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Introduction: Why should you read the “Project Service Automation (PSA) Software Buyer’s Guide”?  

Robust and repeatable delivery of successful projects is essential to a company maximizing profits while sustaining growth and strong relationships with its customers. However, managing projects successfully to deliver services is often the result of people working harder and faster rather than smarter. Companies need the right management mindset and appropriate technologies to execute successful work delivery.

This is where modern project management software comes in.

How do you get started with project management software or project service automation (PSA) software? This guide answers the questions you have about this topic, discusses the types of work you should consider as projects, defines the different project types, delves into the most common tools/methods companies use to manage projects – and reveals why most of today’s approaches fail.

With the recognized need to improve, the guide also addresses the right tools and approaches to managing projects better, focusing on the benefits of integrated solutions acting as a single system to improve execution, profitability, and the management of every project in a repeatable manner.

Finally, the guide will help you prepare for such an initiative by highlighting the business aspects you need to consider as you target improvements, with a particular focus on determining your software requirements and how to evaluate potential products, solutions, and vendors.

One question that often comes up is “Why the need for projects at all?” In other words, you assign work to your staff in some manner and then deliver the services required. Ultimately, those services end up on an invoice if it’s billable work or in the job cost or general ledger module of your accounting system if only for cost tracking. But here’s the problem with a “services but no projects” approach: there’s no way to put seemingly unrelated work into ‘buckets’ that make analysis possible and meaningful.
Let’s assume you deliver different types or categories of work, maybe in different industries across multiple states. Or something similar. If so, how do you aggregate data from many customers to tell you which industry projects perform best by state? Or by work type or category? Without categorized buckets of data elements, you have no way to understand your performance as data slices. Perhaps your accounting system’s general ledger module was created with a very thoughtful and pre-planned design that can give you some of the details – when someone has time to create and run some reports, that is.

In its simplest form, a project coded with a ‘Type’ value,\( x \) for example, would let you analyze performance across all projects with that same Type value. And, with an industry designation and the project state identified by the customer record (a reason to use a CRM system to deliver projects, but we’ll get to that later), it’s impossible to predict the slices you’ll want to look at, let alone have the time to build reports to do so. This ‘bucket’ approach extends to the types of tasks being delivered and other elements that aren’t captured with a simple service record with time spent and some notes.
When you think about making improvements to your company’s project management methods, you must first arrive at the definition of what a project is in your business. From there, you must identify the kinds of work you perform and the data you must understand to improve your work.

In this regard, there are three major categories of projects:

- Internal (for your own business) projects
- Billable external (customer) projects
- Non-billable and fixed-fee external projects where costs need to be monitored

For all three project types, the core elements are essentially the same, as are, at a minimum, the tasks types/categories to be performed and the staff or contractors who will deliver the tasks. A good PSA system also allows you to track time, schedule work, produce accurate data for accounting purposes, provide reporting mechanisms, and more.

**Internal projects**

An “internal” project is work performed for your company’s purposes rather than for a customer.

Internal projects involve tracking the costs of personnel and out-of-pocket expenses. Because you’re performing them for your company, there are no cost markups (but possibly some burden markups) and no calculations necessary for revenue, as there is no revenue. There is a wide range of projects you can consider internal, such as preparing for a tradeshow event that requires staff to spend salaried time preparing artwork, ordering carpeting, etc.

What about product development that will ultimately be purchased, such as a software application? Since the development isn’t for one particular customer, the costs have no direct tie to the ongoing development costs and are undertaken at your own risk until sales begin. If you manufacture multiple products, you’ll want to track time investments in different types of work (development, Q&A, documentation, etc.) in the aggregate as well as by product. Without a project and linked tasks, that’s just not possible.
External projects

From a project control standpoint, external projects for customers are typically more complex than internal projects. To deliver external projects successfully, you must deliver the tasks within quoted budgets and timeframes to make the customer happy and have predictable costs so you can generate profits. Now we’ve involved variable costs (salaries and contractors), with revenues that may vary based on type of work, location, consultant skill sets, and more.

While there are most commonly two kinds of billable external projects — “fixed-fee” and “time-and-materials (T&M)” — these two types come in multiple flavors and combinations. Fixed-fee projects may include fixed-fee work in some phases even while some agreed T&M activities for as-yet-unknown work or travel time are being performed. In addition, those T&M tasks could be at different billing rates, which may need to vary by customer. (Other work deliverables may not be billable at all, for reasons such as goodwill or as part of winning the deal in the sales opportunity, therefore, the sales opportunity should be linked to the project). However, in all cases, tracking costs based on the staff person or subcontractor delivering the work must be managed.

A common factor that makes managing external projects more complex is the incorporation of necessary internal project management or oversight requirements where the staff time can’t be billed even though the overall project is billable.

For example, if you’re truly “managing” a project, there are always some ongoing ‘behind-the-scenes’ non-billable costs. Time approvals, calls, emails, and meetings may be overhead you can’t bill (or you’ve factored it into your pricing) but knowing how much time, and therefore staff cost, has actually been invested could make your heart stop. It’s an even more important number to know when the project is a very large one and that consumption of time may affect delivery schedules. And what you’ll learn by understanding those costs factors into you next quote for a similar project.
External projects often accumulate “change orders” during delivery – some element of the project has changed, so the quantity of work originally proposed must be re-evaluated, perhaps reworked into various schedules, and then requoted for approval. That work itself takes time even beyond the resulting additional time for the change order work. Are you tracking that? All these situations could happen multiple times during the same project, and if all aren’t tracked and managed, you’ll be bleeding costs you can’t see clearly.

Further, external projects often have out-of-pocket expenses (airfare, travel, mileage, parking, meals, etc.). Do you just let them go or make guesses because they’ve always been difficult to track, let alone manage? Where are you building up history to know for sure on the next quote? Both the costs and revenue (if you can bill for some of that) add up every day as the project proceeds and affect the project’s profitability. Why not control it? Maybe you have equipment rentals or materials. Is that being managed in one or two additional applications that have no direct link and impact on project control, success, and managed profitability?

Lastly, expenses from subcontractors are even more complex because they could be T&M or fixed-fee from the vendor as well as billable or non-billable based on those costs. (When it’s a fixed-fee vendor cost, how does your accounting department match the vendor’s invoice to the agreed-upon price before paying the invoice?) Does that waste two people’s time with a phone call or email to verify the amounts with a staffer in the project department or a location in a different time zone that takes three attempts to connect?

Let’s also note that not one topic discussed thus far can be done with a stand-alone time and billing tool, or even by the well-respected Microsoft Project, which deals only with scheduling and progress of tasks and resources. Expenses, time records, vendor invoices, and more don’t even exist in MS Project. We’ll cover that below.

With all the additional project elements involved and the exceptions that may arise from them, it becomes clear that external projects are far more complex than internal ones, requiring more management and oversight.
Companies today use a wide variety of tools and software to manage their projects, reflecting the numerous approaches to managing work that abound. Most products weren’t designed for complete and robust project management that understands how the projects are just one part of the overall business; nevertheless, companies force fit what’s available into their operations. The search for the “best” tool is overwhelming, and there’s a point in time the selection committee simply throws in the towel and accepts “the best fit they can find” – which isn’t the same as “the best fit.” That poor fit then leads to unexpected overall company issues that adversely affect company-wide success (which we’ll delve into in the next section).

Let’s take a look at the most commonly used tools and software.
Spreadsheets

Spreadsheets are the obvious tool of choice for companies trying to manage work delivery. Most companies already own a spreadsheet product and most people know how to use at least the basic functions. So the tool is right at hand, training and costs are minimal, and they're powerful when used for the correct purpose. You can understand the appeal.

Unfortunately, spreadsheets are single documents. They lack visibility across many users and minimize the ability to share the data and collaborate. Project management without visibility is not project management at all. Yes, using spreadsheets allows each project contributor to track his/her own activities and expenses, but there’s little to no functionality to share information or documents, gain visibility or consolidate data (such as the overall progress of a group’s work), get insights into time spent performing deliverable tasks, or calculate the associated costs and expenses incurred when performing those tasks, or link assets and materials.

Additionally, there’s no concept of workflow and automated information sharing between critical data when housed in individual spreadsheets, which makes project “management” impossible without manual consolidation after receipt by management. Spreadsheets must be more than stand-alone documents to be useful, including conversion into an invoice of activities if it’s billable. As they are not, and cannot, become consolidated documents on their own, say hello to re-typing.

What happens when you have poor visibility?

If your project teams don’t know the score, they don’t know if they’re ahead of or behind schedule, costs, task completion, specs, and more. Could a professional baseball team play without a scoreboard?

No, so what happens is that you:

- Anger customers (who then don’t pay) by going over budget
- Lose money and not know it in time to make an impact
- “Pad” quotes to cover unknowns, leading to lost sales
- Slow down payments & reimbursements due to inaccurate payroll records
- Require costly, on-site audits for verification
- Lack adherence to contracted obligations and dates
- Miscommunications in scheduling resources
Scheduling tools

The most common tool people use to perform project scheduling is Microsoft Outlook, even though Outlook doesn’t lend itself to managing task-oriented buckets of work and scheduling them to the most appropriate individual (by skill). Like spreadsheets, Outlook is convenient and often part of the software tools a company already owns – but managing project schedules with a tool designed for contact records rather than company records (not a problem if your business sells to individuals rather than companies) quickly becomes unmanageable. Even if you provide work to individuals, how do you connect the tasks and task schedules? You’re trying to do a job with a tool built for tracking contact schedules, not company schedules. Yes, there are Outlook-based systems for working with companies, but they’re not designed to share the collected information with coworkers or manage cost and revenue schedules among different customers.

Collaboration tools like Asana and BaseCamp help companies understand the project tasks that need to be done and what each one’s status is. That’s helpful, but there’s so much missing and no way to add capabilities without connecting it to yet another tool (which gets confusing, unwieldy, and expensive). Without correlating tasks to other critical project data, you’re flying blind with no functionality for correlating costs to work performed or applying analysis across multiple facets of the project to gain a true picture of how the project is fairing.

You may know that one project team member delivered an advertisement video to the client, for example, and that another team member delivered the video’s landing page on the client’s website, and that the client offered feedback on both. But how has the project been managed to control the cost of potential re-work? Will some costs need to be modified so the deliverables meet the requirements or changes per the client’s feedback? Can you look at all the change orders in one place? On a moment’s notice, can you total the hours spent? And the costs? Does one task raise an additional task item, or do you need to re-negotiate the contract based on your analysis?

Collaboration tools simply cannot provide such deep or broad context. Maybe that’s good enough for your business today, but do you plan to grow? Do you want to choose and invest in a new system in the future, all over again?
Microsoft Project

We’ve been holding this one in our back pocket. “What about Microsoft Project? People love that, don’t they?” you ask. It’s true. Microsoft Project is really, really good at what it does – BUT it only does two things: it manages people and it manages tasks. And it does those, as we said, very well; using Microsoft Project will give you a good handle on the work that needs to be done, when it needs to be done, and managing the people around that work based on their availability, capacity, and skills.

For all its power, however, Microsoft Project has serious project management gaps. It doesn’t manage or incorporate any of the following:

- Time records entered by a user
- Expense records and receipt attachments
- User self-entry of anything – only by a PM (re-typing)
- Document attachments
- Issues tracking and control and assignment
- Work alerts and email communications history

Sorry, there’s not enough room to list more of what Microsoft Project doesn’t do!

Microsoft Project does a great job allowing a single project manager to manage multiple projects at once being managed by that person. What it doesn’t allow is sharing that information – and the related dependencies of resources, schedules, materials, equipment, people, and more – with another PM’s group of projects. Again, that’s a single, standalone document that can’t be shared with other project managers. The lack of cross-manager sharing and visibility becomes an issue around continuous learning because effective services organizations and project management teams ensure that they continuously share best practices across projects to improve their performance as time passes. That is simply not possible when relying on Microsoft Project. You can have 15 different managers running multiple projects simultaneously, all following unique method plans that don’t offer help or insights to each other.
ERPs with add-on modules for project management

Add-on modules built for ERP products have come into the market more recently in an attempt to add time and expense tracking functionality. It seems to make sense, given the ERP system can hold and report on a wide range of data, but when services staff enters data directly into an ERP, the individual entering the data rarely has the same concerns about accuracy that an individual in finance does.

Let me summarize it this way: “garbage in = garbage out.” Let’s see why with an example of time entry and what happens after the time is entered.

Let’s start with the mobile or web entry of my time. From my mobile, I enter my time entry into the ERP system. As it happens, I accidentally record it to the wrong project or task; by doing so, the billing rate, cost, or other values may be incorrect, requiring a review and monitoring. But the data is already in the ERP, the most sensitive and important system in the company. In our case, the fact that the work was done on a Sunday and should be billed at time-and-a-half also wasn’t noted, neither was my that my skill Certification should have been charged at a higher rate. A manager reviewing my time records with no reference to this information fails to achieve the proper result – at least not without depending on another human or system to identify those factors during the review.

That situation, with many others, means the data in the company’s ERP system is inaccurate until it’s corrected. Hopefully the manager isn’t sick or out of the office for 3 days and therefore can’t fix the errors or make decisions as to how to best portray the work that was delivered, which holds up billing. The entry of ANYTHING into an ERP system should NEVER be done by anyone other than finance staff who have a systematic, disciplined, and fastidious approach to data entry. But as the finance staff is likely unfamiliar with the parameters and contractual rates for that customer’s particular job, they’ll need someone els’s help. So either time is wasted, or errors aren’t addressed, or multiples people waste time on a function where only one person should be needed. An ERP system should be the black hole no one other than the finance department touches.
To deal with the above, pro-forma invoices are the method companies have resorted to for managers to review before sending a final invoice. But that creates another slowdown process in producing the invoice, sending it to the manager, waiting for the manager’s approvals/corrections, and perhaps multiple go-rounds before the invoice can be sent.

From just this one ERP issue around time recording, you can see how ERP-based project management systems slow down the billing process and don’t account for scenarios other than simple ‘quantity x rate’ calculations. Project managers must also wait for reports from the system to learn the financial health of the project, managing it reactively instead of proactively.

As the discussion of different tools and software demonstrates, project management is a multi-layered challenge that standalone solutions (even the most popular ones) simply cannot address holistically.
The need to improve project management with better technology boils down to one major issue: companies lack one single system for unifying their project data, driving project activities, and learning from existing project information – the standalone nature of today’s systems makes those things impossible.

“In most cases, time capture software that has no correlation to the cost of labor until after it’s gone through the accounting system four weeks after the project is completed has no value. That information arrives too late to affect the project. You’re so busy with your newer projects you barely have time to look at that data and figure out how to use it to improve your next project. Without having a system that shares learned information, you’re stuck trying to put this data together manually. And that means you won’t.”

As a result of this disaggregation of information and activities, companies are so busy (and frenzied) trying to deliver current projects that they have little time to heed the warning signs that they need to dramatically change how they manage projects.

There are two warning signs that you have a major project management problem:

(1) **Warning!** You don’t know, for certain, if your project is profitable until after you deliver the work.

(2) **Warning!** You can’t pinpoint the status of all current projects in real time.

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The idea of integrating project management with CRM makes complete sense when you consider the issues of needing to manage projects better, manage across multiple projects, and learn from past work. Moreover, the unification of so much data in one place (project data and CRM data) offers the information and process unity necessary to work effectively and gain complete visibility.

360-degree view of the customer

Think about the capabilities and insights a CRM system already delivers. It provides a wealth of customer data, from the first set of discussions that kicked off the customer relationship to the final results of the marketing campaigns that attracted the customer’s attention in the first place.

Now add project deliverable information to the historical customer context and you have a complete, 360-degree view of your customer – a direct string of actionable data, beginning with the initial marketing campaign, the companies that responded to it, the projects that were delivered because of it, and the associated costs, revenue, and profits that were ultimately recognized.

One more CRM benefit

By their very nature, CRM systems encourage personalization of the data model so all demographics of your customers can be stored. Historically, this is for the benefit of salespeople to capture the important and industry-unique information needed to close a sale. CRM systems were created for salespeople for just this reason, and permit such growth and scalability – and that’s where PSA systems can take advantage of all of that information when delivering the work.

Leveraging project data for new customer projects

Project teams can quote and deliver projects more profitably when they can base their forecasts on solid evidence from past projects. Moreover, they can better manage unforeseen project ‘roadblocks’ that occur in the midst of a project’s delivery when they can reference relevant historical data from similar past projects.

For example, consider a new project that involves providing various deliverables across the United States, Canada, and Europe. The rules and regulations for paying employees, the maximum hours they can work per day or week, and which days are considered holidays vary by region. Do you want each project team to waste time calculating the best way to deliver their project using resources from different geographies? Wouldn’t it be easier if the proposal system in your CRM had access to data from similar ongoing or past projects? (This issue illustrates how an integrated PM-CRM system improves company learning, streamlines project planning, and makes you more profitable.)
The most challenging step in learning to deliver projects better is determining what you need to improve. What things should you review? What are the numbers you should try to pull together to understand the impact of different things? Where do you start if everything is a project-related process?

To tackle this, limit yourself to two major activities: a process analysis and an application rationalization analysis.

**Process analysis**

A process analysis should yield information regarding the different processes you need and the tools used to perform those processes. For example, you have processes for expense collection, time recording, asset tracking, tech support, and more; each of those must have a corresponding set functionality from a software tool. By laying out your processes and their associated functional tools, you’ll quickly see which tools block functionality and which will help you achieve multiple processes using the fewest number of tools.

Documenting processes and their software requirements isn’t for inexperienced employees because (as with any subject), when it comes to recognizing that a process exists or is necessary, untrained people “don’t know what they don’t know.” Therefore, we recommend engaging a process professional to document your processes. The more varied elements you have, the more you’ll need professional assistance.

**Application rationalization analysis**

Once you’ve documented your processes, you need to answer this question: “How do we do that with the fewest number of applications?” Harking back to the problem of disconnected, stand-alone systems, you need to combine as many as you can to keep data, workflows, and processes unified. Not only does this minimize manual data input, making you faster and minimizing errors, it also reduces the resources you need to support different technologies.
Most companies run into project management problems because they haven’t taken the time to step back and view the ‘big picture’ around project profitability. With not enough time in the day, when you make a change, you want to make it once and move on – which means you need to identify a solution that doesn’t limit your growth.

Project management tools that account for growth do exist in the marketplace. They incorporate broad and deep features and functions, enabling an organization to expand into different areas without upgrading or switching systems. As such, consider tools that won’t limit your project work when it comes to making an acquisition, divesting from part of the business, using different types of teams, engaging varied types of staff, etc. Certainly, most people didn’t use formulas within Excel when they first purchased Microsoft Office, but they were glad formulas were available when they finally needed them. Having a broad and deep application will provide the added benefit of unifying your project data and activities.

Assume nothing

When you’re evaluating project management software projects, dismiss assumptions – many of the project management tools being used today are in place because the people who purchased them assumed critical features and functions were included. You can avoid purchasing incomplete solutions by establishing a written set of requirements based on the processes you documented during your process analysis. Once again, we recommend leveraging a consultant who has helped implement tools at companies similar to yours; such a professional will know the functional areas to probe and save you a lot of time and headache down the road.

“The most expensive way to do something is to do it twice.”

Consultant hiring tip:

Make sure your consultant has no commission arrangements or other incentive-based relationships with software vendors in the project management industry.
Cover the basics

Make sure you cover the basics. Too often, companies hire consultants to evaluate advanced features and functions without considering the basics of how the solution will work within your infrastructure. For example, the most basic of questions: Is it compatible with your Operating System? Is it Windows, Linux, Unix, or something else? Another basic area involves the trade off between convenience and security, so you’ll have to consider whether or not you want a browser-based tool for use by internal and external people, whose server holds your data, and how easy/hard it will be to switch down the road to a different OS or security model.

Perform a trial

After eliminating product choices based on your requirements, you’ll still probably have three or four candidates remaining. Given the inexpensive nature of turning cloud applications on and off, many software vendors offer free 30-day trials of their solutions, and we highly recommend taking advantage of such a trial and focusing on your documented data and workflow requirements as you do. In this stage, you should roll up your sleeves and get into the functionality minutiae. Do you have expenses? Do you mark them up? Do you bill out the exact price of the overnight hotel or do you mark it up? Or do they eat into the cost of your sale?

If you need to consider these aspects, you need to have thought of the questions in advance. Otherwise you won’t know to ask the vendor questions like, “What if we want to mark up an expense? By dollar amount or percent? Multiple currencies? How can we take a photo of an attachment and attach it with the invoice?” etc. The answers will shine a light on the drawbacks of each potential solution.

Seek flexible architecture

You don’t have a crystal ball to see how your projects can be optimized both today and in the future. Just as CRM systems are designed to be flexible, your project management system needs flexibility in table structures, screen designs and layouts, and incorporation of data and logic. If you choose a flexible project management system and integrate it with a flexible CRM system, you’ll be positioned to manage any project in any way that becomes important in your service delivery to your clients.
Delivering successful services and projects are the core of creating delighted customers (and satisfied staff). Finding the right system for your business involves investing time in both considering and documenting your needs and matching those needs to the available solutions in the marketplace.

We hope you found this guide to be a useful starting point for your discussion and evaluation.

About TimeLinx

TimeLinx Software was started in 2001 for a very simple reason - we were tired of using 3 or 4 different systems to track our projects. TimeLinx is fully committed to delivering world-class, innovative project & service management. We’ve designed our solutions with your needs in mind - you’ll find our software cost effective, extremely powerful, flexible and scalable. Our solutions grow with your business, enabling you to start small and continue to use TimeLinx products as you expand.
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