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Comparing The ROI Of SaaS Versus On-Premise Using Forrester's TEI™ Approach

by R "Ray" Wang

TECH CHOICES

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This is the third document in the "Measuring The TEI For Enterprise Applications" series.

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with Eric G. Brown, Jon Erickson, Will McEnroe, and Emily Van Metre

EXECUTIVE SUMMARY

While adoption of software-as-a-service (SaaS) has become widely accepted in CRM, usage in ERP continues to play catch-up. Consequently, firms evaluating various deployment options should consider evaluating both SaaS as well as traditional on-premise options beyond the pure cost tradeoffs. Depending on the business models and economic drivers, differences in business benefits, flexibility, and risk are important when comparing these deployment options. This document, the third in a series, builds upon the on-premise and SaaS models of the first two reports and evaluates four scenarios using Forrester's Total Economic Impact™ (TEI) methodology for 50, 100, 250, and 500 users.

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NOTES & RESOURCES

Forrester received briefings and conducted interviews with nine SaaS and managed application service vendors: Everest Software, Intacct, Microsoft Business Solutions, netASPx, NetSuite, Oracle, salesforce.com, SAP, and Workday. The forecast in Figures 2, 3, 4, and 5, including the TEI methodology and assumptions of the model, is available online.

Related Research Documents
"The Financial Economic Impact Of Software-As-A-Service"
September 1, 2006, Best Practices

"Assessing New Software Vendor Financing Options"
August 29, 2006, Best Practices

"Topic Overview: Enterprise Resource Planning"
August 8, 2006, Topic Overview

"The Financial Impact Of Packaged Applications"
July 11, 2006, Best Practices

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TARGET AUDIENCE

Business process professional; IT sourcing professional; technology marketing, sales, and management professional

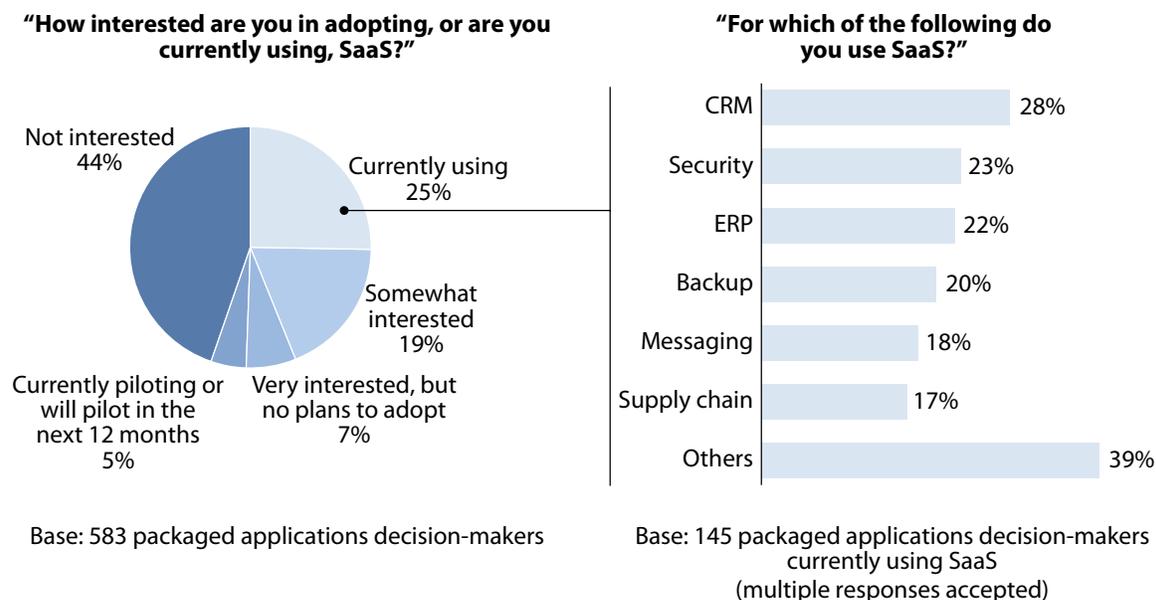## APPLYING THE TEI MODEL TO SAAS VERSUS ON-PREMISE EVALUATIONS

SaaS has emerged as an important deployment option in customer relationship management (CRM) and is eliciting interest in enterprise resource planning (ERP) and software configuration management (SCM) (see Figure 1). As enterprises consider these deployment options during the vendor selection of enterprise applications, few tools exist to evaluate a more inclusive and accurate picture of value or the ROI. Building upon models for evaluating SaaS and on-premise applications, Forrester applied its TEI methodology to go beyond traditional cost approaches like total cost of ownership (TCO) and included key factors like benefits, risks, and flexibility of the deployment option.

Comparing SaaS With On-Premise Using TEI

Forrester's TEI methodology quantifies the impact of costs, benefits, flexibility, and risks. In comparing the two deployment options, we identified substantial differences between their:

- **Costs.** In general, on-premise deployments require greater upfront costs, especially when comparing license fees with subscription fees. On-premise deployments typically require hardware maintenance, upgrades, and support costs on top of license fees, while most SaaS deployments bundle these into the subscription fees.[1] In addition, SaaS deployments avoid charges for upgrades, hardware, temporary business support and backfill, and end user support and administration.[2] Additional SaaS cost drivers include fees for extra features like mobile and offline access, industry-specific functionality, storage capacity beyond a preset limit, and premium help desk support. Over the long run, yearly costs remain lower for on-premise but increase during upgrade cycles, which represent about 65% of the initial costs of implementation in year eight.

- **Benefits.** SaaS deployment options bring not only immediate business benefits but also frequent, automatic updates; shorter time to deploy; independence from IT; and improved usability. On the on-premise front, integration benefits are more pronounced than with SaaS, resulting in enhanced integration with other IT and operational systems, especially when real-time integration is key. Given the lack of disruption in upgrades, implementation, usability, and change management, Forrester assumes that SaaS deployments have an initial and significant advantage in achieving benefits.

Figure 1 Interest In SaaS For CRM, ERP, And SCM

"How interested are you in adopting, or are you currently using, SaaS?"

"For which of the following do you use SaaS?"

Not interested
44%

Currently using
25%

Somewhat interested
19%

Very interested, but no plans to adopt
7%

Currently piloting or will pilot in the next 12 months
5%

CRM	28%
Security	23%
ERP	22%
Backup	20%
Messaging	18%
Supply chain	17%
Others	39%

Base: 583 packaged applications decision-makers

Base: 145 packaged applications decision-makers currently using SaaS
(multiple responses accepted)

Source: Business Technographics® November 2005 North American And European Enterprise IT Budgets And Spending Survey

40227   Source: Forrester Research, Inc.

- **Flexibility.** Both SaaS and on-premise approaches deliver scalability, technical flexibility, and ease of configuration. However, on-premise systems deliver proven integration capabilities, stronger tool sets for customization, and tailored configuration capacity. Meanwhile, SaaS deployments deliver technical agility by allowing migration to on-premise, reduced IT staffing requirements, and greater deployment options in bandwidth-constrained environments. At the end of the day, the advantages in flexibility in one model are easily cancelled out by the other. Hence, Forrester sees negligible advantages in either deployment model.

- **Risks.** Risks in SaaS options tend to center around impact risks like loss of control, weaker integration, limited verticalization, and customization capabilities. On-premise risks tend to relate to implementation risks, such as deployment complexities, training needs, and support issues. Hence, on-premise risks remain slightly greater than SaaS in magnitude.

## Learn From Scenarios For 50, 100, 250, And 500 Users

In developing TEI scenarios for 50, 100, 250, and 500 users, Forrester made some key assumptions in not only cost data but also in the percentages for benefits and adjustment factors for risk and flexibility. Key assumption areas include percentage of users per employer, revenue per employee, percentage of operational cost to revenue, cost of operations, margin, net revenue, and interest rate for net present value (NPV).

Further, Forrester recommends evaluating TEI over a 10-year period of software life-cycle ownership, which covers selection, utilization, implementation, maintenance, and retirement/upgrade.[3] For on-premise, upgrade costs surface in year eight at 65% of first-year implementation costs. Inquiries, briefings, and hands-on advisory work drive the data behind the assumptions for four high-level scenarios that include:

- **Scenario No. 1: Medium-small business with 100 to 249 employees and 50 users.** Businesses with 100 to 249 employees and 50 users typically look beyond accounting packages and point solutions. In many cases, these organizations are experiencing rapid growth and regional expansion and seek immediate CRM capabilities. At this stage of growth, SaaS solutions fulfill the dual capital-deferral objectives regarding upfront software costs and related IT infrastructure investments.[4] Based on the assumptions for a 50-user enterprise, SaaS models provide a better TEI throughout the 10-year life cycle of software ownership, as well as lower cumulative costs (see Figure 2).

- **Scenario No. 2: Medium-small business with 250 to 499 employees and 100 users.** Many firms with 250 to 499 employees and 100 users face upgrade/replacement decisions for their enterprise applications, which typically are deployed in 10- to 15-year life cycles. As these enterprises acquire new entities and expand past regional geographies, the mitigation of data integration, IT infrastructure, and deployment costs rise in priority. However, the requirement for industry-specific functionality and the perception of control in performing integration work and customizations on-site remain equally important. Because of the integration and customization efforts to date, these enterprises often delay upgrade cycles. In general, for 100 user enterprises, SaaS models provide better TEI through cumulative costs versus the on-premise model in the middle of year seven (see Figure 3). In this scenario, IT departments with an ethos of custom development tend to lean toward on-premise models.

- **Scenario No. 3: Medium-large business with 250 users.** In scenarios with 500 to 999 employees and 250 users, Forrester sees a direct benefit to on-premise ownership, despite greater integration costs, higher implementation factors, increased project size risks, more frequent upgrade cycles, initial license fees, and on-going maintenance costs. The TEI analysis clearly shows better TEI for on-premise deployments by the end of year six, and cumulative cost advantages by the end of year seven (see Figure 4). Despite the upgrade in year eight, long-term TEI and cumulative costs favor on-premise deployment. However, enterprises seeking to deploy to subsidiaries in other multiple geographic environments or requiring rapid deployment often continue to consider SaaS options. In many cases, enterprises take advantage of SaaS benefits and then bring the deployment on-premise at a later date.

Figure 2 Scenario No. 1: Medium-Small Business With 100 To 249 Employees And 50 Users

The spreadsheet detailing this model is available online.
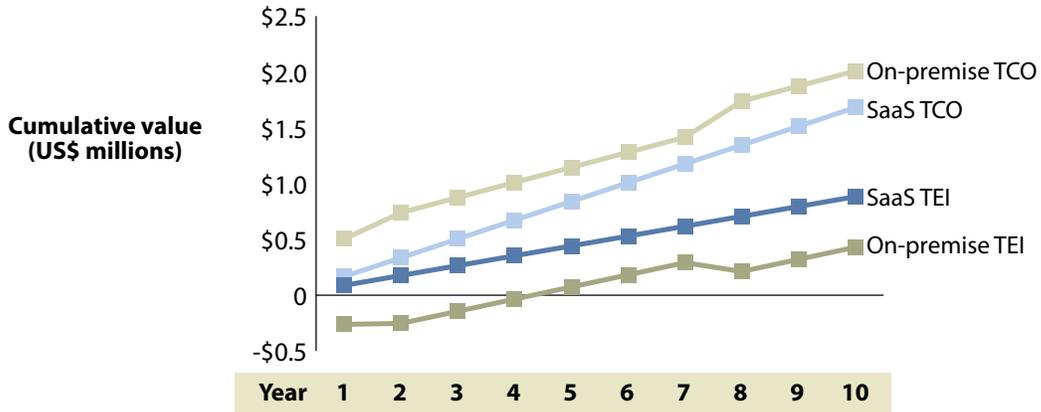
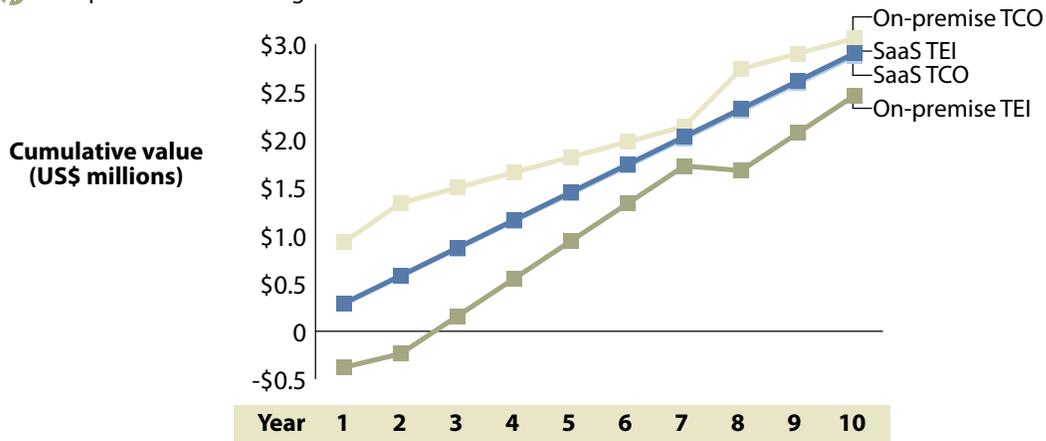40227   Source: Forrester Research, Inc.

Figure 3 Scenario No. 2: Medium-Small Business With 250 To 499 Employees And 100 Users

The spreadsheet detailing this model is available online.

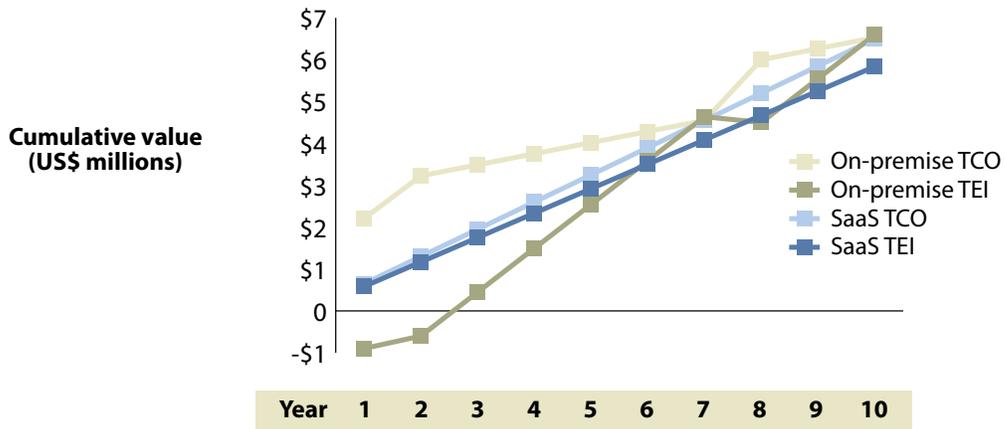40227   Source: Forrester Research, Inc.

Figure 4 Scenario No. 3: Medium-Large Business With 250 Users

The spreadsheet detailing this model is available online.

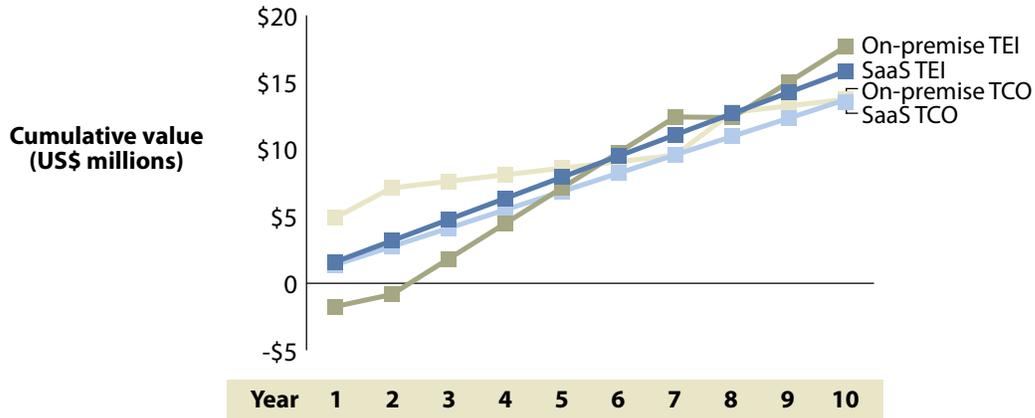
40227   Source: Forrester Research, Inc.

- **Scenario No. 4: Large enterprise with 2,500 employees and 500 users.** In companies with 2,500 employees and 500 users, Forrester believes that on-premise ownership outweighs SaaS in not only TEI but also in cumulative costs. By the end of year six, TEI favors on-premise, and by year seven cumulative costs also favor on-premise, despite upgrades in year eight (see Figure 5). Like medium-large businesses, large enterprises seeking to deploy to subsidiaries in other multiple geographic environments or requiring rapid deployment often should continue to consider SaaS options and treat these cases based on the number of users versus the size of the enterprise. Forrester anticipates many enterprises taking advantage of SaaS benefits and then bringing the deployment on-premise at a later date.

Figure 5 Scenario No. 4: Large Enterprise With 2,500 Employees And 500 Users

The spreadsheet detailing this model is available online.

40227   Source: Forrester Research, Inc.

R E C O M M E N D A T I O N S

EVALUATE SAAS VERSUS ON-PREMISE USING AN ROI APPROACH

Tools such as TEI provide a rigorous methodology for comparing deployment options, such
as SaaS versus on-premise ownership. Companies weighing the relative merits of these two
approaches should:

- **Assess ROI in 10-year periods.** Software life cycles range from seven to 10 years, with
  upgrades typically occurring in year seven or eight of ownership. Analyses should span 10
  years to account for ROI calculations that include the upgrade cycle.

- **Factor in the number of centralized users.** In general, as the number of users increases,
  on-premise models increase in financial attractiveness. However, enterprises operating in
  multiple geographies with 25% or more users in remote locations benefit more from SaaS
  options. Hence, when calculating the number of users, focus on centralized users versus
  remote users.

- **Adjust assumptions based on historical results.** Conduct a retrospective analysis on
  previous implementations to identify the proper factors for areas like benefits, risks, and
  flexibility. In the absence of such data, apply reasonable benchmarks based on company size
  and industry. Leverage the Forrester model to determine TEI and cumulative costs.

- **Consider hybrid models.** Take advantage of hybrid deployment options that allow for
  switching between on-premise and SaaS. Factor in control and customization requirements
  addressed by an on-premise solution against the future scalability and adaptability options
  created by SaaS.

> ## WHAT IT MEANS
>
> ### TEI DEPENDS NOT ONLY ON NUMBER OF USERS BUT ALSO ON NUMBER OF SITES
>
> ROI methodologies, such as TEI, provide a framework for discussions that compare SaaS versus on-premise deployments. Forrester's analysis shows significant TEI for SaaS deployments in enterprises with 50 and 100 users and for on-premise deployments in enterprises with 250 and 500 users. However, actual results may slightly vary in cost, benefits, flexibility, and risk. In addition, a more accurate depiction requires enterprises to consider the number of users per site and not the total number of users. This case applies specifically to enterprises in which SaaS is deployed at smaller subsidiaries or emerging markets while on-premise is deployed at the headquarters or parent entity.

ENDNOTES

[1] In-depth categories for on-premise drivers are provided in existing Forrester research. See the July 11, 2006, Best Practices "The Financial Impact Of Packaged Applications."

[2] In-depth categories for SaaS drivers are provided in existing Forrester research. See the September 1, 2006, Best Practices "The Financial Economic Impact Of Software-As-A-Service."

[3] Like other capital equipment purchases, enterprise software also has a life cycle of its own. From the selection to the retirement of the asset, it is important to understand the requirements in each phase and the subsequent impact of each phase on software licenses. See the July 26, 2005, Tech Choices "Enterprise Software Licensing Strategies."

[4] Forrester identifies additional approaches to deferring capital costs. See the August 29, 2006, Best Practices "Assessing New Software Vendor Financing Options."

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