

The Compelling TCO Case for Cloud Computing in SMB and Mid-Market Enterprises

A 4-year total cost of ownership (TCO) perspective comparing cloud and on-premise business application deployment

Sanjeev Aggarwal, Partner Laurie McCabe, Partner

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Executive Summary

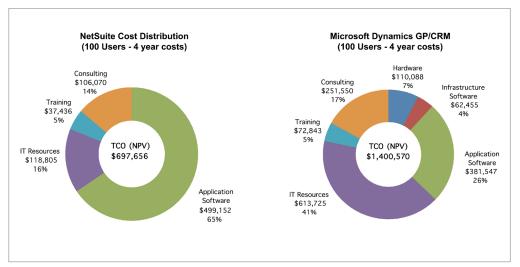
Cloud computing essentially eliminates the need for customers to buy, deploy and maintain IT infrastructure or application software individually. Regardless of the application, the cloud computing vendor takes responsibility for all of the infrastructure required to run the solution--servers, backup, software, operating systems, databases, updates, migration, power and cooling, facility space, etc., and associated internal and third-party staffing costs. Because cloud computing vendors manage all of their customers on a single instance of the software, they can amortize costs over thousands of customers. This yields substantial economies of scale and skill, and lowers total cost of ownership (TCO).

Key findings from our analysis include:

- Overall TCO for NetSuite's cloud-based integrated solution suite is significantly lower than a comparable on-premise solution consisting of Microsoft Dynamics GP and CRM. This holds true for both SMB and mid-market firms. The TCO for cloud-based vs. on-premise business application solutions was:
 - 55% lower for 52 users
 - 50% lower for 100 users
 - 35% lower for 200 users
- IT Infrastructure costs (hardware, software and on-going maintenance required to run the on-premise business applications) account for about 11% of the total cost of deploying on-premise business applications almost \$172,500 in the 100 user scenario (Figure 1). Comparably, there are no IT Infrastructure related costs for cloud-based business solutions.
- Total Cost for cloud computing is a full \$730,745 less than on-premise for the 100 user scenario. With cloud computing, the overall cost of running the solution is more predictable than on-premise. Figure 1 shows that application subscription costs accounted for 65% of the total solution cost, whereas the onpremise license cost only accounted for 26% of total cost.
- Spending for application implementation and support (including internal IT staff and/or VAR, consultant or SI resources) is significantly higher for onpremise solutions than for cloud-based solutions, as much as 3.5 times more for the 100 user scenario.
- Pre-integrated front and back office functionality in the NetSuite offering incrementally contributes to reducing integration complexity and lowers application implementation costs.



Figure 1. Four-Year Total Ownership Cost Distribution - NetSuite and Microsoft Dynamics GP and CRM



Overall TCO for NetSuite's cloudbased integrated solution suite is significantly lower than a comparable on-premise solution consisting of Microsoft Dynamics GP and CRM.

Source: Hurwitz & Associates

Introduction

Small and medium businesses (SMBs) face a tricky dilemma in today's challenging economic climate. It's no longer business as usual; companies need to figure out how to optimize for today, and get on track to capitalize on new opportunities that will emerge as the economy starts to grow again. They need business solutions to help them to manage more efficiently day-to-day, and also provide them with the intelligence they need to move the business forward.

As SMBs evaluate different business application options, total cost of ownership (TCO) is often top of mind. Many customers have become interested in how cloud computing or software-as-a-service (SaaS) can help lower their costs by eliminating upfront capital investments and ongoing maintenance costs associated with onpremise solutions.

In this study, we begin with a brief overview of SMB requirements and challenges, and provide context on how cloud computing is reshaping the economics and TCO of the business applications landscape. Then, we examine and compare the total cost of ownership for planning and design, infrastructure hardware, software and support, application software, deployment and training costs of Microsoft's Dynamics GP and CRM traditional on-premise solutions, with those of NetSuite, which provides an integrated front and back office SaaS solution. We conclude with our recommendations for SMB customers evaluating these alternative computing models.



Section 1: SMB & Mid-Market Enterprises Face Difficult Business and Economic Challenges

Just like larger enterprises, SMBs and mid-market enterprises need business solutions that help them to manage day-to-day operations and processes more efficiently. At the same time, they want insight and intelligence to successfully adapt to fluid business environment, and ensure compliance with regulatory requirements.

However, SMBs have smaller budgets and fewer IT staff than larger companies. Small businesses of 50 to 100 employees may have only one full-time person—typically an IT generalist—to support a complex array of IT resources and users. In medium businesses (100 to 999 employees), IT staffing grows, averaging about one full-time IT person for every 100 employees. But, business and IT complexity often outstrip the growth of IT resources, especially in mid-market firms, who face the complexities of managing several locations, multiple servers, an expanding array of desktops and devices, and a more mobile workforce.

As a result, reacting to daily application availability, maintenance and support issues can max out the IT staff, leaving little time to deploy new solutions or even to update existing ones. The difficult economic climate only heightens SMB requirements for easier to use, faster to deploy and more functional solutions to help the business effectively navigate through uncertainty and improve the bottom line.

Easing the upgrade process and improving operations

When a new CEO came on board at this 50-person insurance rating, quoting and policy solutions in 2000, he was frustrated with the lack of communication and coordination within the firm. "Everything was in silos, and it was difficult to communicate," according to the IT Director. "We had internal people managing it, but they didn't understand all the different applications, and upgrades were difficult." In 2005, the firm implemented NetSuite, attracted by the cloud delivery model, and built-in integration capabilities. "This provides us with the latest version, all the time, without downtime," she notes. "Having one system and a unified dashboard has also helped us to improve service levels and increase customer satisfaction."

Business and IT complexity often outstrip the growth of IT resources, especially in midmarket firms...



Section 2: Cloud Computing Shifts the TCO Discussion

Cloud computing has steadily gained market acceptance as an alternative to traditional on-premise solution deployment and maintenance because it offers several benefits to customers (see Figure 2). The cloud computing model can help companies conserve cash and focus limited resources on the business, instead of reacting to IT infrastructure-related fire drills. In the cloud computing model, vendors provide Webbased access to applications as a service, through a subscription pricing model. This eliminates the need for customers to buy, deploy and manage IT infrastructure and solutions. Vendors take responsibility for everything: the servers, storage, operating system, database, business software, updates, migration, power and cooling, data center space, and support services. As a result, cloud computing shifts the IT burden from the customer to the cloud computing application vendor.

Figure 2.
Key Benefits of Cloud-based Business Application Solutions

Feature	Customer Benefit
Eliminate capital costs	 Vendor pays for shared multi-tenant infrastructure SMBs access solutions through a web-interface over the internet Pay for usage on a per month/user basis
Faster deployment and productivity	 SMBs are up and running in 3-4 weeks vs. 3-4 months as there is no need to acquire, install and test infrastructure Applications can be accessed from anywhere, anytime and through any device Everyone in company has access to real-time information
Streamlines use and management	 Web-based, self-service access to business solutions Vendor manages and updates infrastructure No software to maintain and upgrade Automated upgrades to new versions of applications and functionality IT focuses on higher value, more strategic initiatives
Increase flexibility	 SMB can expand or contract services as their needs change Support a increasingly mobile workforce Easier to investigate solutions prior to acquisition
Improve customer service	Direct customer connection to resolve problems Incentive to achieve high customer retention and upsell additional solutions
Better reliability and performance	 Enterprise class IT infrastructure that is affordable Vendor provides high-availability for business continuity and disaster recovery Vendor provides required data backup services Reduces power consumption and data center space Proactive support and management

Source: Hurwitz & Associates

Cloud computing shifts the IT burden from the customer to the cloud computing application vendor.



Cloud computing vendors can provide these benefits because they've built their solutions as Web-based services from the ground up. Instead of building their solutions to run in-house, as a separate, individual instances for each customer, they architect their solutions for a one-to-many, or multi-tenant model. This means that they can run thousands of customers on a single instance of the database and application software. By optimizing their solutions for this shared environment, they can achieve efficiencies throughout the solution lifecycle that would be difficult for on-premise vendors to achieve.

Lean and mean IT

Headquartered in Slovakia, the U.S. division of this security software firm has grown from 1 to 135 employees over the past 10 years. The division had began by using multiple brands of packaged software for accounting, contact management and reporting functions. But as it grew, the organization wanted tighter integration across functions, better reporting, and an easier way to provide access to an increasing number of remote employees. It also wanted to keep upfront capital and ongoing support costs low. "The fact that there was little or no infrastructure or internal support required drove us to a software-as-service solution," according the firm's Business Systems Director. Since deploying NetSuite in 2006, the company has kept IT "lean and mean", and "the single system, real-time view of customers helps our sales and support teams to offer better service to customers".

Section 3: Why does TCO matter?

In the IT industry, Total Cost of Ownership (TCO) is used to calculate the total cost of purchasing (or in the case of cloud computing, subscribing to), and of operating a technology solution over its useful life. TCO provides a realistic and holistic measure of the long-term costs required to acquire and operate technology solutions.

Return on investment (ROI) is another method to evaluate and prioritize technology investments in a company. This measure is typically used to compare investments that uncover new top line revenue and growth opportunities. However, ROI tends to be more subjective in nature than TCO, because ROI looks at business benefits, which often cannot be measured as objectively as costs.

Hurwitz & Associates views TCO as a preferred method to compare technology investments when two solutions provide roughly equivalent benefits over the solution lifecycle, but have different types of costs associated with acquisition, maintenance and operation. For these reasons, a TCO comparison offers a more tangible assessment of the total costs involved in deploying cloud-based SaaS and on-premise business solutions.

"The fact that there was little or no infrastructure or internal support required drove us to a software-asservice solution."
—Security software firm



Section 4: What does this TCO model include?

The TCO model that Hurwitz & Associates uses in this study compares functionally similar cloud and on-premise business application solutions over a period of 4 years (the useful life of a solution for both hardware and software without the need for a major replacement of solution components). The TCO calculation model includes the following categories and components:

1. Evaluation and Selection:

- Solution evaluation & analysis: Evaluate features and functionality of competitive products.
- Vendor review and SLA analysis (as applicable). Review and audit vendor license agreements, service-levels and security requirements.

2. IT Infrastructure hardware, software and support

(primarily required for on-premise solution; these are included in the subscription costs for cloud solutions):

- Server and storage hardware and maintenance. Capital expenditure required to acquire servers and storage to run applications, databases, and test environment. Operating expenses for maintenance, space, power and cooling.¹
- Operating system, database, security, backup software and maintenance. Capital expenditure to acquire operating system, database, security, and data backup software; operational expenses for software support, upgrades, patches and bug-fixes for this infrastructure.1
- Administrative IT costs for systems and database. Percentage of full-time equivalent (FTE) IT administrators salary for hardware systems, software and databases.2

3. Application subscription costs OR application license costs:

- ERP and CRM application subscription or license cost. Costs are calculated on an equivalent number of users. In the case of cloud solutions, these are operational costs and remain constant for the life of the subscription service. In the case of on-premise solutions, these are initial deployment capital expenses. All application costs are calculated based on vendor list prices.
- Application maintenance. This includes operational costs for bug-fixes and upgrades to new versions of the software. These costs are included in the subscription costs for cloud solutions, and are factored as a fixed percentage of initial licensing costs for the on-premise solutions (in some cases 1-2 years of annual maintenance costs are included in initial license costs).

¹ (All infrastructure costs are calculated for Dell servers and storage systems and prices from Dell's website.)

² Annual salary estimates sourced from www.salary.com.



4. Application solution deployment costs:

- **Detailed design.** Define project objectives and scope; existing processes; identify process gaps and data sources; document business requirements; develop final project plan.
- Configuration and deployment. Application configuration to specifications; integration between front and back office functions; custom integration if required; data migration; system testing; cutover to new solution.

5. Initial and ongoing training costs:

- **User training.** To increase and accelerate adoption by users, including new users over time.
- Administrative training. To transition daily system administration to the customer's internal staff.

Section 5: Assumptions for Developing the TCO Model

Some of the key assumptions used in developing the TCO model include:

- Selection of 52, 100 and 200 user scenarios. These three user size scenarios
 are based on the number of employees that use the solution(s), not on the total
 number of company employees. These sizes were selected based on the midmarket focus of both companies, and were also representative of the companies
 interviewed for this study.
- **Application costs.** Application costs were based on standard list price per user as published by each vendor.
- Ratio of ERP to CRM users. As company size increases, the ratio of CRM to ERP users increases. ERP use is typically limited to company executives, accounting and other back-office staff; while a broader range and typically larger numbers of employees, spanning company executives, sales, services and marketing departments, often use CRM. Since Microsoft sells and prices its Dynamics GP and CRM solutions separately, we accounted for this changing ratio as the number of users grows. NetSuite is sold as an integrated application suite on a per user basis, with all functionality available to all users, so costs are calculated uniformly regardless of which users use what functionality.
- Hardware infrastructure needs to be functionally equivalent for serving application, high-availability and data back-up requirements. We have calculated acquisition costs for new hardware and software costs into the traditional on-premise model to make IT infrastructure functionality and costs equivalent to what is provided by cloud solution vendors. Based on user discussion, we calculated an average of 3 servers (ERP, CRM, and test server) with



internal RAID for 52-user scenario. The configuration for 100 and 200 users includes a cluster of servers for SQL database that can be accessed by the ERP and CRM application servers with a shared network-based iSCSI storage system.³

Application solution deployment, integration, and training costs were determined based on discussions with users, VARs, SIs, vendors, and secondary market research.

Section 6: TCO Methodology

The purpose of this paper is to examine TCO for cloud and traditional on-premise business solutions—not to evaluate customer satisfaction with these solutions. Both NetSuite and Microsoft Dynamics GP and CRM are market-proven solutions, with thousands of customers, and many very satisfied ones. However, their business and delivery models, and cost and pricing structures are very different. As a result, companies that are considering purchasing a business solution want to better understand how choosing one model or the other can affect TCO.

The study compares TCO for cloud-based and on-premise business applications that provide similar capabilities for mid-market front and back office business functions (Figure 3 on the following page). NetSuite provides this functionality via a cloud computing model; Microsoft provides similar functionality in an on-premise model through a combination of Microsoft Dynamics GP and Dynamics CRM.⁴

Hurwitz & Associates independently contacted mid-market users of these solutions to discuss their evaluation and deployment (initial and ongoing) experiences on conditions of anonymity. These companies discussed their experiences with solution evaluation, selection, deployment, and on-going operational processes with us, and provided detailed cost information for each of these phases. As context, they provided qualitative information about the company's organization structure, objectives, challenges, experience and satisfaction with solutions, and with VAR, SI or consulting services that they use.

SMBs and mid-market companies vary widely in terms of number of employees and number of users of both front-office CRM applications and back-office ERP/ accounting applications. We interviewed companies representative of the three user size tiers (52, 100 and 200 users) to provide a more complete illustration of how some of the costs included in the TCO comparison change as the number of users changes. The mix included independent commercial entities, not-for-profit organizations, and divisions of larger corporations.

³ Server, storage and infrastructure software pricing was calculated using prices available on Dell's Web site. ⁴ Microsoft also offers a cloud-based version of CRM, Dynamics CRM Online, which was not included in this study.



Figure 3.
Key Functions and Features for Mid-Market Companies

CRIM:		ERP:				
	Sales Force Automation		Accounting Features			
	Order Management		General Ledger			
	Marketing Automation		Cash How Management			
	Customer Service & Support		Bank Reconciliation			
	Partner Relationship Management		Multicurrency Management Payables & Peceivables Management			
Employ	ee Management:		Job Tracking			
	Employee Management		Time Tracking			
	Expense Reporting		Billing			
	Employee Calendaring		Inventory Management			
			Purchasing			
Reporti	ng:					
Ī	Key Performance Indicators	Supply Ch	nain Management:			
	Compliance Reporting		Inventory Conrol			
			Order Management			
			POGenetrator			
			Bill of Materials			

Source: Hurwitz & Associates

Section 7: TCO Comparison for Cloud vs. On-premise Business Solutions

Detailed yearly cost comparison for the various cost categories is shown in Figure 4 (on the following page), for the 100 user scenario. The top section of the figure highlights yearly costs for the 2 solutions, clearly showing the first year costs for the on-premise solutions are much higher than for the cloud computing solutions, as the on-premise solution require significant upfront capital expenditures for acquiring the infrastructure hardware, software and business applications software, as well as additional internal IT resources required to install and configure these components.

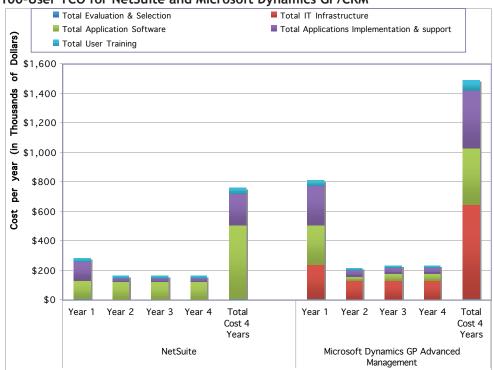
The bottom section of the figure shows four year total costs for the various components. The key component leading to a significant difference in TCO is the additional total IT Infrastructure costs for the on-premise solution.

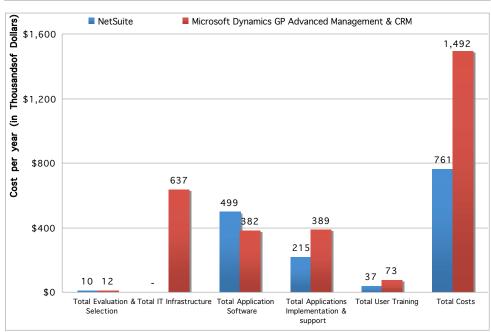
...the first year costs for the onpremise solutions are much higher than for the cloud computing solutions...



Figure 4.

100-User TCO for NetSuite and Microsoft Dynamics GP/CRM





The key component leading to a significant difference in TCO is the additional total IT Infrastructure costs and related management costs for the on-premise solution.



Additional key findings from the TCO comparison are detailed in Figure 5 on the following page and include:

- Overall TCO for NetSuite was considerably less than for the Microsoft Dynamics GP and CRM solutions. TCO savings do taper off, however, as the number of user's increases. In the 52-user scenario, NetSuite TCO is 55% less; for 100 users than Microsoft Dynamics GP and CRM; 50% less; and 35% less for 200 users.
- The yearly subscription fee for NetSuite, which includes both the business applications and all of the underlying infrastructure and support costs necessary to support delivering the application as a service, accounts for 2/3 of total costs.
- Total costs for on-premise application software and maintenance are 25% less than the total 4-year cloud solutions application subscription (maintenance is included in the subscription fee). This is because in the first year of the on-premise model, customers pay the full cost for a perpetual license, and then pay a percentage of the license fee for maintenance thereafter. This gap widens in favor of on-premise solutions as the number or users increases because subscription costs per users remain constant throughout the 4-year period.
- IT Infrastructure hardware, software, and maintenance costs are zero for cloud business solutions (NetSuite), but account for almost 15 percent of the first year costs (12% over 4 years) in an on-premise implementation. These capital expenses are of particular concern to mid-market end-users given the tight budgets and even of greater concern in the current tough economic environment with very tight and expensive credit terms.
- Internal IT resources and VAR/Consultant resource costs account for approximately 30 percent of the TCO costs in a cloud solutions compared to around 58-60 percent in on-premise solutions.
 - In the on-premise scenario, a large a portion of the internal IT costs are incurred on an ongoing basis for infrastructure and database installation, setup and ongoing management, support and updates; as there is no on-premise infrastructure for cloud-solutions these costs are part of the annual subscription costs.
 - Majority of the VAR/consultant (external VARs or service organizations of vendors) costs for both solutions are incurred in the first year for detailed design and implementation of the detailed designs.



	Net Suite						Microsoft Dynamics GP Advanced Management & CRM					
52 Users	Year 1	Year 2	Year 3	Year 4	Total Cost 4 Years		Year 1	Year 2	Year 3	Year 4	Total Cost 4 Years	
Total Evaluation & Selection	7,388	-	-	-	7,388		8,709	-	-	-	8,709	
Total IT Infrastructure	-	-	-	-	-		139,739	87,740	87,740	87,740	402,958	
Total Application Software	67,764	67,764	67,764	67,764	271,056		158,681	15,998	25,683	25,683	226,044	
Total Applications Implementation & support	69,797	15,586	15,586	15,586	116,554		155,524	24,399	24,399	24,399	228,721	
Total User Training	10,165	3,388	3,388	3,388	20,329		21,402	7,134	7,134	7,134	42,805	
Total Costs	155,114	86,738	86,738	86,738	415,327		484,055	135,270	144,956	144,956	909,236	
Total Costs NPV (@7.5%)	155,114	80,686	75,057	69,821	380,678		484,055	125,833	125,435	116,684	852,006	
Cumulative TCO NPV	\$ 155,114	\$ 235,800	\$ 310,857	\$ 380,678	\$ -		\$ 484,055 \$	609,888	735,322 \$	852,006	\$ -	

	Net Suite					Microsoft Dynamics GP Advanced Management						
100 Users	Year 1	Year 2	Year 3	Year 4	Total Cost 4 Years		Year 1	Year 2	Year 3	Year 4	Total Cost 4 Years	
Total Evaluation & Selection	10,239			-	10,239		12,013	-	-	-	12,013	
Total IT Infrastructure	-	-	-	-	-		231,038	135,181	135,181	135,181	636,583	
Total Application Software	124,788	124,788	124,788	124,788	499,152		268,473	25,664	43,706	43,706	381,547	
Total Applications Implementation & support	128,532	28,701	28,701	28,701	214,635		264,662	41,520	41,520	41,520	389,223	
Total User Training	18,718	6,239	6,239	6,239	37,436		36,421	12,140	12,140	12,140	72,843	
Total Costs	282,277	159,729	159,729	159,729	761,463		812,607	214,506	232,548	232,548	1,492,208	
Total Costs NPV (@7.5%)	282,277	148,585	138,218	128,575	697,656		812,607	199,540	201,231	187,192	1,400,570	
Qumulative TCO NPV	\$ 282,277	\$ 430,862	\$ 569,080	\$ 697,656	\$ -	\$	812,607	\$ 1,012,147	\$ 1,213,378	\$ 1,400,570	\$ -	

Year 2	Year 3	Year 4	Total Cost 4					
		rear 4	Years	Year 1	Year 2	Year 3	Year 4	Total Cost 4 Years
179 -	-	-	16,179	16,444	-	-	-	16,444
	-	-	-	296,338	176,063	176,063	176,063	824,528
588 243,588	243,588	243,588	974,352	407,942	30,844	67,878	67,878	574,541
396 56,025	56,025	56,025	418,971	392,182	64,484	64,484	64,484	585,633
538 12,179	12,179	12,179	73,076	56,565	18,855	18,855	18,855	113,129
201 311,793	311,793	311,793	1,482,579	1,169,471	290,246	327,280	327,280	2,114,276
201 290,040	269,804	250,981	1,358,026	1,169,471	269,996	283,206	263,447	1,986,120
201 \$ 837,241	\$ 1,107,045	\$ 1,358,026	\$ -	\$ 1,169,471	\$ 1,439,467	\$ 1,722,673	\$ 1,986,120	\$ -
2000		. 243,588 243,588 896 56,025 56,025 538 12,179 12,179 201 311,793 311,793 201 290,040 269,804			- 296,338 588 243,588 243,588 974,352 407,942 896 56,025 56,025 56,025 418,971 392,182 538 12,179 12,179 73,076 56,565 201 311,793 311,793 311,793 1,482,579 1,169,471 201 290,040 269,804 250,981 1,358,026 1,169,471	- 296,338 176,063 588 243,588 243,588 974,352 407,942 30,844 896 56,025 56,025 56,025 418,971 392,182 64,484 538 12,179 12,179 73,076 56,565 18,855 201 311,793 311,793 11,793 1,169,471 290,246 201 290,040 269,804 250,981 1,358,026 1,169,471 269,996	- 296,338 176,063 176,063 588 243,588 243,588 974,352 407,942 30,844 67,878 896 56,025 56,025 56,025 418,971 392,182 64,484 64,484 538 12,179 12,179 73,076 56,565 18,855 18,855 201 311,793 311,793 311,793 1,169,471 290,246 327,280 201 290,040 269,804 250,981 1,358,026 1,169,471 269,996 283,206	- - 290,338 176,063 176,063 176,063 588 243,588 243,588 974,352 407,942 30,844 67,878 67,878 896 56,025 56,025 56,025 418,971 392,182 64,484 64,484 64,484 538 12,179 12,179 73,076 56,565 18,855 18,855 18,855 201 311,793 311,793 311,793 1,169,471 290,246 327,280 327,280 201 290,040 269,804 250,981 1,358,026 1,169,471 269,996 283,206 263,447

Source: Hurwitz & Associates



Getting more done with fewer people

A private, not-for-profit Colorado organization of 750 employees delivers support services to people with disabilities in Colorado. The organization had been using traditional software for accounting, HR and payroll for several years. In 2006, it decided that the HR component wasn't meeting its needs. After evaluating several options, senior IT staff and executives determined that packaged software offerings wouldn't provide the anytime, anywhere access and support for employees it needed, and put an unwieldy burden on internal IT staff. According to the group's IT Manager, "Ongoing software and support costs in a subscription service may be a bit higher than in a packaged license model, but we save money because we don't have to buy and maintain hardware and software." He's found that "NetSuite is configurable and easy to manage and change. ½ to ¾ of an FTE manages the suite and does customizations." Harding also notes that the pre-integrated system helps them get more done with fewer people. "We reduced job processing and HR support head count because the Web-based system is easy-to-use and reduces redundancy and errors."

Section 8: Recommendations for SMB and Mid-Market Enterprises

While cloud computing can provide clear TCO benefits, customers considering a cloud computing model need to evaluate other important aspects before selecting a solution, in terms of both their own requirements, and vendor capabilities.

- Service Level Agreements (SLAs) and contract terms. In cloud computing, customers give up some control to the vendor. When evaluating on-demand versus on-premises options, review the fine print of the contract terms before making decisions, and get answers to the following questions:
 - Does the contract require an upfront long-term commitment?
 - How easy is it to change the number of users? What penalties or per-user price changes are associated with these changes?
 - Does the SLA supporting the uptime guarantee for these business-critical applications of at least 99.5%?
 - What security features are supported?
 - Investigate cloud vendor's disaster recovery and business continuity plans.
 - What options and penalties does the vendor provide if you terminate the service? For instance, if you terminate the contract, how do you get your data back?
- Address data security concerns upfront. Understand how the cloud vendor stores data, who can access it, and what safeguards the vendor has established to ensure that data is only accessed by authorized personnel. The vendor should be able to provide an audit trail on data access.

"We reduced job processing and HR support head count because the Web-based system is easy-touse and reduces redundancy and errors."
—Colorado not-for-profit



• Application customization requirements. Most SaaS applications are customized via configuration, instead of source code customization. For affordable customization of cloud computing solutions, aim for the 80/20 rule. Can the solution can get you at least 80% of what you need, and how much needed customization cost?

Customers with very heavy customization requirements may want to consider a packaged software solution to achieve deeper customization or SaaS technology implementation and customization via third-party.

- Invest more upfront in the evaluation and selection process. Most companies are under-investing when it comes to thoroughly evaluating business solution requirements and options. Seek the help of independent consulting organizations to better understand the total cost of on-demand and o-premise options as they relate specifically to your company's unique needs and budgetary constraints.
- Carefully consider the benefits provided by a third-party VAR or SI. Many cloud computing vendors offer customers the option of purchasing the solution and consulting and support services directly from the vendor, or through a VAR or SI. In some cases, VARs and SIs may be a better fit for your company than the vendor in terms of their ability to provide industry-specific customization, integration with existing applications, migration of data from existing applications, training and coaching for ramping up usability.
- Assess the trade-offs of deploying an integrated suite vs. integrating applications from multiple vendors. With an integrated suite, all core management applications run on a common code base, and share the same database, providing a single, integrated system of record. This means that many front and back offices workflows are pre-integrated, enabling a higher degree of integration "out-of-the-box", additional custom coding or integration connectors and frameworks.

However, organizations that are happy with an existing front or back office solution may find it less disruptive and costly to integrate new functionality from another vendor, rather than to simultaneously deploy an entirely new front and back office suite.





By packaging all of the application software, IT infrastructure and services together in a Web-based, multi-tenant subscription model, cloud computing vendors have the ability to contain variable costs much more effectively than packaged software vendors-and pass these savings along to customers.

SMB and mid-market enterprises need solutions that enable them to meet their business goals, and also help them to conserve capital and reduce ongoing costs. Although one size does not fit all, for many customers, cloud computing business solutions can help organizations to achieve these requirements, and provide added flexibility to scale as business demands require.



About Hurwitz & Associates

Hurwitz & Associates is a consulting, market research and analyst firm that focuses on how technology solutions solve real world business problems. The firm's research concentrates on disruptive technologies, such as Service Oriented Architecture and Web 2.0, Cloud Computing, Service Management, Information Management, and Social and Collaborative Computing. We help our customers understand how these technologies are reshaping the market and how they can apply them to meet business objectives. The team provides direct customer research, competitive analysis, actionable strategic advice, and thought leadership. Additional information on Hurwitz & Associates can be found at www. hurwitz.com.



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233 Needham Street • Newton, MA 02464 • Tel: 617 454 1030 www.hurwitz.com