The Cost and Benefits of On-Demand vs. On-Premise Procurement Software

A Coupa Executive White Paper

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Executive Summary

Procurement software enables organizations to save time, money, and effort throughout the procure-to-pay cycle. It has a direct and immediate ability to cut costs and control spending.

While there are dozens of procurement software solutions available, there are really only two types offered: “on-premise” procurement software and newer “on-demand” procurement software.

With on-premise procurement software, a software vendor sells you a “copy” of their product for an up-front fee. You then buy the computer equipment necessary to run the software along with the other underlying programs you need (e.g. application server, database). You manage the installation and implementation process. You are responsible for keeping the system up-and-running and up-to-date.

With the newer on-demand model, the software vendor assumes much more responsibility. There is no installation process, no computer equipment to buy and manage, and no ongoing maintenance. Instead, the vendor runs the on-demand service for you. It is available without having to buy a “copy” of the software for an up-front fee. Instead, an all-inclusive monthly subscription covers the cost of the procurement software and the cost to manage and support the procurement software at an external location on your behalf.

This paper outlines an approach to compute and compare the Total Cost of Ownership (TCO) for on-premise procurement software vs. on-demand. We suspect you’ll discover there are many hidden costs of on-premise procurement software and that in almost every situation on-demand software is far more cost-effective.

Exploring Your Two Choices

Choice 1: "On-Premise Software" or "Traditional Software"

As mentioned in our summary, on-premise software[1] refers to software you purchase outright and then run at your physical location. On-premise software was the most common until around 2005, when software running at a remote location became widely available and adopted.

Because of the rise in popularity of running software at a remote location, on-premise software is sometimes referred to as "traditional" or "old-style" software.

With on-premise software, the usage rights you purchase up-front apply to a particular version of the software for an unlimited or perpetual term. In addition, you are entitled to buy support for the first few years of product ownership by paying yearly maintenance fees. Purchasing support entitles you to talk to an agent of the software vendor if your system encounters a problem. But because your system is a unique installation, you are responsible for final diagnosis and patching to correct any problems you find.

Once a new "major" version of the software is issued, you may be required to pay another up-front fee to purchase usage rights for the new version. While you can forego or skip a new "major" version occasionally, if your software gets too out-of-date it may become unsupported in which case your organization will need to support and maintain it yourself and without help from the software vendor.

You have to install on-premise software, or pay a third party to install it. You take responsibility over ensuring it is operating and available when your employees need it. You shoulder the support for any customizations you make to the software. You also take full responsibility for maintaining the software over time.

Choice 2: "On-Demand Software" or "Software-as-a-Service"

On-demand software refers to software that is available as a service and is not intended for installation on-premise. Google.com and Yahoo.com are examples of software available exclusively on-demand.

Salesforce.com is largely credited with popularizing the on-demand movement for business

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[1] See Wikipedia entry "On-premise software"

applications. Nowadays on-demand software is available in almost every category of business software, including CRM, Accounting, HR, and Procurement.

This model of software delivery goes by many names, the two most popular being “on-demand” and “software-as-a-service” (or “SaaS”). On-demand software has a set of characteristics that distinguish it from on-premise software, such as:

Instant Deployment

With on-demand software, you can access the application and start using it as soon as you sign up. You don’t have to purchase hardware or system software (such as databases or application servers). You don’t have to schedule IT resources to install the system before you get your hands on it.

No System Support Headaches

Since the on-demand software vendor is responsible for maintenance, upgrades, and error-resolution, you don't have to worry about staffing and delivering ongoing system support. Your IT group does not have to monitor the application to ensure it is running. Should service be interrupted, it is the software vendor’s problem to make sure it comes back up immediately. Due to economies of scale, the software vendor can provide a level of service not possible with your own IT resources.

Buy-As-You-Need and Pay-As-You-Go

With on-premise software, you typically have to buy all of the user licenses that you think you will need up front, since it is not only expensive to buy them after the fact, but time-consuming to get the license keys from the provider. With on-demand software, you can add user licenses as you need them, and cancel them when you don't, insuring that you only pay for what you need, when you need it. This is significant considering the vast majority of enterprise software applications are licensed for 20% to 50% more users than are actually using the system at any time.

Regular, Automated, Secure Data Backup

On-demand software vendors can invest more in redundancy and robust infrastructure to insure its customers are protected from disasters. Typically they have redundant data-backup systems that do full backups daily and incremental back-ups in real-time across differing regional locations. This means that even in the event of a catastrophic hardware failure, the on-demand software vendor can roll-over to a backup immediately, keeping the system and its data safe and operational. It does not make sense for your internal IT department to make

those same investments, leaving you more exposed to disaster with on-premise software.

Built for Change

Most on-premise software was built to a design, which the vendor needed to be fixed and rigid. Because on-premise software is typically older, it is built on aging technology that inhibits rapid enhancement and drives up ongoing development and support costs for the software vendor. By contrast, on-demand software vendors use modern technology which keeps quality high and ongoing development and support costs low.

Time to Value

Since customers don't have to spend extra cycles buying hardware or system software, they begin using on-demand software immediately. This means customers begin reaping the benefits of on-demand software right away. By contrast, on-premise software often requires many months of extensive and expensive implementation. This delay drives up costs and dramatically impacts time-to-value.

Defining TCO Cost Components

In this section we define the cost components used to compute the total cost of ownership for on-premise procurement software and for on-demand procurement software.

On-Premise Software Cost Components

With on-premise software, you have quite a few cost components to compute. There is hardware and software to buy and install. There is an implementation project to manage. There is internal system support to keep the system up-and-running. Here we define each of the cost components.

License Cost

This is the cost to buy perpetual usage rights to the software.

Support Cost

This is the cost for support of the software you've purchased. It is typically 20% of the license cost.

Upgrade Cost

This is the cost to buy a new "major" version of on-premise software. Most providers release major versions of their software every two to three years, and if you don't upgrade within a certain timeframe, you may lose critical aspects of support. Upgrade license costs are typically 25% to 75% of the initial license cost.

Server Cost

This is the cost to purchase and install test and production computer equipment for running on-premise software. Remember to account for upgrading computer equipment, typically once every 3 years.

Database Cost

This is the cost to purchase and install a relational database required to run your on-premise software. The database will be used to keep a historical record of your purchasing transactions. Like the on-premise procurement software, the on-premise database software requires a license cost and an ongoing annual support cost.

Application Server Cost

This is the cost to purchase and install the software required to run your on-premise procurement application - software like Microsoft IIS or Oracle Application Server. The application server, like the database, requires a license cost and an ongoing annual support cost.

Implementation Cost

This is the cost to install, configure, and customize the on-premise software. It is a one-time set-up cost. Often internal project resources combine efforts with a third party implementation firm to do get the on-premise software up and running. A “small” on-premise implementation typically runs 25-50 thousand dollars, a “mid-size” implementation around 100 thousand dollars plus, and a “large,” enterprise-class implementations can cost a million dollars or more.

Often implementation cost is quoted at an hourly or daily rate with a total “estimated” but not committed. Beware of this structure as the services vendor has little incentive to complete the implementation quickly or efficiently.

Internal Support Cost

This is the total burdened cost for internal resources required to operate and maintain the on-premise software. Typically these resources can be classified into three categories: administrative, quality assurance, and support/operations. If you have a large IT organization with many on-premise applications you can share or split resources. These resources must handle “end user” support, perform regular maintenance of the on-premise software, and continually test any changes needed before they are made to the production system.

Training Cost

This is the cost to train your “end users” on using the procurement software, and train your IT and administrative users on running, managing, and maintaining the on-premise software.

Training is required upon initial installation, and then again with every major upgrade. Costs will vary depending on system complexity and team size.

On-Demand Software Cost Components

With on-demand procurement software, you have far fewer cost components than on-premise software. There is no hardware or software to buy and install. There is no implementation project to manage. There is no internal system support required. Instead, there are only two costs - subscription cost and training cost.

Subscription Cost

This is the annual cost to subscribe to the on-demand software.

Training Cost

This is the cost to train your “end users” on using the procurement software.

Comparing TCO for Example Organizations

In this section, we "run the numbers" for four typical situations. We compute the five-year TCO for both on-premise vs. on-demand procurement software.

Example	Users	Description
1. A Small Department	10	Increase efficiency of creating, issuing, and tracking PO's
2. A Small Business	100	Centralize control for all purchasing, goods and services
3. A Mid-sized Business	500	Curb G&A growth through audit-worthy purchasing control
4. A Large Business	1000	Cut costs through move to self-service purchasing

As you'll see in the pages that follow, on-demand software provides dramatically lower costs in each of these four situations. Cost savings begin at $130,000 over the five-year period, and skyrocket to $1.3MM.

On a percentage basis, on-demand software cost starts at just 15.9% of on-premise software cost, and never exceeds 50% of on-premise software cost. Said another way, on-demand software is less than 50% of the TCO of on-premise software in every example illustrated.

The assumptions and resulting findings from our examples are buttressed by two 3rd party studies. The first, from Merrill Lynch[2], found on-premise software total costs usually add up to six to eight times the initial license cost. The second, from Gartner[3], estimated that more than 70% of the total five year Total Cost of Ownership (TCO) for on-premise software comes after the initial implementation. Now that's hidden cost!

[2] Merrill Lynch On Demand Index, April 19, 2004

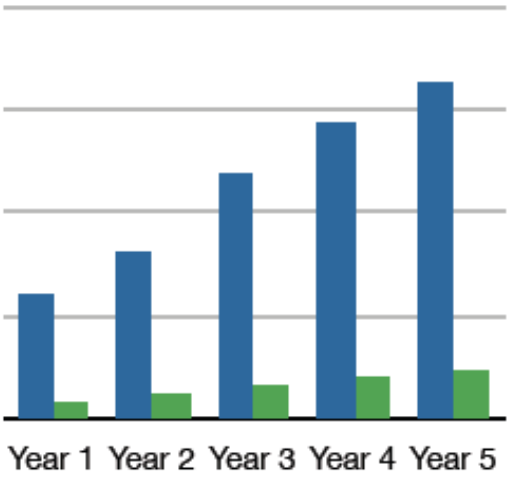
[3] Gartner Research Note, Defining the Business Application Life Cycle, September 4, 2003

Example 1: A "Small Department"

Let's begin by looking at a typical department within a business. This department has 10 or so employees who perform the purchasing function. There are looking to make themselves more efficient through the use of procurement software. Here are a few facts about their situation:

- $600K in purchasing expenditures per year
- Need to automate PO creation and make issuing PO's to suppliers easy
- Choice 1: on-premise software that costs $15,000 up-front
- Choice 2: on-demand software that costs $4,140 per year

We'll assume on-premise support is 20% of the license cost, and that there is only one major upgrade to the on-premise software during the 5 year period. We'll assume discounted costs for server hardware, database software, and application server software. We'll assume the system requires 1/4 a "full time equivalent" or FTE to support, and that the burdened cost for that resource is $60,000 per year. Lastly, we'll assume modest implementation and training costs. Here is the result:



- *5 year TCO is **$164,000 for on-premise vs. $25,700 for on-demand***
- ***On-demand software offers savings of over $130,000***

On-Premise Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total
License	15000	0	0	0	0	15000
Support	3000	3000	3000	3000	3000	15000
Upgrade	0	0	7500	0	0	7500
Server	4000	0	0	4000	0	8000
Database	4800	800	800	800	800	8000
App Server	4800	800	800	800	800	8000
Implementation	10000	0	7500	0	0	17500
Internal Support	15000	15000	15000	15000	15000	75000
Training	5000	0	5000	0	0	10000
On-Premise Total	**61600**	**19600**	**39600**	**23600**	**19600**	**164000**

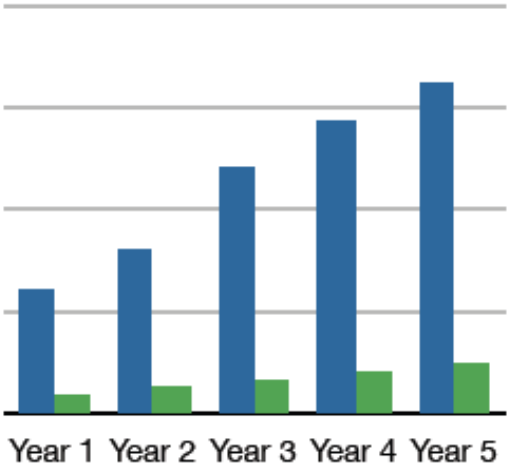
On-Demand Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Subscription	4140	4140	4140	4140	4140	20700
Training	5000	0	0	0	0	5000
On-Demand Total	**9140**	**4140**	**4140**	**4140**	**4140**	**25700**

Example 2: A "Small Business"

For our second example, let's look at a typical small business with 100 employees. Here are a few facts about their situation:

- $1.2MM in purchasing expenditures per year
- Need software to control purchasing for all goods and services purchased
- Will automate and control the procure-to-pay process for all 100 employees from initial request all the way through approval of invoices
- Choice 1: on-premise software that costs $35,000 up-front
- Choice 2: on-demand software that costs $24,000 per year

We'll assume on-premise support is available at 20% of the license cost, and that there is only one major upgrade to the on-premise software during the 5 year period. We'll assume discounted costs for server hardware, database software, and application server software. We'll assume the system requires 1/2 a "full time equivalent" or FTE to support, and that the burdened cost for that resource is $60,000 per year. Lastly, we'll assume moderate implementation and training costs. Here is the result:



- *5 year TCO is **$337,000 for on-premise vs. $135,000 for on-demand***
- ***On-demand software offers savings of over $200,000***

On-Premise Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total
License	35000	0	0	0	0	35000
Support	7000	7000	7000	7000	7000	35000
Upgrade	0	0	15000	0	0	15000
Server	6000	0	0	6000	0	12000
Database	6000	1000	1000	1000	1000	10000
App Server	6000	1000	1000	1000	1000	10000
Implementation	30000	0	10000	0	0	40000
Internal Support	30000	30000	30000	30000	30000	150000
Training	20000	0	10000	0	0	30000
On-Premise Total	**140000**	**39000**	**74000**	**45000**	**39000**	**337000**

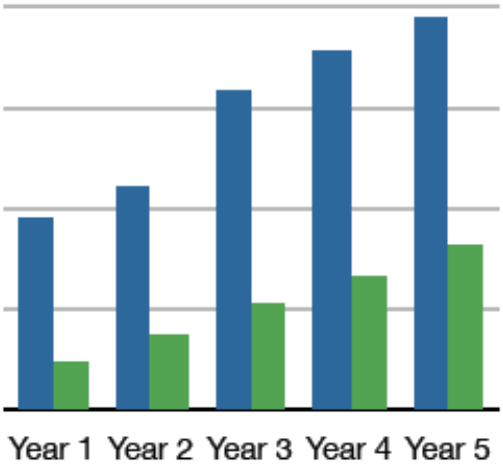
Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Subscription	24000	24000	24000	24000	24000	120000
Training	15000	0	0	0	0	15000
Total	**39000**	**24000**	**24000**	**24000**	**24000**	**135000**

Example 3: A "Mid-size Business"

Our next example is a mid-sized, growing business with 500 employees. Here are a few facts about their situation:

- $15MM in purchasing expenditures per year
- Need to control purchasing process to create audit-worthy records
- Want to curb G&A expense growth through increasing efficiency
- Choice 1: on-premise software that costs $150,000 up-front
- Choice 2: on-demand software that costs $72,000 per year

We'll assume on-premise support is 20% of the license cost, and that there is only one major upgrade to the on-premise software during the 5 year period. We'll assume discounted costs for server hardware, database software, and application server software. We'll assume the system requires 3/4 a "full time equivalent" or FTE to support, and that the burdened cost for that resource is $60,000 per year. Lastly, we'll assume moderate implementation and training costs. Here is the result:



- *5 year TCO is **$976,000 for on-premise vs. $410,000 for on-demand***
- ***On-demand software offers savings of over $550,000***

On-Premise Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total
License	150000	0	0	0	0	150000
Support	30000	30000	30000	30000	30000	150000
Upgrade	0	0	65000	0	0	65000
Server	12000	0	0	12000	0	24000
Database	20000	4000	4000	4000	4000	36000
App Server	20000	4000	4000	4000	4000	36000
Implementation	150000	0	65000	0	0	215000
Internal Support	45000	45000	45000	45000	45000	225000
Training	50000	0	25000	0	0	75000
On-Premise Total	**477000**	**83000**	**238000**	**95000**	**83000**	**976000**

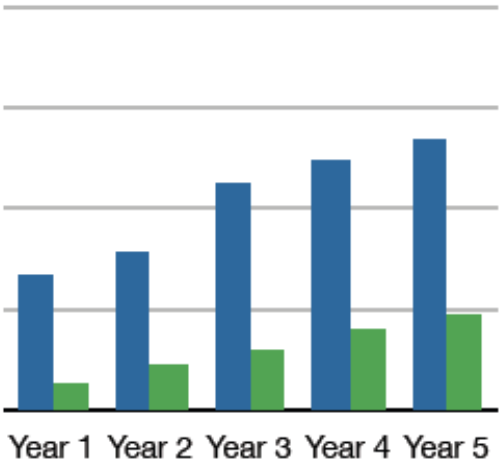
On-Demand Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Subscription	72000	72000	72000	72000	72000	360000
Training	50000	0	0	0	0	50000
On-Demand Total	**122000**	**72000**	**72000**	**72000**	**72000**	**410000**

Example 4: A "Large Business"

Our next example is a larger business with 1000 employees. Here are a few facts about their situation:

- $85MM in purchasing expenditures per year
- Need to control maverick spending and boost contract compliance
- Must cut G&A costs through moving to a self-service approach to purchasing
- Choice 1: on-premise software that costs $400,000 up-front
- Choice 2: on-demand software that costs $130,000 per year

Like with our previous examples, we'll assume on-premise support is 20% of the license cost, and that there is only one upgrade to the on-premise software during the 5 year period. We'll assume moderate costs for server hardware, database software, and application server software. We'll assume the system requires 1 "full time equivalent" or FTE to support, and that the burdened cost for that resource is $60,000 per year. Lastly, we'll assume moderate implementation and training costs. Here is the result:



- *5 year TCO is **$2,025,000 for on-premise vs. $725,000 for on-demand***
- ***On-demand software offers savings of$1,300,000***

Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total
License	400000	0	0	0	0	400000
Support	80000	80000	80000	80000	80000	400000
Upgrade	0	0	175000	0	0	175000
Server	30000	0	0	30000	0	60000
Database	36000	6000	6000	6000	6000	60000
App Server	36000	6000	6000	6000	6000	60000
Implementation	300000	0	150000	0	0	450000
Internal Support	60000	60000	60000	60000	60000	300000
Training	75000	0	45000	0	0	120000
Total	**1017000**	**152000**	**522000**	**182000**	**152000**	**2025000**

Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Subscription	130000	130000	130000	130000	130000	650000
Training	75000	0	0	0	0	75000
Total	**205000**	**130000**	**130000**	**130000**	**130000**	**725000**

Appendix A: Differentiating Hosted ASP Software From On-Demand Software

Some on-premise software vendors will hire a 3rd party to host your software if you buy software licenses from them. They will transfer the cost of the hardware, database and application server, along with a healthy margin, as a bundled cost, so you don't have to worry about doing it yourself. This model is called ASP or Hosted ASP – and don't confuse it with on-demand software or SaaS. Sometimes ASP offerings prove even costlier than on-premise, so buyer beware.

If you are having trouble telling whether a prospective vendor is trying to offer you an ASP solution and not a true on-demand solution, ask the following questions. They are usually quite effective at identifying the wolves in sheep's clothing.

(1) Can I request a free trial?

Since a SaaS provider can set you up simply by creating a new account for your organization, the cost of allowing you to try their system in a limited capacity for 30 days is next to nothing. On the other hand, since a hosted ASP provider has to set up a whole new environment, and tie up expensive dedicated hardware, they will be very reluctant to allow you to try their solution, especially if they are not getting a "set-up" fee to cover their costs, which can be quite high.

(2) How long will it take to set me up?

A SaaS provider can not only enable you within minutes simply by creating an account for your organization, but will have a suite of data loading tools that can accept your data in standard file formats and automatically upload it into the system. Furthermore, they will have administrative tools that your super users and system administrators can use to start creating your user accounts, profiles, and business rules right away. As such, they will be able to set you up in a matter of days, as it typically takes longer for the request to reach their support department than it does the support department to set you up. In comparison, it could easily take a hosted ASP provider, who will have to get FTP'd data dumps from you and do customizations on their end, a matter of weeks to set up even a moderately sized organization.

(3) What's the minimum term I have to agree to? And how does that affect my annual, or monthly, fee?

A SaaS provider will generally prefer and only require a yearly contract. The subscription fee will be the same whether you agree to only one year, three years, or five years. In addition, a SaaS provider will let you start with a small number of seats and add more over time for a fixed incremental fee.

On the other hand, the perpetual license provider who uses a hosted ASP model will need to sign you on for at least three years, and will try to persuade you to sign up for long term deals of up to five or seven years, often by way of a small "discount" for longer terms. Furthermore, the perpetual license provider with the hosted ASP model will try to sell you as many seats as you are going to need over the term of the agreement, and not the number of seats you need today.

(4) How often do you release updates?

A SaaS provider would probably respond that they release updates every month or two.

A perpetual license provider will likely state they have one major update a year. Furthermore, critical patches could take weeks to be applied to your installation, as they have to patch, and test, each installation they have separately.