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# The ROI Of Software-As-A-Service

by Liz Herbert and Jon Erickson  
for Sourcing & Vendor Management Professionals

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A Total Economic Impact™ Analysis Uncovers Long-Term Value In SaaS

by **Liz Herbert and Jon Erickson**

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## EXECUTIVE SUMMARY

Firms almost always consider software-as-a-service (SaaS) as a cost-advantage over on-premise in the short run due to its quick implementation times and pay-as-you-go pricing. But many firms question the long-term value of SaaS, wondering if the rent-versus-own model necessarily has a cost crossover point and if so, when? As SaaS continues to move into a broader range of applications and into larger, more strategic deployments, Forrester examined client decisions across a range of SaaS solution areas and found that firms obtain long-term value with SaaS solutions.

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Forrester interviewed vendors and users of SaaS solutions and leveraged past research and inquiries. We also conducted in-depth case studies with clients of HP, salesforce.com, and Workday. We used this information to create an ROI model based on our TEI analysis framework.

### **Related Research Documents**

["Should Your Email Live In The Cloud? A Comparative Cost Analysis"](#)  
January 5, 2009

["SaaS Contract Negotiation Essentials: What Sourcing Executives Should Know"](#)  
December 22, 2008

["Cost Estimator: SaaS Versus On-Premise Software"](#)  
December 3, 2008

## FIRMS EXPLORE SAAS FOR MORE STRATEGIC, LARGER, LONG-TERM INVESTMENTS

Firms increasingly consider SaaS as a strategic alternative to on-premise applications, no longer simply a divisional play or short-term fill-gap where they can afford to skim on proper due diligence such as a formal total cost of ownership (TCO) assessment. Many of today's SaaS deployments are in the thousands of users — some even an order of magnitude higher if we consider examples like Aravo's deployment of supplier relationship management technology at GE.<sup>1</sup> Additionally, SaaS has grown far beyond its early roots of popularity in a few select application areas such as HR and CRM technologies and is now gaining acceptance across a broad range of applications for business and IT user populations alike.<sup>2</sup>

## THREE FACTORS DETERMINE THE ROI OF SAAS

It is imperative to objectively evaluate the financial impact on business when considering the adoption or avoidance of SaaS. How? Companies can use a simplified version of Forrester's Total Economic Impact™ (TEI) model to systematically consider:

1. **Benefits.** How will your company benefit from SaaS?
2. **Costs.** How will your company pay, both in hard costs and resources, for SaaS?
3. **Risks.** How do uncertainties change the total impact of SaaS on your business?

## Key Benefits: SaaS Enables Fast Deployment, Better User Adoption, And Reduced Support Needs

Organizations that implement SaaS benefit from the ability to deploy applications rapidly — from initial deployment to adding new users and new modules. Firms also frequently report better user adoption and an elimination of the “shelfware” that is common with on-premise deployments, as well as a reduced burden on IT and admin for user support. The scale, timing, and duration of these benefits can be estimated by considering one or more key metrics and the value to the organization of improving those metrics over time (see Figure 1). Benefits include:

- **Rapid deployment.** SaaS eliminates the need for firms to acquire their own instance of hardware as well as associated testing, frequently offering a ready-to-go preconfigured solution that firms can turn on in days or weeks with minimal configuration. SaaS also makes it easy for firms to deploy incrementally and offers short commitments of monthly or annual contracts — which means that purchasing cycles are often shortened as well. Beyond initial deployment, SaaS also makes it easy for firms to roll out new users, new sites, and new functionality as it is often simply a matter of turning on the new logins or the new features. For many firms that Forrester has interviewed, this time-to-value is a win for SaaS versus on-premise alternatives — in the short and long run.

- **Increased user adoption.** Firms complain to Forrester that on-premise applications suffer from low user adoption rates, despite significant investments in end user training and user interface design. However, SaaS applications frequently inherit their user interface from familiar Web programs — having an easy-to-learn Amazon.com or eBay-like look-and-feel. This means that users feel that the user interface flow is natural and more intuitive. Furthermore, SaaS applications are more likely to deliver proactive usage reports — which means that firms can more easily identify gaps in user adoption and either eliminate those subscriptions or address the problem.
- **Reduced support needs.** Firms that we interviewed reported a significant reduction in support needs when moving from on-premise to SaaS. One firm that previously paid a third-party IT services firm for support was able to eliminate those resources completely, while many others redeployed internal resources onto other projects. Technical support staff (bug fix, patch) are usually eliminated completely as the SaaS vendor performs these tasks. Help desk staff is usually reduced because of SaaS’ enhanced usability and more useful training, built-in tutorials, and help files. SaaS applications are more standardized and therefore the provided help materials remain more relevant.

**Figure 1** Key Benefits Of Software-As-A-Service

Dimension	Software-as-a-service helps by . . .
Reduced cost of adoption	Reducing the licensing, training, and support costs of adding additional users.
Quicker adoption	Decreasing the time to ramp up new users, maximizing their productivity from using the application.
Improved adoption	Enabling more users to use the application.
On-premise cost avoidance	<ul style="list-style-type: none"> <li>• Eliminating maintenance costs.</li> <li>• Reducing full-time help desk and server support, and transferring staff to higher value, proactive roles.</li> </ul>
Improved flexibility	Reducing spend on excess capacity.

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Source: Forrester Research, Inc.

**Key Costs: Subscriptions Balance With Reduced Implementation, Upgrades, And Training**

This TEI model considers scenarios of firms moving from existing on-premise deployments to SaaS solutions rather than net-new purchases of SaaS versus on-premise. Therefore, organizations implementing SaaS will incur subscription costs for the SaaS solution but will eliminate many costs elsewhere that are associated with running existing on-premise applications, such as resources, hardware costs, and maintenance (see Figure 2). Firms that would like to analyze a net-new purchase should factor in significant additional upfront time and expense for a new on-premise deployment — in addition to the factors already in the TEI models associated with this report.

- Implementation costs.** SaaS implementation costs are typically significantly lower than those for on-premise implementations. Many firms report typical implementation costs of .5x to 1x the first year subscription fee, compared with 1x to 5x the license cost of on-premise.<sup>3</sup> SaaS solutions often have reduced customization capabilities, which keeps costs down. However, SaaS typically still requires process consulting typical of any application implementation — which is not necessarily different in the SaaS world versus on-premise. On the downside for SaaS buyers, many SaaS solutions have a smaller functional footprint than fuller on-premise suites. This means that SaaS buyers may have more costs in areas like single sign-on and setting up integrations during implementation. Although these costs must be taken into consideration, they are often quite small relative to other cost-savings that implementing SaaS achieves.
- Recurring costs.** The basic recurring cost is the SaaS subscription cost. However, firms often have additional recurring costs for integration tools or other add-on technologies not included in the base subscription, from partners or from the SaaS vendor. Firms often have some level of people costs such as admin and support costs, which although greatly reduced do not go away entirely. Some firms we have spoken with suggest that this number is reduced by a factor of approximately one-fifth by comparison to on-premise deployment; however this can vary greatly depending on characteristics such as type of application, size of deployment, and the makeup of IT organization skills.
- Upgrade costs.** SaaS solutions typically offer seamless, automatic, frequent upgrades as part of the ongoing subscription charge. Because these upgrades happen more frequently and therefore incrementally than on-premise solutions, they typically have significantly reduced testing and end user acceptance and training costs. Firms rarely have to re-engage third-party consultants the way they would with a major on-premise upgrade.

**Figure 2** Key Costs Of Software-As-A-Service

Upfront costs	<ul style="list-style-type: none"> <li>• Implementation</li> <li>• Single sign-on configuration</li> <li>• Third-party process consulting</li> </ul>	<ul style="list-style-type: none"> <li>• Third-party content development</li> <li>• Competency development</li> <li>• External content (competencies)</li> </ul>
Recurring/annual costs	<ul style="list-style-type: none"> <li>• Subscription</li> <li>• Integration</li> <li>• Training</li> </ul>	<ul style="list-style-type: none"> <li>• Change management</li> <li>• Testing and certification</li> <li>• End user support and administration</li> </ul>

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Source: Forrester Research, Inc.

### Risk Analysis: Cost Savings And Adoption Rates Can Be Uncertain

No change — or avoidance of change — is without risk. Factoring this uncertainty into the analysis of SaaS implementation options converts an optimistic and potentially unachievable plan into one with higher accuracy. Two key risks, if factored in, allow the refinement of the analysis:

- **Moving to SaaS does not guarantee retirement of hardware or people resources.** Firms often anticipate lower implementation costs and eliminating hardware as well as people resources when moving to SaaS. However, in some cases these anticipated savings do not materialize or are too small to make SaaS cost-effective in the long run. Some firms find that they end up spending too much money on change management, integration, or force-fitting a SaaS solution into their business process needs. Others find the SaaS solution only covers a small footprint of functionality and therefore they don't end up retiring hardware or support staff resources from existing on-premise resources.
- **Softer benefits around adoption, training, and scalability require planning and monitoring.** Firms that are counting on increased adoption and reduced training as part of their benefits assessment must realize this is not a guarantee across all SaaS solutions. While many are easier to use and have shown higher adoption rates in studies, there are others that do not have such strong track records and that suffer from serious usability flaws. Similarly, firms often tout the ability of SaaS solutions to scale up or down with actual usage needs. However, ironclad contracts or failure to accurately track usage can prevent firms from capitalizing on this potential benefit.

## CALCULATING ROI FOR SAAS HAS SPECIFIC CONSIDERATIONS BY APPLICATION TYPE

To arrive at a quantitative assessment of the economic implications of SaaS applications, Forrester evaluated the key drivers of benefits, costs, and risks for an organization considering SaaS. Beyond considerations common to most types of SaaS, firms must consider application-specific issues as well.

For example, some types of applications (e.g., employee-facing applications and CRM) have a high end user population, so usability is a big factor that can significantly affect training time and cost and user adoption of the solution — all of which heavily tie into ROI (see Figure 3 and see Figure 4). In contrast, IT applications — like IT management, security, and backup — are likely to have small end user populations and therefore are less likely to benefit from user adoption and training cost reduction in a significant way (see Figure 5). Many of the firms that Forrester interviewed talked about the significant effect that user adoption has on the usefulness of analytics and reporting on data contained in solutions and therefore the ability to drive useful business decisions from solution information.

Other key considerations include breadth of application footprint, which will determine hardware and IT staff that can be retired or redeployed (costs saved); and some SaaS solutions will have heavier requirements in areas like storage (e.g., content management solutions), integration (e.g., order management), or mobile (e.g., sales automation), which can have a significant impact on costs incurred. In terms of upgrades, some categories of SaaS will benefit significantly from feature/function enhancements that happen frequently (like GRC, where the actual risk profiles can be updated), whereas other types of applications are in areas where firms might be less inclined to care about new functionality (e.g., accounting packages).

The examples provided in the models are intended to prompt ideas around key factors to consider; sourcing executives are encouraged to extend these ideas to the relevant areas of SaaS they are considering.

**Figure 3** Model: Total Economic Impact Analysis Summary — SaaS CRM

	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Present value (PV)
Benefit	\$846,402	\$925,104	\$1,015,713	\$1,087,261	\$1,170,779	\$5,045,258	\$3,766,700
Cost	\$923,701	\$777,555	\$793,106	\$808,968	\$825,148	\$4,128,478	\$3,143,096
Net cash flow	-\$77,299	\$147,548	\$222,606	\$278,292	\$345,632	\$916,780	\$623,604
Cumulative cash flow	-\$77,299	\$70,250	\$292,856	\$571,148	\$916,780		
NPV	\$623,604						
ROI	20%						
Payback	12 to 24 months						

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Source: Forrester Research, Inc.

**Figure 4** Model: Total Economic Impact Analysis Summary — SaaS HR

	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Present value (PV)
Benefit	\$676,841	\$735,869	\$806,410	\$857,489	\$920,129	\$3,996,737	\$5,242,391
Cost	\$721,942	\$583,166	\$594,830	\$606,726	\$618,861	\$3,125,525	\$4,148,115
Net cash flow	-\$45,101	\$152,702	\$211,580	\$250,762	\$301,268	\$871,211	\$1,094,276
Cumulative cash flow	-\$45,101	\$107,601	\$319,181	\$569,943	\$871,211		
NPV	\$1,094,276						
ROI	26%						
Payback	12 to 24 months						

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Source: Forrester Research, Inc.

**Figure 5 Model: Total Economic Impact Analysis Summary — SaaS IT Management**

	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Present value (PV)
Benefit	\$566,441	\$623,261	\$691,550	\$740,331	\$800,628	\$3,422,211	\$2,552,393
Cost	\$721,942	\$583,166	\$594,830	\$606,726	\$618,861	\$3,125,525	\$2,383,837
Net cash flow	-\$155,501	\$40,094	\$96,720	\$133,605	\$181,768	\$296,685	\$168,555
Cumulative cash flow	-\$155,501	-\$115,407	-\$18,687	\$114,918	\$296,685		
NPV	\$168,555						
ROI	2%						
Payback	More than 2 years						

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Source: Forrester Research, Inc.

### SAAS CAN BE A LONG-TERM WIN AS WELL — WITH BENEFITS BEYOND COST SAVINGS

Firms that Forrester interviewed have identified long-term benefits from SaaS using five-year cost/benefit analyses. While almost all firms see a short-term win for SaaS in a net-new environment, many have also determined a longer-term value of SaaS, even in larger, established on-premise environments where firms achieve economies of scale in their own IT department. Beyond simple factors such as subscription fees versus new license fees and associated maintenance, key factors that affect whether SaaS will be a long-term win include the ability to reduce or eliminate hardware costs, IT support/staffing, upgrades, software maintenance, and cost of capital. Firms also like the benefits associated with SaaS including the frequently higher adoption rates, reduced training costs and time, and ability to scale subscription up or down more easily to match needs.

#### RECOMMENDATIONS

##### SOURCING EXECs SHOULD WEIGH THE COMPANY-SPECIFIC TRADEOFFS OF SAAS

Despite many generalizations around the costs and benefits of SaaS versus on-premise, there are many company-specific factors that will affect the decision, which sourcing and vendor management professionals must consider in their assessment:

- **Vendor relationships and discounts.** Discount rates and “value” to a vendor will affect a company’s inclination to use SaaS in many cases as it can significantly affect the cost of SaaS versus on-premise equation. Furthermore, firms switching off a major application module should consider the larger effect that could have on their relationship with the application

provider. However, firms should weigh this against the tradeoff of potentially large discounts that they can get by signing up as a new client for a SaaS vendor, particularly in spaces where SaaS is still newer or where the SaaS vendor is trying to build up presence in a geography or industry.

- **Appetite for risk and loss of control.** While some corporate cultures have a high comfort level with off-premise software (including using hosting or other off-premise models), some firms find this model too risky or have regulations by industry or country that limit what can go off-premise. Therefore, cultural or regulatory issues can significantly affect the likelihood of success or in some cases the feasibility of SaaS for an organization. Along these lines, some organizations might only be able to consider SaaS if SaaS-enablement technologies — such as packet accelerators, security/monitoring, or additional backup or escrow services — are purchased; sourcing professionals should consider these issues in their cost/benefit decision. Finally, many SaaS vendors are still smaller, creating additional risk around vendor viability or likelihood of acquisition.
- **The multivendor “tax.”** Most SaaS vendors still offer smaller slivers of functionality footprints, meaning that firms that opt to adopt a heavy SaaS strategy are likely to work with multiple SaaS vendors to cover the same application footprint of a single on-premise footprint. This means that beyond the ROI/TEI analysis for a single SaaS purchase, sourcing strategies around adopting a multi-SaaS strategy must consider costs such as vendor management, identity and access management, and integration — as well as additional functional challenges such as having upgrades across multiple applications or handling workflow across multiple SaaS applications, which many users report to still be an issue.

## SUPPLEMENTAL MATERIAL

### Online Resource

The underlying spreadsheets detailing the models in Figures 3, 4, and 5 are available online. The spreadsheets are interactive tools to allow the user to customize the benefit, cost, and risk data to fit your company's situation.

### Methodology

Forrester Research uses a defined methodology for analyzing and evaluating the costs, benefits, and risks of a proposed solution. This methodology, termed Total Economic Impact (TEI), provides a holistic view of the decision by including an analysis of costs, benefits, flexibility, and risk. By including an assessment of risk, TEI provides a realistic view of expected outcomes, rather than one shaded by early optimism and enthusiasm.<sup>4</sup>

Unlike a cost- or technology-based analysis, TEI does not rely on industry averages or factors that are applied to all organizations, but is a methodology for evaluating projects. The TEI methodology forces the determination and quantification of relevant metrics in light of an organization's current state and future goals. Firms can use the TEI model as a proactive and predictive tool.

### Companies Interviewed For This Document

HP

Salesforce.com

Workday

## ENDNOTES

- <sup>1</sup> GE's partnership with Aravo is an example of how large companies are getting more comfortable with SaaS. Source: InformationWeek (<http://www.informationweek.com/news/services/saas/showArticle.jhtml?articleID=211800221>)
- <sup>2</sup> Forrester recently investigated the state of following SaaS technologies: archiving/eDiscovery, business intelligence, collaboration, digital asset management, enterprise content management, ERP, integration, IT management, and SCM. See the March 12, 2009, "TechRadar™ For Sourcing & Vendor Management Professionals: Software-As-A-Service" report.
- <sup>3</sup> The revenues that system integrators (SIs) receive from SaaS sales and implementation services are much smaller than those from traditional on-premise solutions of a similar size. See the October 29, 2007, "SaaS Economics Will Change ISVs' SI And VAR Channels" report.
- <sup>4</sup> For an in-depth discussion of TEI and the individual elements within the methodology, please see the August, 4, 2008, "The Total Economic Impact™ Methodology: A Foundation For Sound Technology Investments" report.

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