

The Business Drivers of Software as a Service (SaaS): Key Issues for Public Sector Executives

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Introduction

In the past few years, alternative software delivery models have made their way into the public sector marketplace. The current buzz centers on the Software as a Service (SaaS) model, which refers to delivering software applications “in the cloud” or using cloud computing. Cloud computing is a transformative departure from the typical manner in which software is deployed. Traditionally, public sector organizations have deployed software on premises, which means that the applications were loaded onto their computer networks or individual desktop computers, and the organization purchased server and storage equipment to house or host the data generated by the application. With cloud computing, the vendor deploys the software via the Internet and is also responsible for deploying the software updates and patches. The data generated by the application is hosted by the vendor in virtual servers they control. Deploying applications via the cloud allows organizations to save money up-front because they not longer have to purchase additional server and storage equipment.

SaaS is becoming more popular, especially as SharePoint, document management, and unified communication (i.e., telephony, email, and on-line chat) become more prevalent. However, the number of actual public sector SaaS deployments remains low. Local governments considering a software solution should carefully evaluate deployment approaches, as they will impact the following areas:

- Total cost of ownership
- Speed of deployment
- Internal and external resources required
- Scalability/Expandability
- Customization
- Networking requirements
- Internet connectivity.

Though current market penetration is low, local leaders should not ignore this trend. There is no doubt that a major shift is underway. Though this is new technology for the public sector, it has been tested and is widely deployed in the private sector. More vendors are committing significant resources to developing and deploying cloud-based applications. The analyst and research firm IDC predicts that spending on cloud-related services will hit \$42 billion by 2012. Gartner Group, another information technology (IT) research firm, has forecasted that SaaS delivery within the enterprise application software markets is trending toward an annual growth rate of 19.4 percent, which makes it the fastest-growing sector in the software industry today. In addition, according the RFP tracking services companies such as Onvia and FindRFP, there appears to be receptivity in the public sector to SaaS applications as indicated by a recent uptick in requests for proposals that include SaaS requirements.

SaaS Defined

SaaS is priced based on volume of access to the software, rather than outright software license ownership. End users access the solution through a web browser and the organization pays a subscription fee in order to use the software.

SaaS vendors employ a multitenant architecture, meaning that multiple customers access the same software over the Internet, on a single database, but in separate virtual data environments. This means one application can be accessed over the Internet by many users with varying system requirements. Google Apps, Hotmail, and Amazon.com are excellent examples of SaaS. However, the deployment of full-scale public sector applications in the cloud still proves to be the exception rather than the norm.

SaaS Business Drivers

Local government leaders should investigate several issues when considering SaaS solutions:

Attracting and Retaining Information Technology (IT) Personnel. Typically SaaS solutions require fewer IT personnel to maintain and support the application. These tasks are performed by the SaaS vendor. Given the trend toward leaner government and fewer employees, the ability to deploy new applications without adding new personnel may be attractive to local leaders. However, it is important to note that though fewer IT resources may be needed on an ongoing basis, there may still be a significant demand for these resources up-front, depending on the complexity of the deployment.

IT Consolidation. SaaS deployments typically do not require procuring additional servers and storage devices, thereby keeping an organization's IT footprint consistent. By minimizing new equipment, organizations can save physical space and money by not expanding their IT facilities.

Cost. The low cost of deploying and maintaining SaaS is part of its allure. Cost savings can be generated from the following components:

- Eliminating the cost of servers and other storage devices
- Software licenses
- Maintenance fees
- Data center space
- Electricity
- Consultant Fees
- IT personnel.

As with any new application, an organization should incorporate change management and business process redesign into its budget and timetable. Integration with existing legacy systems or third party applications can be either limited or costly. In addition, disaster recovery/business continuity plans may need to be adjusted for SaaS, which could represent a hidden cost.

Essentially SaaS employs a pay-as-you-go model that could significantly reduce the amount of up-front fees. If an organization becomes a heavy user of a SaaS application, it could pay more.

Unlike traditional software deployment, in which an organization may pay a large up-front fee and be locked into annual operations and maintenance fees, SaaS fees are based on actual use. Based on the type of application deployed, the up-front fee may be significant if multiple integrations and data transfers from legacy-based systems are required.

Key Benefits

SaaS vendors frequently tout cost savings as a key reason to deploy their solutions. However, focusing exclusively on price does not paint an accurate picture of SaaS's benefits. Based on previous public sector SaaS deployments, organizations have achieved the following benefits:

Monitoring. SaaS vendors offer 24/7 monitoring of the application and proactively notify their customers regarding software issues or inconsistent usage. In addition, because software functionality is the core business of SaaS vendors, they must remain on top of security issues and be responsible for protection of the application.

Security. The tools that vendors use are typically more robust and up-to-date than those available to most local governments. SaaS applications frequently utilize secure socket layer (SSL) and data encryption to ensure that data remains private and protected. Given that governments possess sensitive constituent data, this feature becomes mission critical. In addition, SaaS offers role-based security to ensure that only named users can access sensitive information.

Updates. SaaS vendors can make real-time updates to their applications, without taking the network down. The updates are pushed through the Internet and the vendors provide on-line training, if required.

Back-ups. SaaS vendors utilize redundant servers to back-up data. So if a server in the clouds is not functioning, users would be automatically redirected to a back-up server without any noticeable performance issues. In addition, SaaS vendors perform daily data back-ups.

Standardization. Since there is one version of the software, there are typically more vendor resources directed to identifying bugs/issues and the related fixes/patches required to address those concerns. Of course, individual customizations are done, but the core software is identical.

Sizing up SaaS

Will SaaS be a good fit for a local government? How can an organization be sure that SaaS will optimize the financial investment while providing value to its users? Clearly, there are no hard and fast rules regarding these decisions and local government leaders should conduct a rigorous assessment prior to selecting a software deployment approach. That said, if an organization has the following attributes, it may be a good fit for SaaS:

Requires basic software functionality. SaaS may be a better fit if a locality does not initially need all the bells and whistles associated with many software applications. However, as noted earlier, SaaS functionality can be expanded with integrations and add-ons.

Minimal customization required. It can be very difficult to customize an SaaS application. If a municipality’s needs can be met with a “plain vanilla” application, SaaS should be considered. Once again, conducting an up-front assessment will help determine how unique an organization’s requirements are.

Limited Funding. As mentioned earlier, SaaS costs much less to deploy than traditional, on-premises deployments.

Uncertain of Future Needs. If an organization desires to remain agile and does not want to commit to an expensive solution because future requirements will be very different from today’s, SaaS can provide a low-cost alternative that minimizes sunk costs. In addition, SaaS contracts may be more flexible than traditional software deployment contracts making it easier to end the contract at the government’s discretion. SaaS may enable organizations to start their software journey sooner than they would otherwise be able to with traditional on-premises solutions.

Usage

A recent survey conducted during the first two weeks of April 2010 by the nonprofit Public Technology Institute (PTI) involved 93 local government IT executives. Among the findings were:

For local governments that are currently using or plan to use the cloud, the top three applications that IT executives feel most comfortable moving to the cloud are:

SaaS Application	Percentage
Web hosting/content delivery	75
Collaboration applications	72
E-mail	58

Among local governments currently using or planning to use the cloud, the top three reasons cited are:

SaaS Driver	Percentage
Resource savings (staff time, maintenance, and support)	87
Features	48
Availability and uptime	45

Next Steps

Though the public sector has demonstrated some interest in SaaS, it is not the best option for every organization. It is highly recommended that an assessment or business case be conducted prior to deployment. The following factors should be considered:

Factor	Issue
Cost	Do we have enough money for the initial and ongoing costs?
Speed of Deployment	How quickly is the application needed?
Internal resources required	Do we have the resources initially? How can the resources be secured and/or retained?
Scalability	Can this solution grow as we do?
Security	How can we ensure that our data and network are protected from intrusion?
Flexibility	What types of customization can be done on this application?