:

- **Engineering alignment:** Application releases and developmental activities should be aligned to consume the SaaS application and its features in a timely fashion
- **IT security alignment:** CIOs need to assess whether the SaaS application vendor's security is in tandem with the enterprise IT security guidelines and standards. The organization may need to relax some policies wherever applicable to take optimum advantage of SaaS
- **Data alignment:** SaaS may require data redundancy to allow the SaaS vendor to provide a distributed data architecture

3. Operational alignment


Operations ranks as one of the most high-cost items in a CIO's budget. This should be handled effectively with a long-term view - both for business users and the infrastructure operations team. Operational alignment involves:

- **Seamless service delivery:** In deploying SaaS, a CIO must ensure seamless SaaS operations for the enterprise. Business users and IT support personnel should not be forced to change their activities while consuming SaaS services. For example, a business user should not be logging-in separately when using a SaaS application in the context of the overall business process
- **Data ownership and security:** Before opting for SaaS, a CIO needs to carefully consider several data ownership issues for legal alignment from a contractual perspective. These could include ensuring ownership of offsite data, segregation of data amongst tenants, and ensuring that data is not tampered with in multi-tenant environments. All these need to be performed within the audit procedures followed by the enterprise
- **SLA management:** The CIO must ascertain that minimum service-level agreements (SLAs) on infrastructure, application and services are adhered to by the SaaS vendor. The vendor must be able to extend the existing SLAs and continue to provide the same or better service to business. These SLAs can pertain to availability, reliability, disaster recovery and issue resolution and regulatory reporting

Partnering for success

While enterprises can reap several benefits by employing SaaS, these may not be fully utilized unless the technology challenges involved are appropriately addressed. These challenges must be resolved through a collaborative effort on the part of the SaaS vendor and the enterprise. Both need to understand their roles and responsibilities and contribute proactively for a successful SaaS deployment.

The following table shows contributions both sides must make to facilitate the process.

Alignment Area	Enterprise Contribution	SaaS Vendor Contribution
 Business Alignment	<ul style="list-style-type: none">• Clearly articulate the business roadmap to enable the vendor to work toward organizational goals• Extend your team<ul style="list-style-type: none">- to perform functional validation of your extensions- for regression• Have data sets to perform specific tests of your needs• Allow generic test cases to be bundled into the product regression suites	<ul style="list-style-type: none">• Jointly review the product's business roadmap in detail with the enterprise's functional personnel• Provide testing for a large number of test cases• Allow extensions to test cases to ensure that the tests the enterprise wants to perform can be integrated for a given customer
 Engineering & Architectural Alignment	<ul style="list-style-type: none">• Integrate the vendor's release calendar into the engineering calendar• Allow the vendor to perform functional upgrades against your test bed with support from your end• Share your enterprise standards to ensure you get the best fit from the vendor• Be open to changing some enterprise standards for good, with a versioning policy	<ul style="list-style-type: none">• Provide release plans well in advance and in conformance with customer's calendar. Do a least common denominator study• Provide customization of various standards and policies to allow the customer to choose or customize with minimal effort and cost
 Operational Alignment	<ul style="list-style-type: none">• Extend your environment to support a seamless service delivery• Achieve clarity on SLAs. SLAs can be different from those for on-premise services• Extend existing support procedures like audit and assessment processes across the SaaS services	<ul style="list-style-type: none">• Support and try to provide seamless service delivery to ensure that end users do not have to consider SaaS operations as a separate run book or a process• Be open to extend existing support procedures to allow customers specific procedures by offering multiple standards

CONCLUSION

Cost-effectiveness, agility and convenience are just three reasons why enterprise SaaS is fast emerging as a viable option for companies to outsource a part of their IT environment. SaaS also allows ease-of-use and increased functionality with reduced time to market.

Though promising, the SaaS journey must begin only after thorough planning. A CIO must carefully consider the risks and challenges involved, rigorously evaluate various vendors and their capabilities, and judge the ability of IT and business to adapt to the enterprise SaaS model.

A meticulous architectural analysis must be carried out to ensure that there are no grey areas, security is not compromised, data ownership is assured, and that reliability is not an issue of concern. Finally, treating your vendor as your partner can go a long way to ensure the success of SaaS.

Learn more

<http://www.infosys.com/socialedge>
<http://www.infosysblogs.com/digital-consumer>



For more information, contact askus@infosys.com

About Infosys

Many of the world's most successful organizations rely on Infosys to deliver measurable business value. Infosys provides business consulting, technology, engineering and outsourcing services to help clients in over 30 countries build tomorrow's enterprise.

For more information about Infosys (NASDAQ:INFY), visit www.infosys.com.