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The ROI Of Project Portfolio Management Tools

by Craig Symons
for CIOs



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A Total Economic Impact™ (TEI) Analysis Uncovers Significant Benefits

by **Craig Symons**

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EXECUTIVE SUMMARY

Project portfolio management (PPM) discipline has remained a significant effort in organizations of all sizes. Both inside and outside of IT, leaders are turning to PPM to better capture, manage, prioritize, and align investments and resources with the hopes of increasing the amount of business value they can provide. Organizations are choosing to implement PPM software solutions to provide a tool base for this objective. Almost anyone who has looked into the return on a PPM software investment has seen massive triple-digit returns advertised by these vendors. But is it true? The answer is, “Yes — it can be.” A Total Economic Impact™ (TEI) analysis shows that a comprehensive PPM tool investment is likely to provide an ROI of more than 250%, whether delivered on-premise or via software-as-a-service (SaaS).

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WHAT IT MEANS

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NOTES & RESOURCES

Forrester interviewed and surveyed 22 vendor and user companies, including AtTask, CA, Compuware, The Gensight Group, Innotas, Planisware, Planview, and PowerSteering Software. We used this information to create an ROI model based on our TEI analysis framework.

Related Research Documents

- “[PPM Tool Selection: Look Beyond Core Functions](#)”
March 5, 2009
- “[The Essential Steps Of PPM Tool Adoption](#)”
September 29, 2008
- “[Getting Portfolio Management To Level 5 Maturity](#)”
October 31, 2007

PPM IS A GUIDING LIGHT IN TURBULENT SEAS

Leaders, especially CIOs, are struggling to understand their portfolio of project investments, and current economic conditions only intensify this need. Managing a portfolio of project investments requires up-to-date visibility into each individual project — its value, performance, and alignment with strategy. As shrinking budgets accompany a need for greater business value, executive teams are turning to PPM software for the project investment visibility they need to make the best project decisions. But with PPM tool investments that can range into the millions of dollars, technology decision-makers need to be sure that these tools actually have an impact on the bottom line.

THREE FACTORS DETERMINE THE ROI OF PPM TOOLS

It is imperative to objectively evaluate the financial impact on business when considering the adoption or avoidance of a PPM tool. How? Companies can use a simplified version of Forrester's TEI model to systematically consider:

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

Key Benefits: The Right Projects, Done Right

Organizations implementing PPM can expect several benefits from the visibility and functionality that PPM tools offer. The scale, timing, and duration of these benefits can be estimated by considering one or more key metrics and the value to the organization of improving those metrics over time (see Figure 1). Benefits include:

- **Reduction in project failure rate.** Project failure rate is the metric used to describe the percentage of projects that fail to provide value due to factors such as budget and schedule overruns, poor alignment, mismanaged requirements, or technical failures. PPM tools provide the functionality and visibility to help organizations ensure that projects have adequate and proper resources, are effectively sequenced, are tracked and managed, and are doable and well-aligned. In turn, there is a smaller chance that a project will fail to provide value. A survey and interviews with PPM tool users found that most organizations would see a project failure decrease of around 15%.
- **Reduction in successful project cost overruns.** While overruns cause many projects to fail, even projects that provide a positive return often go over budget due to poor scheduling, budget estimations, and project transparency. With capabilities that enhance change and issue management, as well as resource scheduling, PPM tools provide the visibility and functionality to help project managers keep projects closer to budget. In surveys and interviews, users of PPM tools estimated that they decreased their rate of cost overruns by approximately 10%.

- **Reduction of project throughput times.** Project throughput time is the average time it takes to complete a project. PPM tools keep projects in motion with workflows and reporting, providing managers with project insight that allows them to make decisions quickly. As a result, organizations see project duration shortening, giving resources more time to perform other value-adding activities. In cases where the project is revenue-generating, this shortened duration means quicker access to that revenue. PPM tool customers we contacted estimated that their project duration decreased by around 10%.
- **Reduction in the number of low-value projects.** Low-value projects are not aligned with strategy or have redundant goals with other projects, and therefore they erode the value of the overall project portfolio. PPM tools provide functionality, such as standardized project scorecards and business cases, that feeds the demand management process and helps decision-makers select the best projects for the organization. In addition, PPM tools track the earned value of ongoing projects and identify the underperformers. A survey and interviews of PPM tool users found that most users find that about 10% of projects are either low-value or redundant.
- **Reduction in administrative time (status reporting and facilitation).** Administrative time in this case describes the time that managers take to gather project status data and manually build reports. PPM tools capture this data and generate reports so this work doesn't have to be done manually. These managers then have more time to spend on other value-adding activities. Companies we contacted that have implemented PPM estimate that a manager's time spent on administrative duties decreases by about 25%.

Figure 1 Key Benefits Of PPM Software

Dimension	PPM helps by . . .
Reduced project failures	<ul style="list-style-type: none"> • Aligning projects with available resource capacity. • Synchronizing projects for highest impact. • Aligning projects to strategic goals. • Providing estimation tools and best-practice methodologies.
Reduced project cost overruns	<ul style="list-style-type: none"> • Aligning projects with available resource capacity. • Assigning the right skills to the right projects. • Providing workflow and visibility into project performance. • Providing estimation tools and best-practice methodologies.
Reduced project throughput times	<ul style="list-style-type: none"> • Aligning projects with available resource capacity. • Assigning the right skills to the right projects. • Providing workflow and visibility into project performance. • Providing estimation tools and best-practice methodologies.
Reduction in low-value projects	<ul style="list-style-type: none"> • Capturing planned and active projects and performance. • Providing portfolio reporting and analysis capability.
Reduction in administrative activity time	<ul style="list-style-type: none"> • Capturing active project data (e.g., status, issues, risks, and changes). • Providing automated report generation and analysis.

Key Costs: Software And Support Drive Costs

Organizations implementing PPM can expect several costs that stem from the both the software and the personnel required to support it. In the case of on-premise deployments, organizations see high software costs upfront followed by moderate support costs. In the case of SaaS deployments, organizations see lower costs from hardware and support, but software costs last the entire duration of the tool’s use (see Figure 2). PPM tool costs include:

- **Hardware.** Hardware costs encompass all hardware required to run the application, including license and maintenance fees. In SaaS deployments, there is no hardware cost. For on-premise deployments, costs may vary because vendors require different levels of hardware investment. Some organizations may repurpose existing hardware to control this cost.
- **Software.** Software pricing varies from vendor to vendor and may include the costs of individual modules, a “foundation” of basic PPM functionality, monthly subscription fees, various types of user licenses, and maintenance fees.
- **Implementation.** Implementation costs come from both the vendor and the internal organization. Internally, there is a cost of resource effort to plan and manage the implementation and its goals and to work with the vendor to design the tool to match these goals. Vendors also provide consultants to manage the process and design the tool, charging for the configuration, testing, and training as well.
- **Support.** In this evaluation, support costs represent the costs of an administrator’s time put toward this application. In addition, support also includes the time spent managing the infrastructure supporting the application.
- **Enhancement.** Enhancement costs represent the costs associated with further development of the tool and its users. This includes the time and effort to manage the rollout of major upgrades, as well as the usage of additional vendor services such as training and development sessions.

Figure 2 Key Costs Of PPM Software

Project phase	Key costs
Planning and implementation	<ul style="list-style-type: none"> • Software and licensing • Hardware • Vendor services • Internal resources
Operation	<ul style="list-style-type: none"> • Maintenance fees • Internal support • Subscription fees (SaaS)
Enhancement	<ul style="list-style-type: none"> • Internal support • Additional vendor services

Risk Analysis: Adoption And Appropriateness Of Scope Are The Greatest Risk Factors

No change — or avoidance of change — is without risk. Factoring this uncertainty into the analysis converts an optimistic, and potentially unachievable, plan into one with higher accuracy. Initial estimates can be refined by factoring in two key risks:

- **Adoption.** Vendors and end user organizations alike cite adoption as the biggest threat to PPM investment. Implementations that lack top-down support and accountability, were designed in a vacuum, or have objectives that aren't communicated to end users are likely to see a much slower time-to-value — if they attain any value at all.
- **Scope.** PPM is the amalgamation of a variety of disciplines like resource management and project management. Implementations that only plan to include some of these disciplines in the tool are, of course, not going to see value in full. The opposite is also true — as scope widens and implementations become too complicated, costly integrations and customizations tip the scales more toward the “cost” side of the equation.

CALCULATING ROI FOR ON-PREMISE AND SAAS PPM IMPLEMENTATIONS

To arrive at a quantitative assessment of the economic implications of PPM, Forrester evaluated the key drivers of benefits, costs, and risks for a hypothetical organization that is considering PPM and that:

- **Implements a unified tool in its IT organization.** Although certainly not the only place for PPM, our sample company invests in a tool to use in its IT organization — a typical entry point for PPM. A very large company, it plans to grant access in some form to up to 250 users, ranging from time-sheet users to the executives viewing reports.
- **Implements a full PPM solution.** Our sample company implements the typical capabilities found in the resource management, project management, portfolio management, demand management, financial management, reporting, and scheduling functions of the tool. These functions are native in the vendor's tool and are seamlessly integrated. All project and portfolio management activity is performed within the tool.
- **Is currently at Level 2 maturity.**¹ PPM processes are in place but are not used consistently across the IT organization. Our sample company hopes to formalize these existing processes and templates within its PPM tool. Like many large companies, our sample company currently uses mixed systems such as SharePoint and Excel to support PPM processes, making high-level visibility and analysis more difficult and time-consuming to achieve.

Company Baseline And Assumptions

For the purposes of conducting the analysis, we established a set of baseline values and assumptions, based on conversations with numerous end users and technology vendors, that can be adapted to match any individual organization. Based on our observations and numerous conversations with PPM vendors and users, we chose to use the following parameters:

- **A three-year window for analysis.** Our sample company will evaluate the costs and benefits of the tool over a three-year period. During this analysis period, the first two to four months were spent planning and implementing the solution, with the solution in use for the remaining months.
- **A set of baseline project and portfolio metrics.** To understand the return on a non-revenue-generating application, it is important to first understand the “before state.” Forrester defined a set of baseline metrics to describe our sample company’s current rates of project failure, overrun, return, etc. Forrester drew from its own experience and generally accepted sources such as The Standish Group International’s CHAOS report to guide these assumptions.²
- **A learning curve for the first phase of operation.** In the initial benefits phase, we assume that only 80% of the tool’s benefits are realized. This assumption is based on the idea that not all users will have adopted the tool, not all functionality will have been rolled out, and that best practices on tool usage have yet to emerge.

Evaluation Time Frame

This analysis assumes that the project begins on January 1 of Year 1 and continues until December 31 of Year 3. Based on reports from organizations initiating this type of project, the following phases will likely occur:

- **Planning and implementation.** This phase, typically lasting two to four months, is the period during which our sample company selects a vendor, plans the design and implementation approach, and invests in the required hardware and software.
- **Initial benefits.** This phase, lasting until the end of Year 1, is the period in which the tool is being adopted, functionality is being used, and best practices are being gathered and shared. Due to these factors, we assume that only 80% of the benefits are actually realized.
- **Ongoing benefits phase.** During this phase, which lasts until the end of our evaluation time frame, the organization sees the full benefit of the software. Users have adopted the tool and desired functionality is being applied. Best practices have been captured and the tool’s use is part of day-to-day operations.

Scenario 1: PPM Implementation With On-Premise Delivery And Cost Structure

In this scenario, our organization chooses to implement the PPM application on-premise. The company has decided that it has the resources available to host the application itself and believes that this delivery method will be less expensive in the long run. In this scenario, we assume:

- **The organization purchases one database and one application server.** The organization must purchase these servers to support the application. For the development and test environments, our sample company repurposes existing servers.
- **Database licenses are not required.** Our sample company chooses a vendor that does not require customers to purchase database licenses separately. This cost is included in the license fee for the vendor's software.
- **An internal technical team is required.** Our sample company assigns a programmer, a business analyst, and a DBA to the implementation project. This team will work with the vendor's implementation team and consultants to ensure a smooth rollout.
- **Ongoing support is required.** Our sample company will assign an application administrator, expecting that this application will take up half of this FTE's time. In addition, infrastructure personnel will be required to maintain the hardware supporting the application, with one FTE devoting approximately one-quarter of his or her time to it.
- **The company performs major updates and enhancements.** Our sample company expects to apply major upgrades to the application annually after Year 2. This requires a technical team of a business analyst, a programmer, and a DBA spending a combined total of 250 labor hours. In addition to software upgrades, our sample company plans to leverage vendor training services once every year beginning in Year 2.

Scenario 2: PPM Implementation Via SaaS Delivery And Pricing Model

In this scenario, our sample company opts to outsource the hosting and support of the PPM application. The organization chooses this simpler option to minimize upfront costs and hopes to enjoy a faster time-to-value. In this scenario, we assume:

- **Our sample company chooses the same vendor.** Many vendors offer their solution as either an on-premise or SaaS application. Our sample company enjoys the same functional benefits as an on-premise deployment but faces a different cost model.
- **The company pays a flat-rate, subscription-based price.** Our sample company chooses a vendor that charges a flat monthly rate of \$50 per user. This includes maintenance and support fees, access to all functionality, and unlimited data storage.

- **A limited internal technical team is required.** Due to the hosted model, a database administrator is not required at any point during or after implementation. Additionally, less developer time will be needed as the majority of this effort is handled by the vendor.

PPM SOFTWARE PROVIDES GREAT BENEFIT, WITH SLIGHTLY HIGHER RETURNS VIA SAAS

In our sample company, implementing a PPM solution produced an expected return of 255% and a net present value (NPV) of \$1,677,248 over three years via an on-premise deployment (see Figure 3). SaaS delivery of the application produced an expected return of 281% and an NPV of \$1,821,584, with a faster time-to-benefit (see Figure 4). Much of this success is due to the:

- **Size of the deployment.** Our sample company chose to focus the PPM deployment on the entire IT organization, rather than just one area. Thus, they expand the reach of the tool’s benefits to all possible projects and portfolios, not just a selected few.
- **Strong adoption rate.** A PPM tool that is not adopted by all levels of the affected organization will provide little to no value. Due to the large size of the deployment, our sample company put significant time and effort into communicating the value of the tool to all levels and assigning responsibility for adoption success to IT managers and executives alike.
- **Completeness of solution.** Our sample company implements the full suite of integrated PPM modules provided by the vendor, which includes the necessary functionality for project management, scheduling, resource management, demand management, portfolio management, and financial management. As a result, it sees the benefits of these modules working together seamlessly to create a full picture of project and portfolio activity.

Figure 3 Model: Total Economic Impact Analysis Summary — On-Premise Implementation

	Year 1	Year 2	Year 3	Total	Present value (PV)
Benefit	\$580,849	\$1,089,093	\$1,089,093	\$2,759,034	\$2,336,102
Cost	\$513,324	\$111,165	\$111,165	\$735,655	\$658,853
Net cash flow	\$67,525	\$977,927	\$977,927	\$2,023,379	\$1,677,248
NPV	\$1,677,248				
ROI	255%				
Payback	Within 12 months				

Figure 4 Model: Total Economic Impact Analysis Summary — SaaS Implementation

	Year 1	Year 2	Year 3	Total	Present value (PV)
Benefit	\$726,062	\$1,089,093	\$1,089,093	\$2,904,247	\$2,470,557
Cost	\$314,643	\$216,596	\$216,596	\$747,835	\$648,973
Net cash flow	\$411,419	\$872,497	\$872,497	\$2,156,412	\$1,821,584
NPV	\$1,821,584				
ROI	281%				
Payback	Within 12 months				

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Source: Forrester Research, Inc.

RECOMMENDATIONS

CONSIDER THE SAAS VERSUS ON-PREMISE ARGUMENT CAREFULLY

In our three-year window, SaaS PPM solutions are shown to provide a higher return. However, the yearly cost of a SaaS application is about \$100,000 greater than on-premise for our sample company due to the per-license subscription pricing. At some point, it may become more economical to bring the solution back in-house.³ To help guide these decisions, Forrester recommends that organizations:

- **Talk to their vendor about SaaS versus on-premise options.** Most vendors that typically offer on-premise solutions now also offer SaaS versions of their products, and vendors that typically offer SaaS can also deploy on-premise. Depending on your vendor, you may have the option to switch from one delivery method to the other to maximize your return.
- **Leverage their vendor's ROI tools.** Many vendors have their own ROI calculators that are tightly linked to their implementation approach and the tool's capabilities. Some vendors will assess your current processes and costs to create a customized ROI analysis for your organization. This can help you illustrate the cost-benefit gap between SaaS and on-premise specific to your organization.

WHAT IT MEANS

REGARDLESS OF DELIVERY MODEL, USAGE OUTSIDE OF IT PROMISES GREATER RETURNS

Whether SaaS or on-premise, PPM tools are about making sure the right projects get done, and that those projects are done right. The more projects are expensive, sensitive to market change, and linked to revenue, the more value PPM tools can provide. Some vendors have been applying similar rigor into areas like new product development for some time now and are seeing their solutions provide great returns. Vendors in the PPM space are keenly targeting deals and developing functionality to support the needs of PPM's next big markets. CIOs may see an opportunity to leverage their IT PPM vendor to enable their business peers at a discount.

SUPPLEMENTAL MATERIAL

Online Resource

The underlying spreadsheets detailing the models in Figure 3 and Figure 4 are available online.

The online versions of Figure 3 and Figure 4 are interactive tools to help our clients get a general sense of the costs and benefits they would see with a PPM tool investment.

Methodology

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

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

Companies Interviewed For This Document

AtTask	Planisware
CA	Planview
Compuware	PowerSteering Software
Innotas	The GenSight Group

ENDNOTES

- ¹ Level 2, repeatable stage: Portfolio management processes have been developed to the point that similar practices are implemented by different people across the organization; however, the expertise is typically limited to only a few individuals so inconsistencies exist. The PMO begins to expand its role to include portfolio management capabilities, although not on an enterprisewide basis. A standard business case format is introduced but not yet used by everyone. For the first time, the organization can begin to compare projects in an apples-to-apples way, improving the quality of project selection and prioritization. See the October 31, 2007, "[Getting Portfolio Management To Level 5 Maturity](#)" report.
- ² The Standish Group's CHAOS report is a widely used report on the state of project management (<http://www.standishgroup.com>).
- ³ While adoption of software-as-a-service (SaaS) has become widely accepted in CRM, usage in ERP continues to play catch-up. Consequently, firms evaluating various deployment options should consider evaluating both SaaS and traditional on-premise options beyond the pure cost tradeoffs. Depending on the business models and economic drivers, differences in business benefits, flexibility, and risk are important when comparing these deployment options. This document, the third in a series, builds on the on-premise and SaaS models of the first two reports and evaluates four scenarios using Forrester's Total Economic Impact™ (TEI) methodology for 50, 100, 250, and 500 users. See the September 20, 2006, "[Comparing The ROI Of SaaS Versus On-Premise Using Forrester's TEI™ Approach](#)" report.
- ⁴ For an in-depth discussion of TEI and the individual elements within the methodology, please see the August 4, 2008, "[The Total Economic Impact™ Methodology: A Foundation For Sound Technology Investments](#)" report.

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