



# 2015 Cloud PSA Evaluation Guide



## Table of Contents

Table of Contents.....	2
Introduction.....	3
When to Replace Your PSA System .....	7
Getting Organized.....	12
Macro Selection Considerations .....	18
Selection Process Today.....	28
Short Listing .....	34
Software Demonstration .....	37
Decision Making.....	44
Selling the Decision .....	51
Appendix .....	53

# Introduction

## Brief History of Project and Service Solutions

### Genealogy of Project and Service Solutions

Service organizations have not enjoyed the 4+ decades of packaged software solutions that have been available to manufacturers and other entities. Custom, bespoke solutions have figured greatly in service organizations during this time frame. Spreadsheets, PC-based applications and components of larger ERP suites have rounded out the software portfolio of countless service firms globally.

In the 1980s, firms like VisiCalc and Lotus produced spreadsheet tools that ushered in a new level of productivity, accuracy and planning for project-based activities. In subsequent years, Microsoft and other firms expanded this capability into project planning software and project management systems. These project planning/management solutions greatly aided efforts in developing work plans, determining critical path activities, identifying schedule conflicts and other project management activities.

During that same time frame, some financial and ERP software vendors created project accounting software that utilized much of the same functionality found in their accounting modules. These systems kept track of the cost and expenses involved in project-based work.

As these project and service-based solutions continued to evolve, the market saw more specialized solutions enter the marketplace. For example, newer products could:

- manage portfolios of projects for maximum ROI (PPM – Project Portfolio Management)
- manage shared resources across multiple projects (Collaboration and Project Tracking)
- track and prioritize Research & Development efforts and their stage gates (NPD – New Product Development)
- assist internal (often, IT) groups manage their projects, operations and the value they deliver to their internal stakeholders (ISM – Internal Service Management)
- calculate earned value and other metrics (Project Management Software)

## PSA EVALUATION GUIDE

- generate reports, bills and costing data to satisfy different regulatory and government contracting requirements (Contracting Software)
- facilitate coordination between different trades and disciplines (Collaboration, Project Management and Design Engineering Support Software)
- manage the full lifecycle of project from design, construction and long-term operation and maintenance (Project Lifecycle Management)

But even with all of this positive evolution, some software shortfalls existed. Many service firms, for example, wanted software solutions that:

- did more than just (or simply) plan and track a project
- worked well in the field with remote project teams
- came with their own fully integrated accounting solution
- permitted easy entry of information from contractors and other third-parties
- eliminated many redundant sources of data entry (e.g., the need to enter time and expenses into separate project tracking, project accounting/billing and travel expense reimbursement systems)
- were designed first and foremost for service organizations and were not a retrofit of a solution designed originally for hard industries (e.g., manufacturing)

Around 1998, at the end of the client/server era, a new generation of software products began to emerge. These products would become known as Professional Service Automation (PSA) technologies. PSA products contain core functionality, missing from many ERP suites, that is essential for a well running, efficient service organization. For example, PSA solutions often possess capabilities such as:

- Resource Management -- Resource Management deals with the number one asset and cost component of a service organization: its workforce. Resource management, at a minimum, helps executives determine who the best suited individuals to complete a project are and what their availability is. Done well, resource management can have a tremendous impact on chargeability, client satisfaction and utilization of personnel. When the right people are placed on projects at the right time, work should be completed at or ahead of time and at or below budget.
- Pipeline Management – Pipeline Management gives service organization executives forward-looking visibility into future chargeability. Executives should be able to plan for project team member substitutions, billing rate changes, training commitments for their staff, etc. The impact of these changes should be easy to enter, review and forecast.

## PSA EVALUATION GUIDE

PSA solutions are continuing to evolve. Virtually all PSA products today are cloud-based solutions. Many are multi-tenant applications that require little capital investment and ongoing maintenance support from the service organizations they serve.

The modern PSA solution is being embraced by more kinds of businesses and service organizations than in the past. Previously, early PSA solutions found a strong following with accounting firms, law firms, IT consultancies and other professional service firms like architects. In the last decade, as companies of all kinds have tried to grow revenue, these firms have created new revenue sources through the sale and delivery of add-on services. New PSA customers are coming from business units within retailers, oil and gas firms, software companies, manufacturers and many other sources. Because service revenue is becoming a growing and important part of many business' income stream, interest in solutions that will help manage and profitably grow these revenue streams is on the uptake.

Today's PSA system should contain modules that support:

- Resource Management
- Integration with Microsoft Excel and Microsoft Project
- Client Billing
- Time Tracking
- Time Entry
- Project Accounting
- Project Tracking
- Mobile Support
- Expense Management
- Collaboration (especially with clients, contractors and other third-parties)

These new solutions have significant functionality to support mobile computing devices such as cell phones and tablet computers. Likewise, powerful platform computing environments are propelling the development of new PSA solutions as well as thousands of complementary add-on functional applications built by all-new armies of independent software developers.

### **Mergers and Acquisition in the Project Software Space**

The PSA market is currently expanding and contracting. ERP vendors have acquired a number of previously independent PSA solution providers.

This market activity points to several positive developments along with a couple of cautionary points. On the plus side, it shows that the PSA market is gaining in relevance. When larger ERP providers are acquiring PSA solutions, it indicates that these software vendors see additional growth in the services space. Moreover, ERP vendors are signaling that more of their growth will come from sectors that are also growing (like services).

On the other side, the history of mergers and acquisitions in the software industry is a bit of a mixed bag. While company founders and shareholders often benefit, software customers sometimes can

## **PSA EVALUATION GUIDE**

end up on the short end of the receiving stick. In the PSA space, an acquisition is generally not a bad thing. However, the best acquisitions will be those where the ERP vendor and the PSA vendor both share a common technical architecture. For some acquisitions, the common architecture may never occur. For some, it may occur over time. And for some, like FinancialForce and its acquired product, the two product lines were built on the same Platform-as-a-Service (PaaS). It is the latter category that may possess the most benefit to customers short and long-term.

### **SRP – Services Resource Planning**

In the last few years, a new term has emerged: SRP (Services Resources Planning). SRP represents a broader scope and value proposition than PSA. Generally, SRP refers to PSA and additional software products that complete more of the business needs of project oriented businesses. SRP solutions often include additional software for:

- Accounts Payable
- Fixed Assets
- General Ledger
- Accounts Receivable
- Credit & Collections
- Purchasing
- Payroll
- Human Resources (HR) Compliance
- Recruiting/Talent Acquisition
- Customer Relationship Management (CRM)
- Sales Force Automation

Software vendors often begin their product line with 1-2 applications and then add more modules or applications over time. Usually, these vendors add solutions that complement their existing applications. The new applications usually appear on the periphery of their existing solutions. PSA product lines are growing and, hence, morphing into ever larger software suites. SRP is evidence of a trend where service firms can now experience the full, complete application suites that ERP (Enterprise Resource Planning) users (e.g., manufacturers) could enjoy.

For the purpose of this guide, we will stay focused on the core PSA application areas. Adding additional content to cover these other modules adds considerable bulk to the guide. Also, many of the additional modules found in SRP solutions are covered by other publications Vital Analysis has produced on ERP and HR solutions.

### **The Changing PSA Buyer**

As this market continues to mature, buyers of PSA software are becoming savvier, too. They see significant differences between the products being marketed today and those from previous generations. They are being bombarded with a veritable lexicon of new product names, architectural and technological attributes and other software characteristics that may confuse them for a time. Yet

## PSA EVALUATION GUIDE

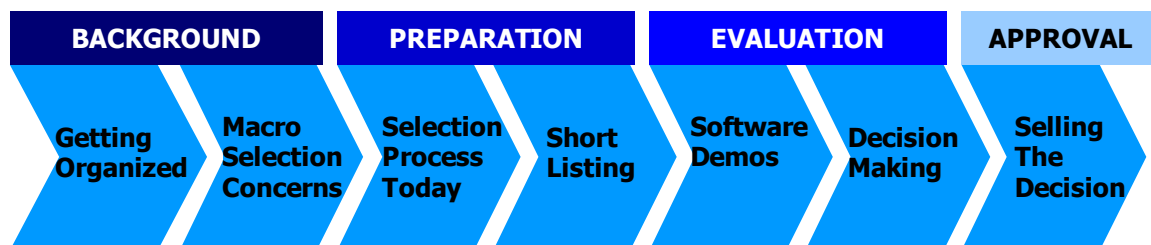
underneath all of the buzzwords and marketing hype, there truly are pioneering firms with radically new and impressive products that are reshaping the PSA software space.

Because of these changes in the market, we have crafted this quick buyer's guide for cloud-based PSA software. Our goal is to help the reader understand the very different choices, decisions and considerations they may need to make when deciding on their next PSA software solution. We have defined some useful guidance within these pages to help you make a decision that serves your organization well for many years to come.

### This Buyer's Guide

We have laid out this PSA Evaluation Guide to follow a multi-step process. We believe this process will allow your organization to become more aware of the PSA software marketplace and determine a new software solution partner.

Each section of this guide highlights many of the major issues your organization should consider in making a PSA software selection decision.



We hope this guide will:

- help your organization get productive quickly
- collapse many of the best ideas in PSA software solutions into one, easy-to-read, structured publication
- accelerate the selection team's learning curve
- define and structure the PSA vendor selection process
- preemptively address many of the issues the selection team will encounter in choosing a PSA solution
- provide practical guidance to making a PSA software solution choice
- make you, the reader, more self-sufficient and successful

This Buyer's Guide is not a detailed methodology as it trades completeness for brevity. It does, however, serve as a quick reference guide for the selection team and provides a common framework for communicating with them. Be sure to adapt the contents of this guide to your organization. Smaller organizations may not require as formal of a selection, for example. Larger organizations may need additional personnel, review points, etc.

Enjoy.

---

## When New PSA Software System is Needed

### What Kind of Service Organization Are You?

How do you know if your organization needs a new PSA system? While every situation is unique, you may find your service operation falling into one (or more) of the following categories.

#### **The Inconsistent Service Organization**

Does every project team in your firm have its own way of selling projects, planning the work, tracking time, recording expenses and/or preparing bills? Smaller service groups often start off this way but realize this approach to business does not scale or scale well. Results are hard to predict. Cash management can get really difficult too. Staff may get frustrated and could be underutilized. No one knows what opportunities exist or what the true pipeline is.

In this world, there is no PSA. What systems that exist are usually a smattering of diverse personal computer based (or free/low-cost Internet web applications) that may not be integrated with each other. To understand the true status of any one project, data from multiple people's personal computers, spreadsheets, time reports, status reports and other communications must be hunted down and analyzed.

This is a frustrating work environment for everyone. Team members spend too much time reconciling data and rekeying project information. No one really knows what is going on across the company because the data is too fragmented and hard to coalesce. Worse, few have confidence in the data they do have. Customers are often frustrated, too. They may not get project status data for days, weeks or months AFTER the work has occurred.

The inconsistent service organization needs PSA software if it wants to:

- prosper
- better serve clients/customers
- improve cash flow
- improve worker productivity
- eliminate non-value (and non-chargeable) activity



## The Functioning Service Organization

Some service organizations have never had a PSA (Professional Services Automation) solution. Typically, these organizations possess a collage of systems. These may include:

- packaged financial accounting software
- a mix of package and custom human resources software
- PC-based project estimating and tracking tools
- a different collaboration tool
- a third-party expense management tool
- another vendor's CRM (Customer Relationship Management) solution
- dozens or thousands of spreadsheets
- custom built staffing and resource management technology

For these firms, their current software portfolio has allowed them to function but rarely much more than that. The solutions can be a mix of on-premises and cloud products. Few processes within these service organizations could be labeled as process excellent or world class. Some functions like time and expense reporting may require multiple, redundant inputs into separate billing, project tracking, expense reimbursement and other systems.

In short, service organizations with this patchwork of non-integrated, multi-origin systems need a new, single, integrated PSA product if they want to:

- perform as a high functioning service entity
- improve productivity of service professionals
- improve productivity of (and reduce costs of) internal, non-chargeable personnel (e.g., accounting and human resources)
- improve service levels
- become more competitive

The functioning service organization will rarely score well on benchmarks against its peers. While some parts of the organization may shine, too many parts are suffering from the collective inefficiencies that a less than integrated collection of technologies may trigger. Functioning service organizations just aren't as competitive as they could be.

## Service Organization in Transition

Some service organizations will require a PSA solution because the entity itself is undergoing a significant transition or transformation. Some of the reasons behind such a transformation may be due to organic growth or contraction of the business. In other words, the firm may have outgrown the technologies that served it well when it was a much smaller entity. Likewise, inorganic changes, such as mergers, acquisitions or divestitures, may mandate the need for a new or singular set of solutions.

## **Service Organization with No Prior PSA Solution**

When a new service operation is launched, service operation executives will often try to create custom makeshift solutions (e.g., spreadsheets). These suboptimal solutions may serve a valid business purpose for the short-term; however, these are not the underpinnings of a successful long-term service operation.

These solutions are often inadequate as they:

- **Do not scale well, if at all.** Spreadsheets might suffice for a very small, local service firm but fail once the company adds headcount, expands into new geographies, etc.
- **Have the potential for keying and other errors.** The data within these systems may, despite the best efforts of those using them, lack the integrity, reliability and accuracy that external auditors, bankers, customers and others require.
- **Are difficult to debug or correct.**

The presence of these temporary solutions is not in and of itself a problem. Rather, they simply require a decision as to when their replacement will occur. A new PSA solution will be required at some point if this service operation begins to grow.

## **Product Firm with Unsupported Service Organization**

Service revenues are a growing part of many firms, especially firms traditionally focused on the sale of products. Unfortunately, the information systems that were designed for one kind of business (e.g., manufacturing) may be inadequate, incomplete and ineffectual in the operation of a world-class service firm.

For captive service organizations, these entities may:

- Use, for a time, a combination of the parent company's ERP and custom applications. These customizations may include modifications to the ERP product, the use of spreadsheets and/or the development of custom applications. The value of this makeshift solution is often transitory. It allows for basic functions to be completed but little else. Should the service organization experience any modest market acceptance, this kludge will need to be replaced.
- Use spreadsheets and other one-off temporary solutions (see above section "No Prior PSA Solution").

In time, the captive subsidiary or business unit will need a PSA solution to support its operations, audit, revenue recognition and other requirements.

## **Service Organization Striving to Become a Market Leader**

Some service operations are well-run and well-managed. They have great systems and they achieve top quartile results across their competitive peer group. The service entities are clearly process excellent.

To move beyond process excellence, the service entities will need to focus on gaining insights into their business in ways that competitors cannot. What this implies is that these firms must have a single, integrated technology suite where all information is extensible, accessible and connected to powerful reporting, analytic and other tools. If the information is disjointed, then errors, latency and other data quality concerns will frustrate executives as they try to achieve market leadership position.

To illustrate, there are very well-run service operations that still have great difficulty getting agreement across their different practice units globally. Can your firm agree on what the definitions and calculations are for chargeability, utilization, backlog, write offs, gross margin, net margin and other factors? Inconsistencies in how service entities account for time, revenue, vacation, training, etc. make it very hard to consistently and accurately optimize these entities on a large scale. Implementing a PSA solution does not solve these problems per se; however, the implementation of these technologies often forces these issues to the front and helps facilitate the development of a great global service organization.

## **Other Change Triggers**

Some service firms experience a different kind of transition that is difficult to pull off with less than capable PSA components. For example, your service organization may be undergoing one of the following changes:

- **From local market focus to industry specializations** - Frequently, service entities discover that different practice locations have different solutions which may be configured differently across geographies and lack the ability to scale. Solutions that are optimized for tiny micro markets may not be suitable for a service organization that wants to provide the best and brightest resources on a national or global basis. PSA software, especially the resource management capabilities, can greatly enable this migration.
- **From “Lone Wolf” sales practices to team selling** - Many successful service organizations possess a “eat what you kill” approach to service sales and delivery. In this environment, capabilities such as collaboration, resource management and other functions may be minimal or nonexistent. However, should this service organization wish to gain additional synergies from team selling and better utilization of resources across teams, then a PSA solution may be required.
- **From loose confederations to a single global firm** - For many reasons, some firms (e.g., accountancies) have different legal structures in the various parts of the world in which they operate. Moreover, while the different legal entities may share some common planning and marketing activities, the systems are frequently unique at each practice

## PSA EVALUATION GUIDE

component level. For those companies moving away from a confederation style of business, a single, global, accessible PSA solution may be required.

No matter what the trigger is behind the transition, the continued use of too many obsolete, different or ill-suited service software solutions will only make a future PSA transition even more difficult.

### Other System Concerns

As mentioned above, the legal entity structure of certain service operations can introduce a number of operational and technical requirements with any systems decision.

Service firms that are partnerships have some interesting factors that must be considered in a software evaluation. Let's examine one of these in more detail.

### Partnerships and Capital

In a partnership, especially a long running partnership, there are often new partners being promoted every year while other partners are retiring and leaving the firm. This ebb and flow of ownership can have some interesting implications on technology decisions. From a funding perspective, IT projects within a partnership are often funded out of current year earnings. Even though the accounting treatment for these projects may be listed as a capital expense, the firm cannot pay earnings to partners as the cash to do so may have already been committed to a software company and/or implementation consultants. In other words, service partnerships abhor large IT capital projects because they can adversely affect current year earnings distributions.

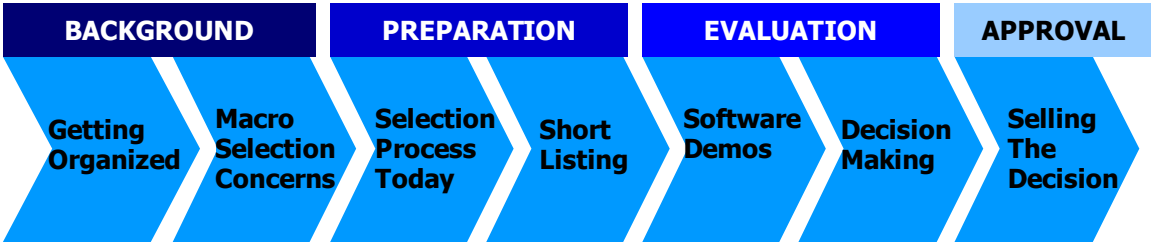
New, freshly minted, partners are usually at the bottom of the income pool. Moreover, they must incur significant hits to their current year income to offset the demands placed on them by the partnership to fund their initial capital stake in the company. Bottom line, new partners are cash strapped and do not like to start their partnership tenure with additional capital demands to fund new systems.

Likewise, partners that are about to retire do not want to see current year earnings being used to fund long-term capital investments. These individuals, often the most senior and influential members of the firm, may attempt to delay or defer large IT capital expenditures as long as possible. In this way, these partners can maximize their last years' earnings while pushing off the IT capital expenditure to a different generation of partners.

Cloud-based systems, as most PSA systems are today, do not require as heavy of an upfront capital expenditure as prior on-premises systems did. Cloud-based systems generally do not require large upfront license fees and other immediate hits to a partnership's current year earnings or cash flow. For this reason, cloud-based solutions may represent a more amenable technology choice for service partnerships.

Section  
**2**

# Getting Organized



## Guidelines for Getting Organized

Three distinct groups must be convened in most software technology selections: organization executives (e.g., practice leaders), functional users (e.g., Finance) and IT. Many other participants may also serve important functions during some or all of the selection effort:

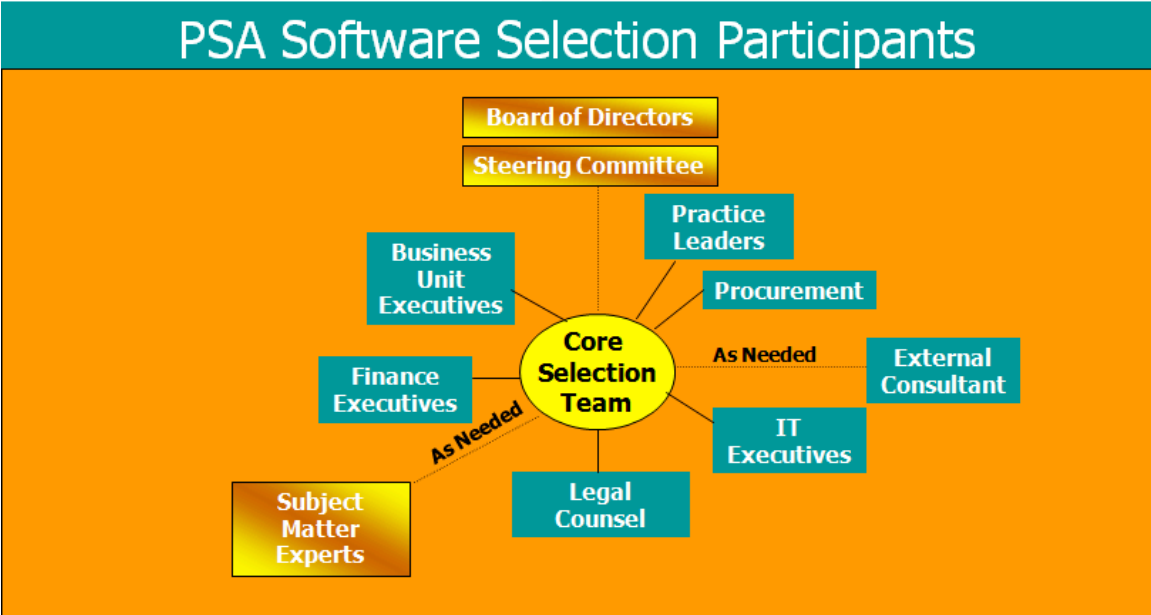


Figure 1

## PSA EVALUATION GUIDE

Most every successful software selection has a core selection team. Smaller organizations may not require more than this group. In fact, the core team size should be commensurate with the size and complexity of your organization. Larger, more complex entities will want more input, more consensus and more guidance.

The following text illustrates the team composition a large entity may utilize.

A large organization will likely need a **core selection team**, a **steering committee** and input from several **business unit users**.

The **core selection team** will likely contain senior executives from:

- Practice Leaders
- Finance
- IT
- Procurement
- Legal
- Operations

These individuals are responsible for articulating the organization's strategic vision, identifying potential organization changes (that could affect a software selection decision), developing the parameters for a shortlisted PSA solution, performing much of the due diligence and, making the key recommendations to the executive and/or steering committee. In sales parlance, this group represents decision makers and influencers.

The core selection team should also be supplemented with critical **subject matter experts** (SMEs) that intimately understand the affected practice and resource management functions. These persons know the unique organization issues/requirements, accounting nuances, regulatory requirements, integration concerns, needs of the broader user community and other factors that must be considered when evaluating new PSA and enterprise software solutions. These individuals will likely be major contributors to the deeply functional aspects of the selection documents, selection process and detailed evaluation of the long and short-listed vendors.

**Practice Leaders** are needed to:

- identify critical business requirements
- decide critical practice management issues (e.g., how utilization will be consistently calculated and reported)
- design the operating and management structures (e.g., how different practice groups will roll up into the industry structure of the firm)
- ensure that new software will be used by the practice professionals (i.e., facilitate a successful change management effort)

## PSA EVALUATION GUIDE

- validate system, process and control designs when/if appropriate
- support training and rollout activities

A **Finance** executive is needed for several important roles. This individual should:

- analyze the effect of the proposed solutions on the capital and operating budget of the organization
- document the effect that any solution has on the free cash flow of the organization
- assess the process impacts of any new solution on company personnel
- provide valuable context on how project profitability, margin and other metrics will be calculated and reported
- ensure adequate controls will be in place
- assess any solution specific (or implementation specific) risks that could expose the organization to unwanted harm

Finance also has a critical role to play during due diligence. A careful review of the corporate health and viability must be undertaken for each of the short-listed PSA providers. Equally important, Finance will want to examine the security, controls and risk mitigation efforts of the cloud computing environment where the solutions will be housed.

Finance will also be the key liaison between the selection team and the internal and external auditors.

**IT** representation is needed as the PSA solutions will need to be integrated with the other IT systems within an organization (e.g., office automation, HR, etc.). IT should provide technical due diligence in investigating the shortlisted providers' systems.

**Procurement** personnel can efficiently and effectively manage the procurement process. Typically, Procurement will control communications with potential solution providers and guide the negotiations.

**Legal** personnel need to be involved in any cloud software selection. Their role will be to review proposed software contracts.

The **Steering Committee** is a group of the organization's most senior executives. They should be apprised periodically as to the core selection team's progress. These briefings should occur at the completion of key milestones (e.g., Getting Organized, Shortlisting and Decision Making steps). In some situations (i.e., when the scope and importance of the deal are significant), the **Board of Directors** will also need to be briefed.

## Key Information to Collect

The best selections occur when the core selection team is quite aware of the market. We recommend the selection team gather market intelligence from a variety of resources that include:

- analyst firm research reports (e.g., SPI Research, IDC, Aberdeen) on the PSA software market
- key blogs that cover the PSA market space (e.g., Software and Services Safari)
- traditional IT media

Whenever possible, we also recommend that the selection team visit key software shows (e.g., Dreamforce), software vendor headquarters and other opportunities where the team can access those on the vanguard of technological change.

Additionally, the project team should collect a number of critical documents that will aid in its selection efforts. These include (but are not limited to):

- sample reports produced by the current system
- examples of spreadsheet reports the current system cannot complete
- a listing and flow diagram of all systems that must be integrated with the core financial software products (e.g., customer relationship management)
- quantities and roles of all current system users
- inventory of all significant software modifications made to the current system
- inventory of known functional shortfalls with the current system
- inventory of difficult operational issues (e.g., forecasting utilization) that the current system struggles with
- any communications from the external auditors regarding systems and control deficiencies in the current system
- excerpts from the IT strategic plan that indicate future technical direction for the organization and more specifically for certain enabling technologies such as mobile computing



## Software Selection Project Charter

A critical component of this phase should be the creation of a project charter. This document is meant to help the selection team crystallize its selection decision. It also helps the team agree on and communicate its key project requirements, value drivers and other business needs to prospective software providers.

What goes in the project charter? Formats and content can vary from company to company, but essentially, a project charter should contain:

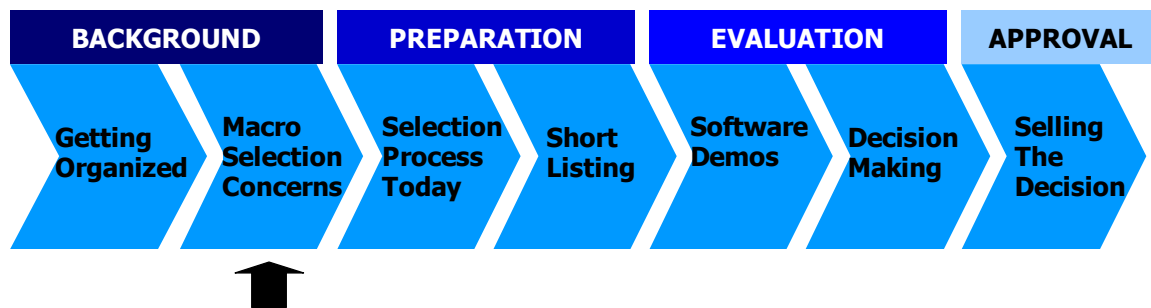
- **Prioritized project objectives** – What are the top 3 – 5 business priorities that the organization wants to address through this software initiative (e.g., materially increase staff utilization, improve accuracy of bills, improve service professional productivity, etc.)?
- **The rationale** why each objective is needed (e.g., our inability to staff globally is hurting us economically. It is causing significant non-value added time being spent by professional staff that must manually roll-up metrics or submit status reports in error-ridden, costly spreadsheets.).
- **Key metrics** that substantiate the need and value that a new solution would bring to the company.
- **Key capabilities** the company needs (e.g., what are some of the key functional abilities that the solution must address?).

## PSA Selection Readiness Checklist

(Check all that apply)

- A core selection team has been convened.
- The core selection team contains appropriate representation commensurate with the size and complexity of your organization.
- The steering committee has been established.
- The organization has held preliminary discussions with potential outside experts.
- The project has been funded.
- Top management has signed off on the initiative.
- The core selection team has undertaken considerable research on the new PSA market.
- Critical project documentation has been assembled.
- The project has a charter that is agreed upon by all core selection team members.

## Macro Selection Concerns



### PSA Solutions – General Functionality

PSA software varies from provider to provider. The exact names of individual modules will vary, but generally, your selection team should see the following modules in most major PSA suites:

**Project Planning** – This functionality aids users in the development of proposal and project work plans. Version control and effective dating are key capabilities here. These solutions should be able to produce Gantt charts, help identify critical path activities and load work breakdown schedules. Solutions should support two-way integration with Microsoft Project. Great project plans are the foundation of great service delivery.

**Project Management/Tracking** – Progress tracking, resource utilization and status tracking are a key output of these solutions. Users should be able to see where the team is relative to key milestones, quality review checkpoints and more. The best solutions can provide visibility across projects, programs, and sometimes, the entire service organization.

**Resource Management** – These solutions aid service organizations in staffing the right person on the right opportunity at the right time. These products provide visibility into training, vacation and other chargeable and non-chargeable commitments a team member may have. Ultimately, great resource management software should maximize chargeability, utilization and cash flow. It should also help avoid unnecessary or redundant third-party, contractor resources. And, when utilized to its greatest extent, Resource Management helps staffing coordinators guide the careers of professional staff.

**Time & Expense Management** – Time and expense entry completes the most important information to the project management lifecycle. These solutions book time and expenses to specific project tasks.

## PSA EVALUATION GUIDE

Simultaneously, new estimates to complete can be entered or verified by the team members. From this data, the project or program manager can immediately see how well the team is performing as compared to original or revised project work plans. This information is also a key input to project billing/invoicing systems.

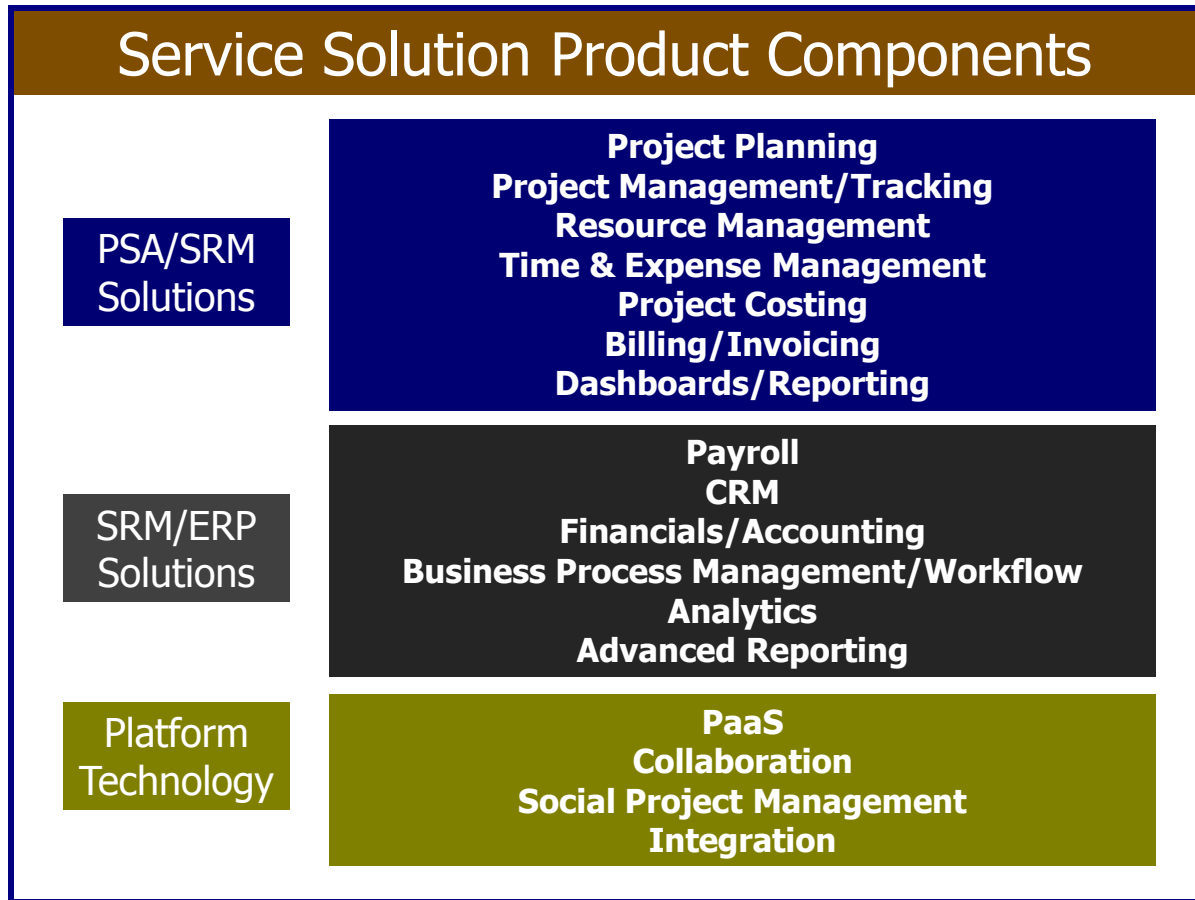


Figure 2

**Project Costing** – Project costing functionality can range from very straightforward to very complex. For government and defense contractors, a significant number of rules exist as to how different project costs can be accounted for and billed. Costing modules may need to take into account rate cards, planned fee adjustments, currency conversions, volume discounts, ramp-up costs, supply costs, housing costs, feeds from client or third-party travel agencies and more. Of course, the major input to these solutions comes from the time & expense tracking module.

**Billing/Invoicing** – Billing terms often do not match the expenditure of time and the current costs incurred. For this reason, some clients are billed in advance while some are in arrears. Some time will not be billed (e.g., time spent getting a new service person up to speed) while some tasks may get a value billing. To prepare bills in a timely and accurate manner, project leaders need solutions that present the most current project status, prior payment information, time and costs.

**Dashboards/Reporting** – Tracking the progress of a project, especially a project that transcends multiple years, locations or countries, requires solid reporting tools. More complex projects need tools that support multiple countries, time zones, currencies and languages. Better solutions also provide advanced analytics and pre-supplied reports that show utilization, forecasted billings, potential staffing conflicts, etc.

## Prepare for a Very Different Selection

A software selection today is a different experience, particularly for those accustomed to buying older, licensed on-premises solutions. The vendors, the offerings, and even the sales approaches are different. In fact, most of what you may remember from the last time your organization selected new software may have changed.

If your organization already has a PSA or services software solution, it probably is a combination of on-premises software products, some PC-based software, and possibly, some cloud applications. The on-premises applications are licensed for use on your organization's computers. Your staff has to maintain these products. They have to apply upgrades, patches and fixes. Your organization has to have its own computing hardware, systems software, databases and more to operate this software.

On-premises software products are yielding market share to cloud software products as these newer solutions are scalable, require little to no capital expenditures and are maintained by the software vendor (not your organization). As a general rule, these newer solutions are often less expensive to use and maintain.

When evaluating PSA solutions, the selection team will likely notice:

- **A different sales experience** – Cloud software vendors can't spend as much time on site doing in-person demonstrations. The expense of these sales cannot be justified with the reduced fees these vendors charge customers. More precisely, the monthly usage fees are often a fraction of the large upfront license fees that on-premises vendors charge. What your organization will likely experience is a sales environment that utilizes more web-enabled demonstrations. The selection team will still get the personalized attention they need/deserve except that the pre-sales vendor professionals will likely use internet video technologies from a remote location.
- **You will be able to use more of a product's standard capabilities** – Tailoring of application software has been getting progressively easier and less expensive. The newest products today are often built using powerful Platform-as-a-Service technologies. These PaaS environments permit users to tailor their usage of the software in powerful ways. Better products will let the organization tailor workflows, processes, field names, etc. They will also permit the addition of new functionality without impairing the vendor's ability to maintain the application. However, very large scale or radical alterations to the core application software design may not be possible with many cloud applications as they could produce unacceptable or unplanned side effects.

Let's continue with this point a bit more. If your service organization is adamant that any new software should be able to support a particularly unique way of completing a process or

## PSA EVALUATION GUIDE

calculating a value (e.g., utilization), it may find varying abilities within cloud products to support this. Cloud software platforms can be exceptionally powerful but they can't do everything. Your organization may have to decide if it is willing to change some practices and reporting methods to accommodate the software. If your organization possesses some flexibility in its workflows, then a platform-based cloud solution may be a fit.

- **Single tenant cloud software solutions (see next page) deliver a small incremental improvement in productivity and some savings in hardware and capital expenditures over on-premises products.** The scalability of these SaaS solutions allows firms to avoid large upfront costs. Multi-tenant cloud solutions may also bring additional savings beyond those from single-tenant solutions. Multi-tenant solutions can deliver substantial cost savings to organizations by transferring the cost of application maintenance to the software vendor. Multi-tenancy can reduce annual maintenance costs materially.
- **A shorter implementation cycle** – Cloud solutions often have shorter implementation timeframes. Frequently, organizations may be able to shave 3 months off their implementation time (and the costs associated with this) simply because the users do not have to incur the order, shipping, setup and other costs associated with the acquisition, configuration, patching, integrating, etc. of hardware, systems software, database and security of other products. Some cloud applications can be 'installed' in a manner of minutes or hours.
- **You need to spend more time thinking through deployment options and functional choices** – Very early in the implementation of a cloud solution, the project team will need to plan how they want the software to work. They will need to make decisions about time and expense processes, reporting standards (e.g., for chargeability), etc. much earlier in the process. These decisions may trigger software configuration options that could get hard to reverse later on.
- **IT priorities and activities will shift post-implementation** – If typical, your IT team spends a significant amount of time every year patching, upgrading and maintaining your current services' solutions. With a multi-tenant PSA solution, the workload on IT is substantially reduced. Be prepared to unleash this newfound time on more strategic IT initiatives (e.g., in-memory analytic application development, mobile workforce connectivity, etc.). Freeing IT from low/non-value added activity may be one of the best benefits your organization may derive from a new solution.

### Technology Factors to Consider

There are many kinds of PSA solutions. The next few pages will attempt to highlight some of the choices your organization must make.

**On-premises applications** – Some PSA products are designed to be installed and run on a customer's computing environment. The customer will need to acquire servers, disk storage, systems software, database management software and other components to complete the installation.

## PSA EVALUATION GUIDE

On-premises environments may sometimes be the best environment for those entities that:

- Want to maintain internal control of their technology
- Need to materially modify their applications to support unique business requirements
- Have the IT staff that can patch, maintain, upgrade and integrate these applications
- Want to control the timing (if ever) of implementing upgrades or new versions of the software

On-premises applications are usually sold via a large up-front license fee coupled with annual maintenance fees.

**Hosted on-premises applications** (also called **Hosted SaaS** or **Single-Tenant SaaS**) – Some vendors of on-premises software have struck deals with cloud providers to place their software on these environments. Each customer, generally, gets their own copy of the software and has their data in a separate database. This approach often allows the customer to acquire new software on a monthly subscription basis without acquiring new hardware, systems software or a new software license. While these products are marketed as SaaS (software-as-a-service) solutions, they are at their core an on-premises product that runs on a third-party's data center.

Providers of these solutions point out the following benefits to this approach:

- No upfront capital expenditures are required
- The customer can decide when, or if, they want to upgrade or patch the software
- The customer can make major modifications to the software, if desired
- Each customer's code and data can be logically and physically separated

There are other points to consider regarding these products. These include:

- The cost to maintain, upgrade and patch the software usually remains the responsibility of the licensee. Even if the vendor performs this maintenance, the single-tenant architecture requires the vendor to upgrade each individual implementation separately. This approach generally does not result in maintenance savings for the customer. Given that this is one of the most expensive aspects of software TCO (Total Cost of Ownership), this is a relevant issue to consider.
- Some hosted, SaaS solutions are essentially the same products vendors have been selling for a decade or more. While the applications may have been designed for web interaction, they generally lack one or more of the following components:
  - An Integration-as-a-Service (IaaS) capability to make connections between on-premises, cloud, mobile, social and other applications
  - Rich support for many mobile and tablet devices
  - A Platform-as-a-Service capability to allow the user to easily tailor and extend the application

## PSA EVALUATION GUIDE

- A rich PaaS ecosystem that contains hundreds, if not thousands, of applications that can extend, enrich and leverage the base software solution

**Multi-tenant SaaS products** – These solutions are akin to many consumer websites (e.g., Google search engine). There is one copy of the software but all customers use it. Each customer's data is kept 'logically' separated from other customers' data. It may or may not be 'physically' segregated though.

Because there is only one copy of software, all customers are essentially using the same version of the software. Moreover, every customer is running on the most current version of the software.

There are some significant benefits that multi-tenant solutions offer. These include:

- Application maintenance is primarily the responsibility of the vendor. This capability is a major TCO savings. Customers can sandbox new releases and test them prior to their go-live date.
- The software permits each user to tailor the application. These tailoring changes are carried forward from one release to the next.
- New, added functionality is often delivered via a setting that a customer must consciously enable. If your organization does not want to use a new feature/function, it generally will not be required to do so.

Multi-tenant applications are not for everyone. Some buyers may balk at the inability to do radical programming changes to the software. If your organization's functional requirements are so unique and cannot be satisfied by the tailoring capabilities of the cloud solution, an on-premises or hosted SaaS product may be a better fit. But, be sure to review the tailoring, extensibility, API and PaaS capabilities of these solutions before ruling them out of the evaluation.

**Private cloud solutions** – Private cloud solutions are essentially on-premises applications that are being run on an organization's internal cloud infrastructure. In this situation, an IT group has created a cloud-like environment for use by their organization. Software, hardware, etc. are running much like they would in a public cloud environment except that their organization is generally the only entity with access to these systems and data.

The advantage of a private cloud solution is that the organization can control every aspect of the solution set. They decide when, or if, they upgrade the solutions. They limit access to the solutions. They can add additional layers of technology or can modify applications to their choosing. Like a hosted SaaS solution, this flexibility comes at a price as these systems require their own hardware, systems software, database licenses, staff to maintain the hardware and software, etc.



## Financial Factors to Consider

Cloud solutions, whether single or multi-tenant, are generally good at reducing an organization's upfront capital costs in IT. Figure 3 provides an illustrative view of different cost categories your organization should consider in evaluating any cloud solution.

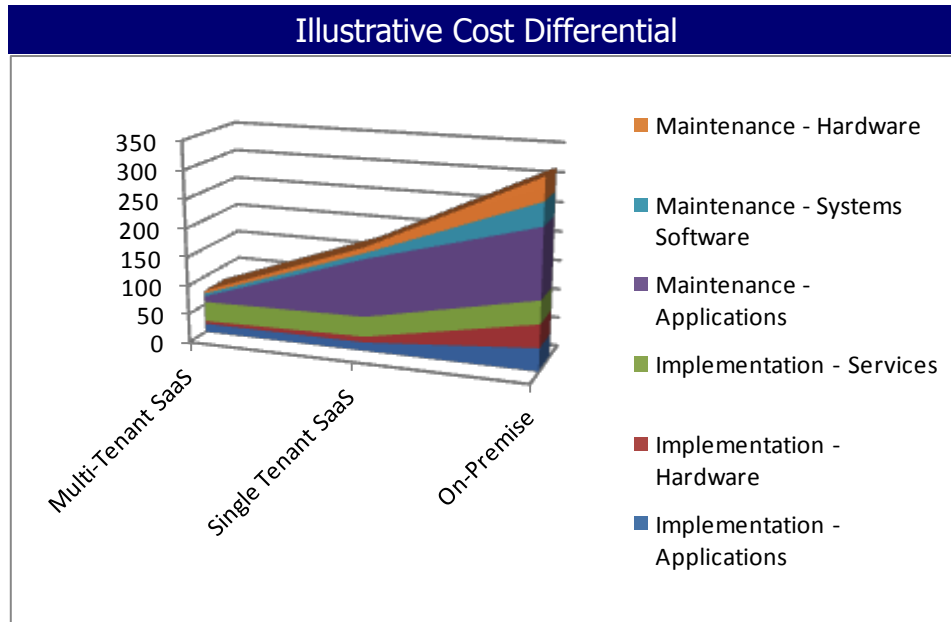


Figure 3

There are other financial considerations to evaluate as well. These include:

- **Cash flow** – While the current economy is producing record low interest rates in many parts of the world, access to capital is still difficult. Be sure to evaluate each solution based on its impact on free cash flow. Often, cloud solution vendors will offer discounts if users pre-pay 1-3 year's worth of usage up-front. Measure these discounts against your organization's cash on-hand, borrowing capability and cost of capital.
- **Operating Expense** – A key component of the cash flow analysis will be to understand how the new solution will impact current and future accounting period operating budgets. If a monthly subscription pricing method is being used, be sure to understand how many users will be accessing the system. Also, be sure to understand exactly how monthly charges will be calculated (e.g., based on users, modules, etc.) so that accurate operating funds estimates can be created.

## PSA EVALUATION GUIDE

- **Capital Expenditure** – This remains a significant cost item for on-premises solutions but not so much for most cloud solutions. The vendor is responsible for the acquisition, deployment, maintenance, etc. of the computing equipment and systems software used on the cloud platform. These costs are generally amortized and included in the monthly operation fee. Also note that on-premises hardware may not be as scalable as that found on cloud services. Should your on-premises solution need more storage, computing power, etc., your organization may have no choice but to acquire new servers and acquire new usage licenses for critical systems software.
- **Implementation costs** - Implementation costs of cloud solutions are generally less than those for a comparable on-premises product. Why? The solutions are often ‘installed’ in minutes or hours on the cloud provider’s site. This effort alone could take weeks or months to complete on-premises. Some solutions come pre-supplied with specific processes, reports, etc. These configuration utilities further reduce implementation costs. If the product is part of a family of solutions in a robust PaaS ecosystem, there may also be specific integration tools, add-on products, etc. that will also shorten implementation time and costs. No matter what cloud computing solution type your organization chooses, however, some activities, like change management, will be needed in all implementations.

### Security Factors to Consider

Placing one’s service transactions, project data, etc. in a third-party’s data center requires a measure of trust. Security and risk concerns regarding cloud solutions are appropriate concerns to have and your organization should undertake a measure of due diligence to ensure that specific risks have been mitigated to an appropriate level.

Most PSA solution providers have implemented relatively strong security measures. They need to have these controls as their company’s reputation is dependent on having the highest standards of reliability and security. PSA software vendors should:

- protect the integrity of their customers’ data
- minimize the possibility of a hostile hack into this information
- maintain segregation of customer data from that of other customers’ data

Additionally, these firms should have well-planned disaster recovery plans that include:

- failover data centers
- automated backup and recovery

When evaluating a PSA software vendor, be sure the vendor has:

- a SAS 70 Part II/SSAE 16/ISAE 3402 certification

## PSA EVALUATION GUIDE

- ISO 27001 certification

These certifications indicate the level of security controls/measures in effect at a point in time. We recommend that any organization considering a PSA solution examine their own current level of security to develop a relative comparison of capabilities and concerns.

Beyond the certifications mentioned above, we recommend a technical team develop and complete a technology review checklist with each vendor. This team should develop comfort with each vendor's approach to:

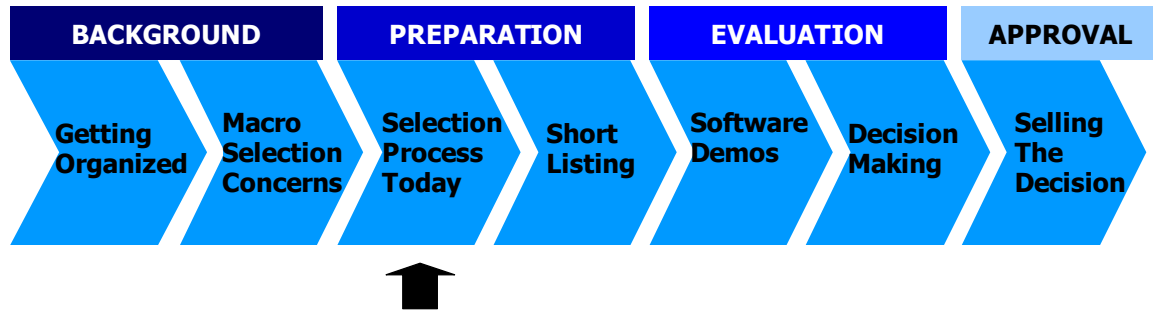
- Data encryption
- Data segregation
- Intrusion detection and notification
- Backup and recovery protocols
- Privacy management
- Disposal, destruction and redaction of personal information
- Protection of personal information
- Information quality standards
- Monitoring and enforcement programs
- Security safeguards testing
- Security to/from portable media and telephony
- Physical access controls
- Controls re: transmission of personal information
- Logical access controls
- Etc.

How transparent each cloud system is can vary from one vendor to another. Some are quite open about system uptime, disruptions, etc. Some will publish information about the security (physical and technology) utilized at their cloud centers (e.g., <http://trust.salesforce.com/trust/status/>).

## PSA Software Risk Tolerance Checklist

<u>A Potential PSA Software Vendor Must:</u>	<u>(Yes/No)</u>	<u>Comments</u>
Have Substantial Risk and Security Controls in Place		To protect the data and business of its customers
Have at Least 10 PSA Software Customers		Isn't a new entrant to PSA
Have Global Customers		To provide breadth of coverage and knowledge of complex organization issues
Be Financially Viable with the Appropriate Backing		To mitigate risks
Derive a Material Portion of its Revenues From Cloud PSA and Other Cloud applications		Shows focus and commitment to the Cloud computing space
Sell Cloud PSA Software as a Standalone Offering and Not as Adjunct to On-premises Solutions or Hardware Sales		Why choose a provider that does Cloud PSA reluctantly?
Has Improving (not Declining) Financial Condition		Pick a winner in the making and not a potential failure
Have a Positive Image in the PSA/PPM/Services Press		Find a successful player that will likely remain successful
Possess Known PSA, Services or Technology Thought Leaders on Staff		How can they advance these solutions if they don't invest in new ideas, thought leadership, etc.?
Be Well Regarded By Industry Analysts		Usually they possess knowledge broader than your organization
Be Free of Patent Infringement Claims, Theft of Trade Secrets, Customer Litigation		Do they own what they sell? Are customers happy?
Have No Recent Large Layoffs		Are workers motivated and will they do a good job for you?
Stable Executive Team		Will new leaders steer the organization away from PSA solutions?
Not Be Up For Sale or Being Acquired		New owners may kill investments in PSA applications
Provide Access to Their Senior Management & Are Attentive to Customers		Dispute Resolution must be swift & effective

## Selection Process Today



### The Ever-Evolving Software Selection

Software selection activities have evolved over the years. A critical driver behind this evolution has been the increasing maturation and evolution of package software.

Years ago, software buyers had no choice but to develop lengthy, highly detailed functional checklists with which to compare one application software product to another. These software buyers did this because the earliest applications often lacked significant but critical chunks of functionality. Only through an exhaustive review of most every function and feature could a buyer ascertain which solution best met their needs. In fact, the software marketplace of yore was so imperfect that buyers often did not choose the best product but rather the one that was missing the fewest critical functional components.

Over time, as software products matured, function/ feature checklists gave way to more process or scenario-based evaluation techniques. While the checklists contained thousands of features, many of these functions would never be utilized by a prospective buyer. Product maturity alone was not enough to decide the best business fit. Instead, users put vendors and their products through drills where vendors had to demonstrate the software's ability to perform specific processes or solve particularly thorny business problems (e.g., cross-border expense reimbursements). The goal in these process/scenario driven selections was to surface the degree of difficulty in implementing or using each product.

Some readers may wonder what is wrong with continuing to use a function/ feature checklist approach to selecting their next services solution. They may argue that function/ feature approaches have worked for them in the past and that this should work again going forward. Should they choose this approach, they may well find that all evaluated products have remarkable similarities, functions, features and capabilities. Where the differentiation may lie now rests in how well the solution

## PSA EVALUATION GUIDE

accommodates future business change, future technology innovations, current and future business tailoring requirements and other needs.

The biggest danger lies in developing a function/ feature checklist that mirrors the current solution. Buyers in this instance often make a new software choice that will deliver no additional value to the organization as the new solution represents merely a lateral change in technology.

The next several pages address a number of evaluation tasks and activities your organization should consider. Hopefully, many of these suggestions will sharpen the focus of the selection team around more critical differentiators in today's software market.

### **Avoid a Non-Value Added Replacement**

Earlier in this guide, we identified a number of reasons that an organization may have for choosing a new service solution. Yet, no matter what the reason for the change, the software selection team should be focused on bringing *additional* value to the organization. A simple replacement of one technology product with another solution will not result in new value being added to the organization.

To maximize the value that may be possible from a new solution, the selection team needs to understand how the new technologies (i.e., not just the services functionality) will impact other operational aspects of the company, other users of the information, the workload of the company's IT organization, etc.

The selection team should evaluate how any new solution impacts:

- the organization's Total Cost of Ownership (TCO) over a multi-year timeframe (e.g., 8-10 years)
- key ROI metrics such as top line revenue growth, net margins, free cash flow, return on assets employed, and of course, shareholder equity
- the efficiency and effectiveness of service workers
- potential improvements in business processes

### **Find Full Process Support**

When evaluating new solutions, the selection team should take the broadest possible view of processes. In the past, selection teams often limited the purview of their selection to discrete service functions such as project management. This functional view may be very familiar to project team members but is only part of the equation when one sees how certain PSA components fit in the larger enterprise process designs.

## PSA EVALUATION GUIDE

For example, the process called “**Opportunity-To-Cash**” (OTC) often begins in the marketing department where prospects are nurtured and passed along to the appropriate sales channel for further pursuit. Sales and/or practice professionals convert these opportunities to proposals and eventually to orders or arrangement letters. Project resources are scheduled and work commences. As the work is conducted, time and expenses are tracked. The client executive or billing group will produce a bill/invoice, discounts may or may not be offered and revenue will subsequently be booked to the appropriate ledger entries in the Accounting software.

The broad view of a process is important as the selection team should understand what other technologies (e.g., CRM, SRP, payroll, etc.) must be integrated to deliver maximum value to the organization. In the OTC example above, the PSA solution should have a tight integration with accounting software, CRM (Customer Relationship Management) software, marketing campaign software (e.g., Marketo), mobile software (i.e., if practice professionals want to enter time via their iPad or smart phone), etc. Viewed this way, the selection team must evaluate more than core PSA functionality. It must also view the solution’s Platform-as-a-Service and the other applications and technologies within the PaaS ecosystem.

Why is this larger process view so important? When an organization seeks to purchase a PSA solution, the applications will invariably need to be integrated with non-PSA, but equally critical, operational technology solutions. In evaluating PSA vendors, the selection team must also evaluate:

- the ease with which applications can be integrated with other software solutions
- the availability of other operational products that can enhance business outcomes without unduly adding to the cost and workload of the company’s IT organization
- the ability of a solution’s tailoring capabilities to support horizontal and other extensions to the core product
- the ecosystem of complementary products that can be added to the core solutions set especially if some of those can be added via a simple click or download

### **Evaluate the Platform as Much as the Application**

We believe the best long-term value may come from choosing a multi-tenant PSA solution that has a strong, underlying Platform-as-a-Service as well as a robust collection of third-party add-on technologies within the PaaS ecosystem.

The selection team can make this assessment of the PaaS and PaaS ecosystem relatively easy. Software buyers need only log into a vendor’s application store online and peruse the available products. We would recommend that buyers also evaluate:

- Whether the platform is open to third party developers or closed to all but the software vendor.

## PSA EVALUATION GUIDE

- The number of complementary products designed to work with the PSA software. For example, are there accounting, HR, etc. applications?
- The size of the third-party ecosystem. Some vendors have no ecosystem while others may possess tens or hundreds of thousands of products to choose from.
- The reviews that different products are receiving (including the one being considered in this evaluation).
- The breadth of the add-on technologies. For example, are there mobile, analytic, big data, social media, and other enabling technology solutions available for purchase?
- The availability of tools that will permit straightforward tailoring and extension of the applications your organization is considering.

### Make Flexibility a Priority

Many software products are used by organizations for approximately 10 years. In choosing a new software solution, the selection team must plan for change and evaluate vendors on their ability to support flexibility.

Within 10 years, can your organization expect to see any of the following changes?

- new leadership/management
- entry into new markets
- launch or abandonment of particular products or services
- new regulations
- new methods of selling products or services
- corporate reorganization
- new business owners
- etc.

Software rigidity is a luxury that few organizations can afford today. Rapid change and tailoring capabilities need to be a focus area for the selection team.

There is another major attribute that the selection team can use in evaluating the flexibility or rigidity of a particular solution. The selection team should undertake an examination of the following:

- How long did it take each vendor to build out their core PSA solution? If this product was originally built using a PaaS, the answer should be closer to 2-3 years. For vendors that are trying to transition older on-premises products to the cloud or to multi-tenant cloud solutions, the answer may be spelled out in 5-10 year time frames or longer. If the vendor's product is so difficult for them to change, why should the selection team expect it to be easier for your organization?



## PSA EVALUATION GUIDE

- What is the average age of a product on the vendor's application store? If new products are being added to this store daily and in large numbers, then the selection team can be fairly certain that there is a powerful and flexible PaaS toolset behind them. If the vendor has no application store or has only a smattering of solutions within it, the selection team may want to seriously investigate the root causes for this.

### Focus on the Organization of Tomorrow

The organization that is selecting software today will likely bear little resemblance to the one using this solution years from now. While no selection team can have a perfect crystal ball that foretells the future, they nonetheless must choose a solution with flexibility for today and tomorrow. This means that rapid tailoring capabilities, which may be part of the PaaS, are very important.

We believe these organizations of tomorrow will also possess certain characteristics, if successful:

- have the ability to change and grow in a nonlinear fashion
- easily serve non-traditional users of organization information (e.g., shareholders, regulators, external auditors, suppliers, customers, etc.)
- receive, send and collaborate with all manner of internal and external entities via PSA and non-PSA technologies (e.g., social media, collaboration software, video and mobile tech)
- easily alter workflows and business processes that change with changing business requirements

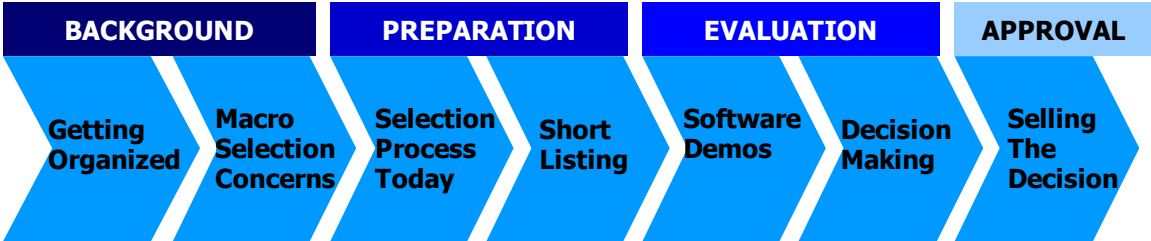
## Key Selection Team Decisions

(Check all that have been adequately addressed)

- Will the new software bring additional value to the organization?
- Is the selection effort focused on more than the limited functional needs of one group (e.g., service delivery personnel)?
- Does the team have a plan as to how it will choose and evaluate each vendor's Platform-as-a-Service?
- Does the team have a plan as to how it will choose and evaluate each vendor's PaaS *ecosystem*?
- Is product flexibility & extensibility being built into the selection process?
- Will the solutions fit the organization requirements of today and tomorrow?
- Is the selection team positioned to choose a solution that optimizes the entirety of processes?
- Does the software complete processes (e.g., order-to-cash)?

Section  
**5**

# Short Listing



## Why Create a Short List

It is expensive to evaluate software applications and the vendors that make those products. For this reason, make sure *that the providers that the selection team is seriously evaluating are, in fact, serious candidates for your organization.*

A PSA selection will require a commitment of time from several of your most senior executives. Each additional solution provider on your shortlist represents a significant additional time commitment from each of these executives. Chances are, the schedules of these executives were already full before this project started and adding more providers to the shortlist isn't going to help.

PSA software providers also want to see a small shortlist. Why? It costs software vendors a considerable amount to compete for these sales. Some organizations will engage outside legal counsel to assist them during the negotiations. They may invest hundreds or thousands of person-hours into this sales effort (depending on the complexity of your organization) and they need to see that they have at least a one in four chance of winning. Some providers will not proceed if there are more than three providers on a shortlist as it is simply not cost-effective for them to do so.

When PSA software providers realize a prospective client is looking at a long list of candidates, they know that this prospect is still shopping and not serious about doing a deal yet. As a result, the software vendor will only provide passing support for this sale.

## The Short List Criteria

The short listing process will require a number of decisions regarding some very important overall selection points. These usually involve a mix of technical, due diligence and third-party matters.

For PSA solutions, the technical issues can usually involve matters such as:

- Platform-as-a-Service capabilities
- Multi-tenancy
- Platform ecosystem breadth and depth
- Product line completeness
- Tailoring/extensibility of applications
- Ability of solution to support user hardware (e.g., mobile tablets)
- Security and risk mitigation points

Due diligence matters might include:

- Commentary from market analysts (e.g., IDC)
- Financial analysis of each vendor
- Customer references
- Installation statistics

Functional short list matters might include:

- Completeness of solution with targeted business processes
- Ability of solution to provide full process support
- User ability to create appropriate dashboards, reports and analytics

Crafting the shortlist is partly subjective and partly objective. The core selection team should, confidentially, develop a shortlist of 2-3 providers and their rationale for choosing them. This recommendation, and all of the supporting documentation, should be sent to and discussed with the executive steering committee. This presentation should address:

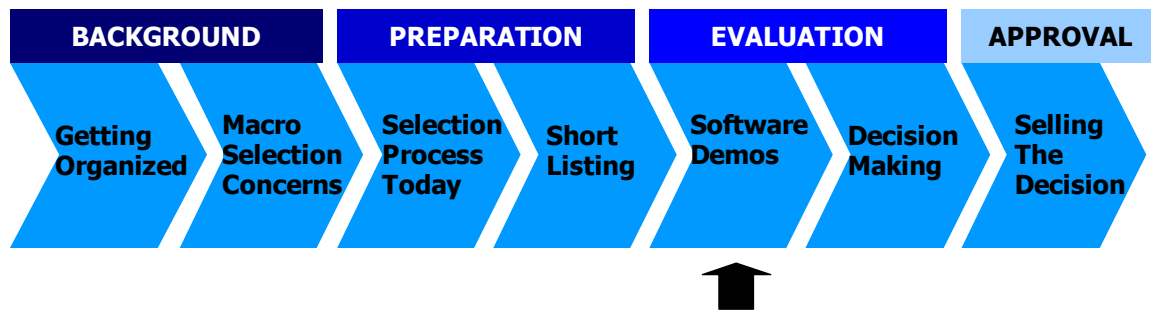
- Each vendor's commitment to the PSA space
- Customer reference comments and experiences
- Core competencies of each provider
- Each vendor's security profile

**PSA EVALUATION GUIDE**

## Key Shortlist Criteria

Key Criteria (Y/N)	Shortlisting Criteria	Long List Vendor					
		1	2	3	4	5	6
Y	Product built with a PaaS	Y	Y	Y	Y	Y	Y
Y	Product is multi-tenant cloud SaaS product	Y	Y	Y	Y	Y	Y
Y	Product part of large, relevant ecosystem	Y	Y	Y	Y	Y	Y
Y	Vendor has at least 10 PSA software deals in production	Y	Y	N	N	N	N
Y	PSA/SRO software is the firm's core competency	Y	N	N	Y	Y	N
N	Key executives have strong cloud and PSA credentials	Y	N	N	N	Y	N
Y	Vendor possesses deep, relevant intellectual property (e.g., best practices, benchmarks, methodologies, global requirements, etc.)	Y	N	Y	N	N	N
Y	Vendor uses a quality improvement program internally	Y	N	Y	Y	N	N
Y	Vendor committed to SAE 16 or other security protocols	Y	N	N	N	N	N
N	Vendor has positive media coverage re: its cloud accounting software business	Y	Y	N	N	Y	N
N	Existing clients are equal to or larger than our firm	Y	N	Y	n/a	n/a	N
Y	Vendor has a broad software offering	Y	Y	Y	N	Y	N
Y	Vendor has exemplary client references	Y	Mostly	Y	n/a	n/a	Y
	Keep this Vendor?	Yes	No	No	No	Yes	No
	If no, why not?		No PSA software commitment really lacking in this firm	No real client base	no IP, no quality program and no credentials		good credentials but new in this space

## Software Demonstration



### Demonstration Guidelines

The software demonstration has been a staple of software selections for decades. Prospective buyers would invite a vendor to their offices so that the vendor could answer questions and illustrate, often with access to a demonstration version of the software, the capabilities of the product.

Software vendors originally traveled to customer locations because on-premises software did not lend itself well to remote demonstrations. Many years ago, demonstrations required a considerable amount of technical wizardry to get the solutions to operate remotely in the days of slow modems and spotty Internet access. When the live demonstration was not possible, vendor salespeople often fell back upon their tried-and-true method of using slideshows to illustrate a product's capabilities.

Today, most businesses have access to the Internet with many having high speed connections. The need for vendors to be physically present to demonstrate products has been diminished considerably by advancements in telecommunications capabilities and the ubiquitous nature of this telecommunication infrastructure.

But there are new economics involved with cloud and most PSA software solutions. Many of today's most modern products are sold on a subscription (e.g., software-as-a-service or SaaS) basis, not up-front licenses. As a consequence, SaaS software vendors do not receive the same large cash payment that frequently occurred with older on-premises sales. As result, software vendors generally cannot spend as much on selling to your organization as prior generations of vendors did.

But that is turning out to be a good thing. Software vendors that have a lower cost of sales can also deliver lower-cost solutions to their customers. Moreover, today's software vendors take advantage of webinar, telecommunication, video, Internet and other technological innovations to make the software sale and demonstration experience better.

## PSA EVALUATION GUIDE

Today, vendors frequently place user videos, software demonstrations and replays of demonstrative webinars on their website for software buyers to peruse at their own leisure. As a result, each member of your selection team can perform much of the selection effort, pre-shortlist, at home, at all hours and independently.

The days of tying up each vendor for days on end at your organization are fading away. The selection team should embrace the shopping and education tools vendors make available online to make your selection process more efficient, effective and responsive.

### Step One – Getting Very Familiar

Software vendors today display a tremendous amount of information regarding their products available on the Internet. Some of these materials include:

- **Role-based (e.g., project leader) videos.** These are often 3-5 minute videos showing how a particular user would interact with and get value from the software. These are especially useful in helping users visualize the new solution and to verify that critical core functionality is already present in the application.
- **Pre-recorded webinars.** These are longer format video productions that often run up to one hour in length. Webinars usually cover a specific issue (e.g., project tracking) or process area (e.g., expense reimbursement) in detail. Webinars often include a mix of presentations, voiceover, and sometimes, live video. As with role-based videos, webinars can provide insights into the product's functionality, its completeness and its look and feel.
- **Case studies.** Case studies document the implementation and/or experience that specific companies have gained through utilization of the solution. Case studies are often delivered in PDF documents that can be downloaded from the vendor's website. Prospective buyers will find case studies of interest as they provide clues as to the ROI others have received. Case studies also highlight a product's ability to solve some particularly onerous business problems.
- **Product guides.** Product guides often contain the most detailed information regarding specific product functions and features. Some product guides also provide insight into the solution's applicability to specific verticals.
- **Technical specification sheets.** Tech sheets are instrumental in understanding technical architecture, extensibility tools, Platform-as-a-Service components, ecosystem characteristics and more.

Your selection team should amass and review all of this information prior to any direct vendor contact. From this information alone, the selection team should be able to eliminate several long list vendors from further consideration.

## Step Two – Consider a Trial

Some software vendors have a trial solution option that your selection team should take advantage of whenever possible. The key here is that not all vendors offer this. Why? Unlike an inexpensive functionally limited application that anyone may download to their mobile phone, PSA applications often require some measure of coaching to configure initially. For example, you may need to configure the software for your billing methods, time card approval process or currency requirements. If this initial configuration is done incorrectly or with the wrong parameters, the user of the trial software may come away with an incorrect perception of what the software can and cannot do. This is not necessarily a fault of the vendor but rather a realization of the power and complexity that may reside in some of the solutions.

Some vendors will only permit a trial usage of their software subject to your organization meeting certain provisos. For example, will the selection team:

- Agree to some level of training before activating the trial software?
- Complete the trial within a defined time period?
- Provide the vendor with some documented use cases or other functional/process requirement documentation prior to the launch of the trial?
- Be willing to pay some nominal fee for the use of the trial software and the prep/training time the vendor invests in your organization?

Software vendors want to see some quid pro quo from your organization before they “invest” their time and expensive pre-sales personnel in helping the selection team through the trial experience. These are expensive undertakings on their part and they need to be sure that your organization is actually a serious buyer of new PSA technology. The selection team, therefore, must be ready to prove to the vendor that it is a relevant, focused and ready buyer of this type of software. Your organization is, in effect, qualifying for the right to earn a trial usage.

Please note that some trial software may be: free, low-cost, of a limited or unlimited duration. There is no industry standard for this. The number of users may or may not be constrained. Please check into these and other details before committing to any trial period.

Also note that some vendors may provide full access to their solution’s functionality while others may offer just a “taste.” Be sure the selection team knows what they are reviewing as a highly limited version of the product may give them an incorrect perception of the solution’s true capabilities.

One last point regarding trials. Not every vendor offers them and, of those that do, they may not offer them to every prospective customer. Whether a vendor will offer a trial solution should not be a deal breaker. It may, though, put that vendor’s solution at a disadvantage when it comes to making a final selection decision.



### Step Three – Document What You Saw

While there can be significant similarities from one software product to the next, there should also be some very notable differences, too. Software selection teams can often become distracted by some of the bells and whistles present within any given package. And since selections often occur over a matter of weeks, there is often a tendency for teams to forget what they saw from one vendor's solution to the next. It is for this reason that most vendors want to be the last vendor your team will evaluate as it will be the one your team will remember the best.

Documenting what each team member saw is crucial to making an informed decision. It is not enough to simply document what one personally liked or disliked. Each team member needs to methodically review the same capabilities across multiple products and document at a minimum whether each solution possessed, satisfactorily met or exceeded their needs/expectations. Any time a particular product failed, outright, to meet expectations (or materially exceeded them); a selection team member should document exactly what they did or did not see. **THIS DOCUMENTATION SHOULD OCCUR WHILE THE PRODUCT IS BEING REVIEWED – NOT DAYS OR WEEKS LATER.**

From our vantage point at Vital Analysis, we have reviewed hundreds and hundreds of products and can attest to the difficulty in any one human being's ability to adequately recall every nuance of every product we have seen. The problem is compounded when the team that was charged with a selection decision realizes that no one maintained adequate documentation.

Failure to document each vendor's solution will likely result in:

- rework for the selection team and the vendors involved
- dissatisfaction among the team and the vendors involved
- the potential for an incorrect selection decision
- inability to defend the selection decision before the executive committee

Does the documentation effort have to be onerous? No. In fact, the selection team can often stipulate that many core functions and features are present in most packages. The documentation the team must produce should be focused around significant departures from common functionality or capabilities. Done this way, the team can avoid the generation and completion of function/ feature checklists.

## Step Four – Platform & Integration Review

Functions and features are not all that must be reviewed. A PSA software selection must, in our opinion, include a review of the Platform-as-a-Service and other technologies. In particular, the team should evaluate the:

- robustness of the platform and its technical capabilities
- ability of the platform to develop additional, complementary applications
- size of the platform ecosystem
- number of developers and integrators building on this platform
- ease with which these applications can be integrated to:
  - o other cloud applications within the platform ecosystem
  - o other non-vendor cloud applications
  - o mobile devices on-premises solutions
  - o analytic, business intelligence and other data-driven technologies
  - o social media
  - o collaboration technologies
  - o and more

This exercise can be quite telling as the selection team may encounter products that:

- have no PaaS
- have little or no third-party products in their PaaS ecosystem
- may be difficult to integrate with third-party cloud or on-premises applications
- integrate to a specific social media tool but not in an easy to extend manner
- etc.

Reviewing the technical platform and the integration opportunities available under each solution may produce some of the greatest differentiation the selection team will encounter. It is for this reason that we strongly advise readers to undertake this step and give it serious evaluation time and consideration.

## Step Five – Call in the Vendors

After the selection team has completed the first four steps, they are ready to engage directly with the software vendor. Be prepared for some interesting activity at this juncture.

First of all, be prepared that many of your interactions with the vendor will occur on teleconferences, webinars and other collaborative media. As stated previously, modern software vendors will utilize every technology possible to respond to deals in a more virtual aspect. Unless your organization is significantly large in size and scope and presents an outsized revenue opportunity for the vendor, your organization will likely deal with the vendor in a virtual manner throughout most, if not all, of the sales process.

One of the first things the selection team and the vendor must do is clarify their understanding of the product's capabilities as well as those of its PaaS. Be sure to share with the vendor the team's assessment of their product's strengths and weaknesses. Some of their assumptions regarding the vendor's product could be based on the viewing of obsolete information or simply due to a lack of information involving critical needs that your organization has.

Once the selection team has corrected this information for all vendors, they should make any adjustments to the short list and move the selection forward.

At this stage, the selection team should notify each vendor of the organization's most complex, thorny or difficult business problems and process issues. Vendors should be given a few days to contemplate solutions for these and be prepared to provide an Internet-based demonstration of how these issues will be resolved.

The selection team needs to take copious notes for all of these vendor solution suggestions. At the end of each proposed solution, one selection team member should play back their understanding of the solution to the vendor to ensure it has been correctly recorded. This information will be especially important in:

- guiding any future implementation teams
- estimating the work effort required for the implementation
- assessing the solution's impact on process owners and their organization

While the selection team is trying to focus on these critical business problems, some software sales professionals will try to turn the demonstrations to other matters. These sales professionals know that their product possesses some capabilities or characteristics that are particularly eye-catching and appealing. We believe that any selection team should dedicate a fixed amount of time where each vendor can showcase some material aspects of their products that they wish to highlight. Sometimes, these vendors can surface some new, hidden capabilities few knew of, yet could result in adding significant value to the buying organization.

## **PSA EVALUATION GUIDE**

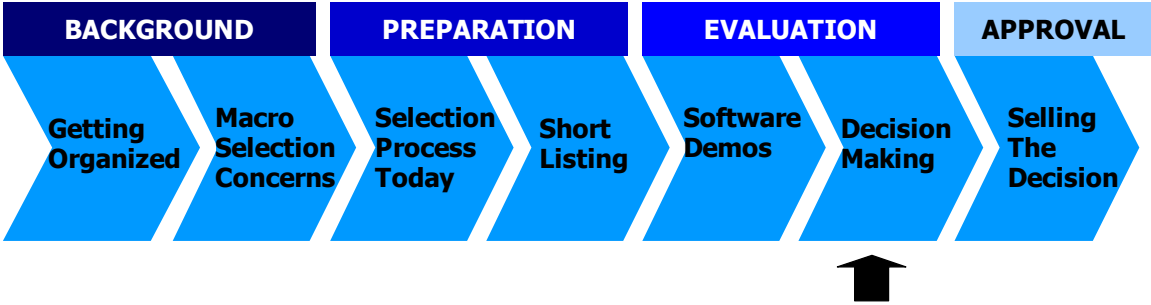
Do not, however, allow any vendor to take over the selection process. Your selection team must retain control of the process, the criteria and the decision-making efforts if it is to choose wisely and pick a product that lasts for years to come. Recognize that some software sales professionals have a certain flow with which they like to demonstrate their product. While that is understandable, it is not your responsibility to let them take over the process and determine what your team will or will not see.

Be sure that the selection team allocates sufficient time with each vendor to cover all of the applications and functional concerns the team has highlighted. Budgeting time wisely is one of the hardest tasks for the selection team as they must balance the time constraints of team members with vendors. One of the most important activities is to decide which topics all team members must attend as schedules may never allow all members to be present for all aspects of each vendor's responses.

As much as possible, ensure that all vendors follow the same schedule and cover the same topics/issues of concern. By doing so, the selection team puts all vendors on an equal footing and provides the selection team with an enhanced ability to make apples to apples comparisons of the short list solutions.

Section  
**7**

# Decision Making



## The Decision

At this juncture, the selection team has evaluated a significant number of PSA solutions. They have winnowed down the list of vendors to a short list and have compiled an impressive amount of documentation about the solutions and technical platforms within each. The team has also been in touch with individual vendors on the short list to gain additional clarity around the products and their ability (or lack thereof) to solve critical process and business issues for the organization.

Now the selection team must make an informed decision - a decision that will likely bind the company to the vendor for many years.

## The Problem in Deciding

Human beings 'know' what they do and do not like. Almost from the beginning, members of the selection team will develop preferences for the provider they would like to see win the deal. While these sentiments are natural, each member of the selection process must be open to the possibility of using any of the shortlisted providers. If not, they will try to force all discussion, all scoring, etc. to favor the provider they already 'like.' Worse, vendors will pick up on these obvious preferences. A vendor that believes they have already won the deal, generally, will not negotiate much, if at all.

Process review and business issue checklists (and other documents) that can be weighted and scored, are particularly subject to manipulation by those pushing a personal liking for one provider. Your selection team needs to recognize this possibility, identify and deal with individuals who are knowingly or unknowingly trying to influence a decision to one provider.

## PSA EVALUATION GUIDE

Scenarios, usually, make it easier to see the pre-delivered elegance of some solutions and the kludge inherent in others. While scenarios don't necessarily lend themselves well to a numeric score, users, subject matter experts and others often have strong positive or negative reactions to specific solutions. Listen to this feedback carefully as this well could be a predictor of success or failure in the implementation of the chosen PSA solution.

Financial analysis of the terms of one provider's deal to another is often predicated on many assumptions that can vary from provider to provider. The selection team must endeavor to make these competing arrangements as consistent as possible to really understand how close or how far apart the providers are from each other. The selection team's analysis should carefully consider the effect of the following on the annual cost of the deal to your organization:

- changes in transaction volumes
- step change charges (additional fees due whenever your organization crosses certain thresholds)
- utilization of third-party add-on enabling technologies
- usage of specific services (e.g., mobile support, business intelligence, in-memory analytics, etc.)

At no point during these reviews should any provider be advised of their status. Only after the steering committee (and the board, if warranted) has approved the shortlist, should all providers be notified. Be prepared to tell, specifically, why excluded providers were eliminated.

### Reference Checks

Reference checks should be undertaken in two phases. First, the project team should review all public case studies, articles, blog posts, etc. by existing customers of each shortlisted product. This external review should aid in bringing to the surface any potential issues that will require follow-up with the vendor.

Once the team has identified the likely finalist (or in a few cases, the finalists), then a deeper reference check is warranted.

This deeper reference check entails very detailed due diligence. At the end of this step, the selection team should know everything about the financial underpinnings of the finalist provider, their treatment of other customers, their reputation, the quality of their management team, etc.

A finalist vendor should provide the selection team a list of reference customers. All of these should be contacted by the selection team as part of the reference checking process. However, a review of literature, websites, etc. should also indicate other companies that are using this software. We strongly advise that the selection team utilize whatever other contacts it may have to reach out to some of these other customers to determine their experiences with the product. The power of certain professional social networks (e.g., LinkedIn) may be instrumental in identifying appropriate contacts for the team to use in conducting these additional reference checks.

## PSA EVALUATION GUIDE

We would also advise selection teams to carefully review the reference customers as some may be utilizing older versions of a vendor's product. In particular, customers using single tenant, hosted on-premises or on-premises only versions of the vendor's product may make for poor comparables in the reference checking effort.

Don't overlook the Platform-as-a-Service and its customers. Some PaaS environments post customer reviews. You may also find individual reviews for other, add-on applications that may work with the PSA software under consideration. Evaluate the entirety of the application, its PaaS and its ecosystem.

Each member of the core selection team should participate in the reference checking effort. The selection team must formulate a position on each provider regarding subjects like:

- Ethical behavior
- Litigious behavior towards clients
- Corporate culture
- Quality and commitment to developing intellectual property
- Commitment to PSA
- Thought leadership in PSA
- Quality of relationships with clients
- Attitude and professionalism of their people
- Track record of utilizing continuous improvement techniques to improve customer outcomes
- Holding the line on price increases
- Global PSA capabilities & global support
- Signs of financial distress

The core selection team should decide whether one or more providers should be discarded from the process. If a provider has questionable references, they probably should be removed from the selection immediately as there is probably no chance of your organization working with a long term partner like this. If the selection team eliminates all but one provider, they remove all of their negotiating leverage. So, make sure the team understands which of these reference risks they can and cannot live without.

One final note regarding reference checks: some software vendors are often eager to provide negative references of their competition to your selection team. Sometimes, these include customers of one firm who have switched away from one cloud solution to another. While we sometimes find some fascinating, if not titillating, back stories involved in these "references", we generally do not find

them to be, on the whole, terribly helpful. Instead, we reiterate our advice above that the selection team should find, on its own, additional references that they personally check out.

## **Contract Issues**

Any software selection will involve contract issues. Cloud software selections introduce additional issues that your organization may have little or no experience with. The most notable of these include:

- service level agreement
- exit strategy (what happens to your data if you do not renew)
- liability issues
- performance requirements

**SLA (Service Level Agreement)** – This document spells out the level of service and the availability of the solution to your organization and its users. More specifically, this document identifies issues such as:

- hours that the product may be unavailable due to system upgrades
- how your organization can sandbox potential new releases for early testing
- whether your organization can elect to not utilize upcoming new features and functions
- how frequently new releases will arrive and what advance testing time your organization has with each
- how many concurrent users can access the system
- how specific services (e.g., user training, troubleshooting, etc.) will be priced
- what is an acceptable response time
- how certain debugging problems will be researched and possibly billed (e.g., what if a problem turns out to be with your organization's router or Internet service provider?)
- who are the principal contacts within each organization
- how will issues be escalated

**Exit Strategy** – Different solutions have different terms. Some products are licensed month-to-month. However, annual or longer terms are more common. In general, when a customer does not renew, their usage of the system ends. So, too, does their access to their data.



## PSA EVALUATION GUIDE

Every firm should plan for the end of their usage term via an exit strategy. This is the pre-nuptial agreement for cloud deals. These cover such contingencies as:

- exit required because of merger or divestiture involving the customer
- exit required because of organization failure or reorganization
- exit required because one party wishes to terminate (for cause or for other reasons)
- exit required because of a business failure (e.g., bankruptcy) of either party or of a related third-party (e.g., a third-party failover data center provider)

For vendors with one-year or shorter standard terms, the customer is often free to drop the service at any time. The customer will, of course, be required to pay for the unused portion of the term. If your organization is considering a longer term, be sure to craft how the unused term will be billed.

Every PSA selection team must plan an exit strategy from a deal. This strategy must identify a timeframe for a decoupling, describe how data will be transferred, dictate obligations of the solution provider to continue to perform during the cutover, and document other transition matters. The importance of this task cannot be overstated. The terms, conditions, costs, fees, procedures, ownership rights and more need to be included in the initial contract and other communications with the shortlisted providers.

**Liability Issues** – Some buyers of cloud software solutions have an expectation that the cloud software provider will indemnify their organization against any and all losses related to data breaches to the cloud solution. Vendors, understandably, resist signing such unlimited liability requests as they represent a significant risk to their firm’s viability. While this may not provide solace to top executives in your organization, they should note that security hacks and breaches of data on cloud-based systems have actually been exceptionally rare. Why? Most cloud solution providers realize that their inability to protect the security of the information in their systems may result in the dissolution of their business. As a result, these entities frequently undergo rigorous security audits (e.g., SAS 70 part II) as well as implement other security procedures over and above what these standards bodies require.

PSA software vendors may provide documentation regarding their most recent security audits. However, do not be surprised if they do not permit your organization access to their physical cloud data center. We have heard of few instances where prospective customers have been given access to these facilities. Access to failover data centers is even rarer still.

The selection team should check with their external auditors with regard to their need to audit these facilities as part of their annual audit process. These concerns need to be brought up before any contract is signed or selection decision is made. Likewise, the selection team should reach out to their internal audit group for guidance on this matter as well.

**Performance Expectations** – These metrics identify the levels of expected customer service, quality, efficiency and effectiveness desired by your organization, the user of these cloud processes. These metrics can be especially difficult to measure/quantify. While the selection team needs to avoid

## PSA EVALUATION GUIDE

subjective measures, the solution provider needs to know how the team will evaluate their performance and when your organization may exercise an exit option described in the preceding paragraphs.

Your organization will also want contract clarity around:

- systems outages
- access to systems and data for auditors, regulators and other third-parties
- error resolution
- dispute resolution
- process improvements
- etc.

### Decision Process

Most every organization has some mechanism for making important business decisions. Selecting a new core PSA system will generally have implications to users throughout the entity. As such, it is not a decision to be entered into lightly.

The selection team should exercise rigor in documenting its approach and its decision. We believe that hard facts and economic data should be the first set of decision items considered by the team. These items include:

- the degree with which each solution fits the business needs of the organization
- the degree with which each solution could be implemented with few or no tailoring or modification needs
- the robustness of the platform ecosystem for each solution
- the ease with which each solution could integrate with other applications and technologies that the organization uses or may soon use
- the cost of each solution and an estimate for the implementation cost of each
- the ability of each solution to improve organization and work processes, business efficiencies and productivity
- the ability of each solution to free up IT resources to work on more strategic projects

## **PSA EVALUATION GUIDE**

- the ability of each solution to adapt to an ever-changing and more rapidly changing business environment
- the quality of the references each vendor possesses

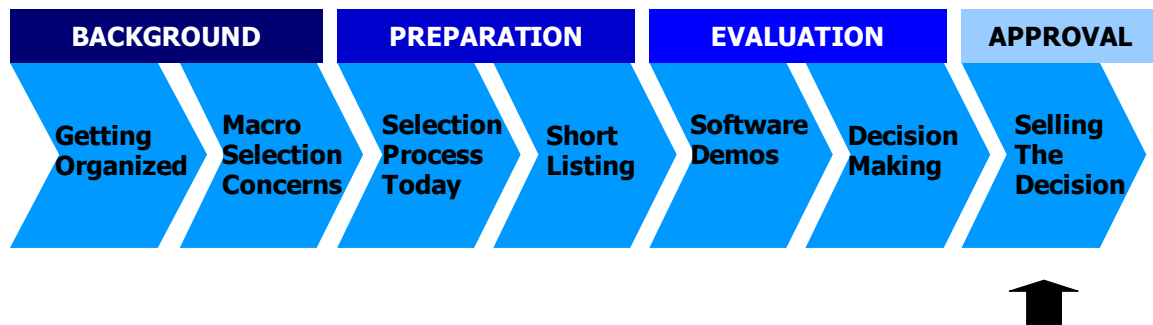
Only then, and only in a tiebreaker, should the team consider more soft side issues like:

- Do we prefer one vendor over another?
- Did one vendor come across as more of a business partner than another? (But, watch out, as this could be a sales tactic and not a genuine vendor characteristic.)

## Section

## 8

## Selling the Decision



### Presenting Your Findings

At this point, the selection team has collected a lot of information, shortlisted vendors, listened to numerous presentations, sat through solution demonstrations, contacted reference customers, and maybe, visited the solution providers' home offices. The selection team knows what the right solution is and they are ready to move on this. Or are they?

Before the team contacts any vendor to negotiate terms, the selection team will need to sell this decision to a number of people in your organization first. They will need to sign off on the selection team's choice. The best way to do this is to organize the selection materials and prepare a great presentation: a presentation that should work with the Steering Committee, the Executive Committee and various groups of users.

How is this accomplished? It shouldn't be that tough if the selection team followed the steps in the previous sections of this guide.

We've identified the core components the team will need in an internal presentation regarding this PSA solution selection. This presentation will need to build a compelling case for change and show a logical, well-thought out approach to making a wise solution decision.

## Checklist: Contents of a Software Decision Presentation

- Restatement of the project charter and key business strategies and concerns that the new solution should address.
- The selection team organization chart identifying key participants (e.g., core selection team, process experts, steering committee, etc.) and their role in the selection process.
- Summary of the selection team's assessment including vendor risk tolerance factors, support for key processes, desired improvement levels, and key technology criteria that must be supported by any solution.
- The category or type of solution desired; the preferred deployment model (e.g., multi-tenant SaaS) with explanations.
- Current assessment of existing service processes (i.e., efficiency and effectiveness measures, quartile assessments, quality metrics, etc.) and the desired level of process improvements needed.
- Expected value or return on investment to be delivered by a new PSA solution.
- The comprehensive list of vendors that were considered and the rationale behind why those providers were short-listed.
- Results of reference checks with short-listed vendors.
- List of process scenarios and how each short-listed provider fared with each.
- Additional results from vendor visits, security tests, pilot programs or preliminary discovery sessions (optional).
- The selection team's decision matrix.
- Key contractual terms and conditions your organization requires.
- Next steps.

If you think you've got everyone on board with the decision and have constructed the right deal terms and economics, then you're ready to move from solution selection to implementation.

Good Luck!

## Appendix

### About Vital Analysis



Vital Analysis is a very different kind of technology research organization. We are the intersection set where exceptional technology market knowledge meets the executive suite. Where other 'analysts' replay vendor press releases, we give you the:

- impact new technologies will or won't have on your business
- reasons why you should or shouldn't care about specific emerging solutions
- business justifications why you may or may not want specific solutions

Vital Analysis was carved out of TechVentive, Inc. in 2007 as a new, but complementary business. As designed, Vital Analysis is the publishing, research and analytical arm of that company.

Our reach, like our blog readership, is truly global. We've consulted with top technology executives in Australia, Brazil, Canada, the United Kingdom and the United States. We've been briefed by technology providers from virtually every corner of the planet.

### About the Author

Brian Sommer is the CEO of TechVentive, Inc. - a market-strategy and content firm. Brian closely follows what C-level executives think, feel and need. Brian also publishes a blog on the intersection of application software and professional services (<http://blogs.zdnet.com/sommer/>). He welcomes your thoughts and invites you to contact him at [brian@vitalanalysis.com](mailto:brian@vitalanalysis.com).

Reproduction of this publication in any form without prior written approval is forbidden. The information in this report has been obtained from sources believed to be reliable. TechVentive, Inc. disclaims all warranties as to the accuracy, completeness, or adequacy of such information and shall have no liability for errors, omissions, or inadequacies in the information contained herein or for interpretations thereof. The reader assumes sole responsibility for the selection of these materials to achieve its intended result. The opinions expressed herein are subject to change without notice. To purchase reprints of this document or to quote passages within, please email: [contact@techventive.net](mailto:contact@techventive.net).