December 18, 2007

The Forrester Wave™: Project Portfolio Management Tools, Q4 2007

by Lewis Cardin
for CIOs

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CA And Planview Lead, With HP, IBM, And Primavera Close Behind

by Lewis Cardin
with Alex Cullen, Marc Cecere, and Tim DeGennaro

EXECUTIVE SUMMARY

Forrester evaluated 14 leading project portfolio management (PPM) vendors across 95 criteria and found that CA and Planview established PPM leadership — thanks to their wide choice of mature features and functions. Compuware, HP, IBM, Microsoft, Oracle, Primavera, and Serena are leaders with the most complete, suite-ready PPM offering. Daptiv (formerly eProject) and SAP are Strong Performers but lack a fully developed integrated IT management offering. Artemis International Solutions and ITM-Software have more PPM vision than current capabilities, while Cardinis has a PPM suite that, while limited in scope, shows substantial promise.

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NOTES & RESOURCES

Forrester conducted questionnaire, customer reference, and demo-based evaluations in Fall 2007, and interviewed 14 vendor companies: Artemis International Solutions, CA, Cardinis, Compuware, Daptiv (formerly eProject), HP, IBM, ITM-Software, Microsoft, Oracle, Planview, Primavera, SAP, and Serena.

Related Research Documents

"The Customer View Of Project Portfolio Management Tools"
November 16, 2007

"Use Business Cases To Make PPM More Effective"
November 6, 2007

"The Forrester Wave™: Project Portfolio Management, Q1 2006"
March 13, 2006

PROJECT PORTFOLIO MANAGEMENT ENABLES OPTIMAL IT VALUE TO THE BUSINESS

Fundamentally, project portfolio management is a continuous process feedback loop by which IT management absorbs and prioritizes technology-related demand, plans and allocates financial and human resources to the investment initiatives, manages the governance-orientated collaboration with the business stakeholders, delivers expected results from the investment, and provides reporting to stakeholders for decision-making and the communication of investment status. The need for this consolidated planning and execution is evidenced by the growing number of PPM players in the marketplace, the increasing adoption of PPM by business as demonstrated by the growth in PPM licensing, and the largely positive results that are being reported by organizations that have implemented PPM tools. And why are PPM tools important to enterprises? Businesses are experiencing expanding investment demand in the midst of constrained capacity, and execs are raising the bar of delivery expectations. Meanwhile, enterprises need to deal with the paradox of increased complexity in the stewardship of their technology dollars while responding to the desire for higher transparency — the essence of what modern governance is all about.[1]

PPM Imperatives — What PPM Solutions Must Deliver

Modern portfolio management software has its roots in project management. Henry L. Gantt developed the Gantt chart in 1917 to display production tasks on a time scale. In the late 1950s, the critical path method (CPM) and the program evaluation and review technique (PERT) were in vogue. Project management software first appeared in the 1970s when large and clumsy mainframe programs made their debut, followed in 1975 by DOS-based PC software. But only in the last few years has portfolio management for projects become a visible need. Niku, Pacific Edge, and Mercury grasped the value proposition of portfolio management, developed software tools to make it work, and marketed their solutions alongside their more mature project management products to revolutionize IT decision-making. In the past couple of years, a rash of merger/acquisition fever hit — CA picked up NIKU, Mercury went to HP, Serena absorbed Pacific Edge, UMT complemented MS Project at Microsoft, Primavera acquired Pertmaster and ProSight, and Planview took in Business Engine.

This recent consolidation of the separate solution sets of standalone project management, portfolio management, and professional services automation that occurred largely in 2006 has settled down. With acquisition integration activity largely complete, those PPM vendors are focusing on enriching the breadth and depth of their product offerings while taking the wrinkles out of their blended solution offerings. The vendors who have matured their PPM product organically rather than by acquisition have faced the similar marketplace pressures to expand and deepen their product offerings. Going forward, the PPM solutions need to:

- **Accurately portray the status of investments.** Many of the shortcomings of PPM solutions are around reporting. Graphical dashboards, dynamic side-by-side comparisons of portfolios, and the ability to perform what-if analyses on the fly is the window to what is really going on with investment activity in the firm.

- **Readily enable human and financial resources allocation across the investment portfolio.** Identifying where anomalies exist in the need for and consumption of people, resources, and dollars in the portfolio is no longer enough. The presentation of workable and alternative scenarios to the user and the user's ability to simulate the results of alternative allocations saves time and, even more importantly, optimizes the results of alternative comparisons.

- **Meaningfully interact with stakeholders.** PPM is no longer the unique purview of IT. Ease of use is golden. If business execs, process managers, and business analysts need to have an IT background to use the tool, adoption will meet resistance and the value proposition of portfolio management will diminish — and even disappear along with the PPM tool itself.

- **Make the solution as intuitive as possible.** Drop-down menus and wizards earn big points with customers over templates and manual entry. Out-of-the-box functionality gets the customers up and running faster — they will customize and develop hybrids after reaching a comfort level with the software. PPM customers tell Forrester that ease of use speeds up adoption.

Additionally, vendors must tailor their offerings to reflect the fact that:

- **Integrated IT management has become a reality.** With Forrester's research showing project-related investment at 18% of overall IT spend, PPM vendors are responding to the pressure to put application portfolio management (APM) and infrastructure asset management under the same lens as project investment, thus competing for overall IT funding on a more level playing field. The driver? Businesses are expecting the cost effectiveness of MOOSE spend to improve — freeing up funds to perform more project/innovation work or to reduce overall IT spend.[2] The bonus — APM and infrastructure is visible, understood, and most importantly, there is increased support for appropriate funding. And they are no longer inside the mysterious "keep the lights on" black box drawing a largely unexplained 78% of IT budget.

- **PPM is going enterprise.** Our research shows that as PMO functions in the IT organization deliver more value around PPM, there is a growing trend to extend the PPM process across the business at large. With IT positioned to lead the expansion based on a track record of PPM success and knowledge, enterprisewide PPM capability will require solutions that are not inhibited to play in the enterprise because they are highly IT-centric.

Trends — What The Customers Of PPM Vendors Need To Do

Though some business and government IT organizations have not yet committed to PPM processes and tools to support them, most are awakening to the fact that they need to institutionalize portfolio management best practices. And though IT PMOs struggle with quantifying the value proposition — how to sell PPM to their colleagues and how to know they are ready and will be successful — Forrester's research clearly shows a rapidly growing adoption of PPM as a critical success factor for IT organizations. To play — and succeed — in the portfolio management game, PPM solution users must:

- **Seek counsel on key success factors.** For example, ensure that the business has a robust investment management process in place. Clients almost invariably tell Forrester one of two things: 1) The PPM solution is a success because the management processes were in place prior to implementation, or 2) the PPM implementation is seriously flawed because business processes were not robust before imposing the solution into their business.

- **Create implementation road maps.** Most new customers of PPM tools don't know how to plan their tool implementation. Vendors who work with their customers to design which modules, in what order, and over what time frames might well avert a disaster. Know what investment problems need to be solved and understand where the pain points are. Being able to create implementation models with key stakeholders will help them set realistic expectations — the Big Bang Theory doesn't work with PPM tools.

- **Leverage the features and functions of their PPM tools to enable governance.** Ultimately, this is where the PPM solution must shine. Clients tell Forrester that a value proposition of PPM is the improved governance process.[3] Reporting that is relevant to the agenda and informative to the attendees fosters good decision-making and problem solving — and PPM tools can enable the achievement of these desired outcomes of governance activity.

PPM EVALUATION OVERVIEW

To assess the state of the PPM market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top PPM vendors.

Evaluation Criteria

After examining past research, user need assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria (see Figure 1). We evaluated vendors against approximately 95 criteria, which we grouped into three high-level buckets:

- Current offering.

- Strategy.

- Market presence.

Figure 1 Evaluation Criteria

CURRENT OFFERING

Demand management	How well does the application process demand for new work?
Portfolio management	How well does the product support the creation of new portfolios and analysis of existing portfolios?
Project management	How well does the product support the creation of new projects and the management/tracking of existing projects?
Resource management	How well does the product support resource forecasting, allocation, and tracking?
Financial management	How well does the product support the creation and management of budgets?
Methodology	How well does the product support the creation and configuration of methodology?
Workflow	How well does the product create and handle workflow?
Reporting	How well does the product support various printing requirements?
Integrated IT management	How well positioned is the product to offer IIM?
Application technology	What types of application technology are required to implement this product?

STRATEGY

Product strategy	What is the product strategy?
Corporate strategy	What is the corporate strategy with regard to this product?
Financial resources to support strategy	Is the vendor profitable, and what is the vendor's cash flow? Does the company have sufficient revenues, profits, and cash flow to support its strategies?
Cost	What is the cost of this product?

Source: Forrester Research, Inc.

Figure 1 Evaluation Criteria (Cont.)

MARKET PRESENCE

Installed base	How large is the vendor's installed base of customers for this product and for all products?
Revenue	What is the vendor's revenue over the past four quarters?
Revenue growth	What is the vendor's year-over-year revenue growth over the past four quarters?
International presence	How much of the vendor's revenue comes from the vendor's headquarters' market?
Systems integrators	How many integrator partners have completed three or more deployments of any version of this product in the past 18 months?
Services	How strong are the vendor's implementation and training services?
Employees	How many engineers does the vendor have dedicated to this product? How big is the vendor's sales presence?
Technology partners	How strongly do technology partners support this product?

Source: Forrester Research, Inc.

Participating Vendors

Forrester included 14 vendors in the assessment: Artemis International Solutions, CA, Cardinis, Compuware, Daptiv, HP, IBM, ITM-Software, Microsoft, Oracle, Planview, Primavera, SAP, and Serena. Each of these vendors has (see Figure 2):

· Tools capable of enterprisewide (though in some cases IT-centric) deployments.

· Documented implementations across several industries/sectors.

Figure 2 Evaluated Vendors: Product Information And Selection Criteria

Vendor	Product evaluated	Product version evaluated	Version release date
Artemis	Artemis 7	7.0	July 2007
CA	Clarity PPM	8	October 2007
Cardinis	CARDINIS Suite	4.2.1	August 2007
Compuware	Changepoint	12	June 2007
Daptiv	PPM	Fall	November 2007
HP	PPM Center	7.1	June 2007
IBM	RPM	7.1	July 2007
ITM-Software	ITM PPM	3.5	April 2007
Microsoft	EPM 2007	2007	January 2007
Oracle	PeopleSoft/E-Business Suite PPM	9/12	January 2007
Planview	Enterprise	9.1	November 2007
Primavera	Evolve/ProSight	8.9/7.0	November 2007
SAP	xRPM	4.5	December 2007
Serena	Mariner	6.2	March 2007

Vendor qualification criteria

| |
|---|
| The vendor's product was generally available at the time of data collection with at least three references available for contact. |
| The tool is capable of enterprisewide (though in some cases IT-centric) deployments. |
| The tool has documented implementations across several industries/sectors. |

Source: Forrester Research, Inc.

EVALUATION ANALYSIS

The evaluation uncovered a market in which (see Figure 3):

· CA, Planview, HP, Primavera, and IBM lead the pack.

· Compuware, Oracle, Serena, and Microsoft offer competitive options.

· SAP and Daptiv lack the expected full suite of out-of-the-box offerings.

This evaluation of the PPM market is intended to be a starting point only. Readers are encouraged to view detailed product evaluations and adapt the criteria weightings to fit their individual needs through the Forrester Wave Excel-based vendor comparison tool.

Figure 3 Forrester Wave™: Project Portfolio Management Tools, Q4 '07
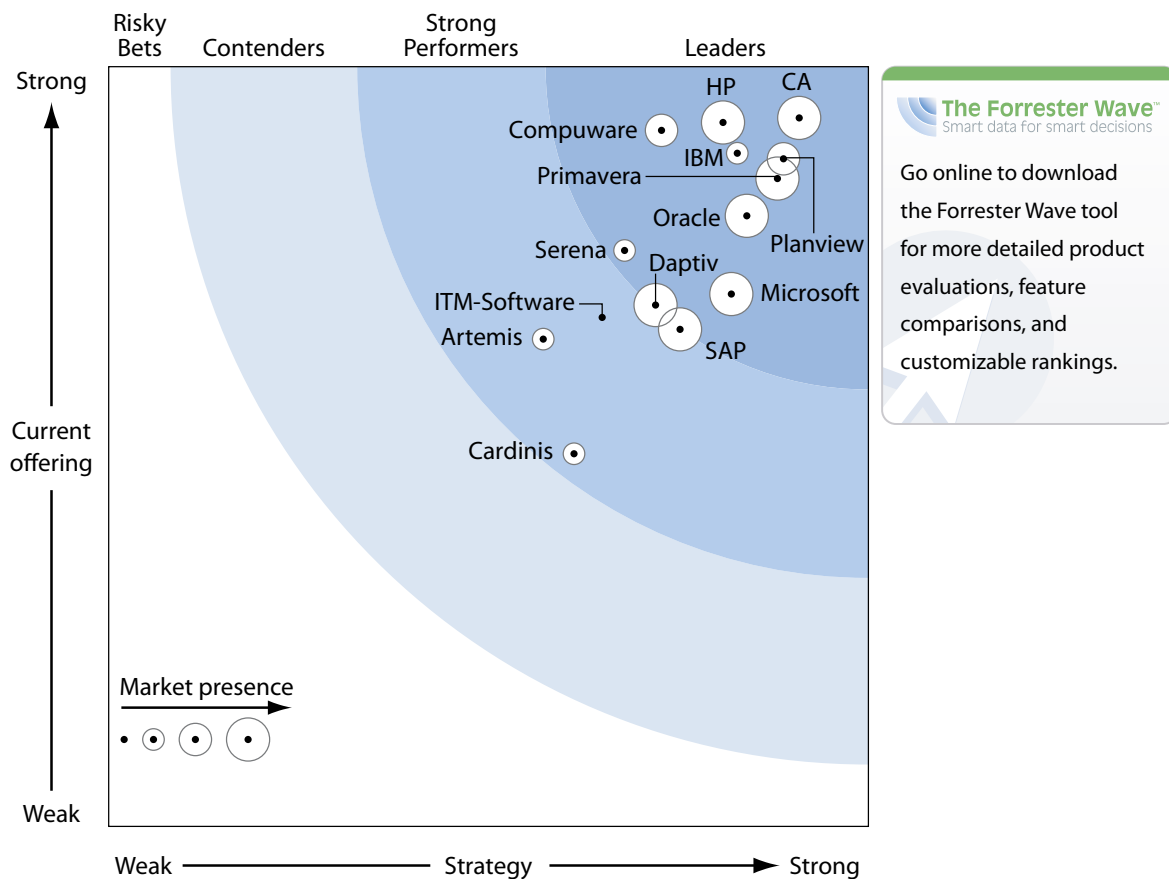
Source: Forrester Research, Inc.

Figure 3 Forrester Wave™: Project Portfolio Management Tools, Q4 '07 (Cont.)

	Forrester's Weighting	Artemis	CA	Cardinis	Compuware	Daptiv	HP	IBM	ITM-Software	Microsoft	Oracle	Planview	Primavera	SAP	Serena
CURRENT OFFERING	50%	3.21	4.66	2.45	4.58	3.43	4.63	4.43	3.35	3.50	4.02	4.39	4.26	3.47	3.79
Demand management	5%	3.00	4.50	2.00	5.00	4.50	5.00	4.40	3.00	5.00	3.00	5.00	5.00	3.00	5.00
Portfolio management	15%	3.00	4.80	3.50	4.70	3.95	4.65	4.70	4.60	4.60	3.60	4.85	4.80	4.15	4.60
Project management	10%	3.25	5.00	3.30	4.65	4.05	4.80	4.30	3.00	4.00	4.15	4.60	4.50	3.45	4.45
Resource management	10%	4.40	5.00	2.10	5.00	4.00	5.00	5.00	2.45	4.65	4.85	5.00	4.75	4.75	4.80
Financial management	10%	4.60	4.75	2.70	5.00	3.35	4.50	4.20	3.80	2.10	5.00	5.00	4.70	4.50	3.80
Methodology	15%	2.60	4.70	3.00	4.60	3.30	4.20	5.00	3.50	2.70	3.80	5.00	5.00	2.20	4.00
Workflow	10%	3.85	4.65	2.40	5.00	3.45	5.00	4.85	4.10	3.20	4.35	5.00	5.00	3.75	4.35
Reporting	5%	4.50	5.00	3.00	5.00	5.00	4.75	5.00	4.00	5.00	5.00	4.75	4.50	3.75	4.00
Integrated IT management	15%	1.60	4.30	0.00	4.30	0.90	5.00	3.00	2.00	2.70	3.00	2.20	1.60	2.30	1.60
Application technology	5%	2.90	3.50	3.50	1.40	5.00	2.60	4.40	2.90	2.00	4.40	2.60	3.50	3.80	1.40
STRATEGY	50%	2.86	4.54	3.06	3.64	3.60	4.04	4.14	3.24	4.10	4.20	4.44	4.40	3.76	3.40
Product strategy	40%	2.90	5.00	2.50	3.30	2.50	5.00	4.80	2.50	4.60	5.00	4.80	5.00	5.00	2.90
Corporate strategy	20%	5.00	4.20	3.80	3.60	5.00	1.20	3.60	4.20	1.80	2.00	4.60	5.00	3.80	4.20
Financial resources to support strategy	20%	3.00	5.00	3.00	5.00	3.00	5.00	5.00	3.00	5.00	5.00	4.00	4.00	5.00	3.00
Cost	20%	0.50	3.50	3.50	3.00	5.00	4.00	2.50	4.00	4.50	4.00	4.00	3.00	0.00	4.00
MARKET PRESENCE	0%	2.62	4.29	2.13	3.47	3.71	4.61	2.96	1.08	3.95	3.30	3.23	4.20	3.86	2.28
Installed base	30%	4.70	5.00	2.05	3.95	5.00	4.20	1.00	1.50	4.75	1.25	4.45	4.50	3.40	2.90
Revenue	20%	0.00	5.00	1.00	5.00	1.00	5.00	5.00	0.00	4.00	5.00	1.00	3.00	5.00	4.00
Revenue growth	20%	0.00	2.00	5.00	0.00	5.00	5.00	2.00	0.00	4.00	5.00	5.00	5.00	3.00	0.00
International presence	5%	5.00	4.00	1.00	3.00	2.00	4.00	5.00	4.00	5.00	4.00	3.00	4.00	5.00	3.00
Systems integrators	10%	5.00	5.00	0.00	5.00	5.00	5.00	4.00	2.00	0.00	5.00	0.00	5.00	5.00	1.00
Services	10%	3.60	4.40	1.80	4.00	2.80	4.00	3.60	1.80	4.20	1.20	3.80	3.40	2.40	2.40
Employees	5%	2.00	5.00	1.60	4.60	2.60	5.00	5.00	1.00	5.00	2.00	3.20	4.20	5.00	2.40
Technology partners	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

All scores are based on a scale of 0 (weak) to 5 (strong).

Source: Forrester Research, Inc.

VENDOR PROFILES

Leaders: Complete Solutions — Out-Of-The-Box

CA, and Planview move out front. Though none is a niche player in the PPM space, they are taking this growing market seriously. These best-of-breed vendors offer the broadest choice of capability in intuitive ease-of-use and out-of-the-box functionality. HP, Primavera, IBM, Oracle, and Compuware are "this close" to the front runners.

- HP is a leader with its maturity of integrated IT management solutions and robust resource and financial management capability.[4]

- CA's continued strength in reporting and its focus on enterprise IT management makes PPM an integral part of overall customer IT management.[5]

- IBM's deployment of wizards and drop-down menu capability in their demand, portfolio, and project management offerings earn it high marks for ease of use.[6]

- Planview continues to be in front in the specific area of portfolio management and is neck and neck with Primavera on project and portfolio management methodology. Planview still has some work to do with its integrated IT management offering.[7]

- While Primavera continues to keep a stronghold with its demand management, workflow, and methodology software, it must develop more depth in its APM and infrastructure portfolio management offerings to be equally attractive to its IT customers as it is with rest of the enterprise.[8]

- Compuware continues to be a leader in all the fundamentals of PPM, particularly in its resource and financial management offerings but has lost some ground to HP on integrated IT management.[9]

- Microsoft moves into the leader zone. Microsoft has had some mountains to climb with its integration of UMT and getting off its thick client workstation solution for project management. Microsoft has succeeded in gluing these project and portfolio management solutions together along with the advent of its server technology. While its reporting capabilities continue to excel (no pun intended), its customers will benefit from further development in its methodology offering and increased financial management capability particularly in the area of chargeback.[10]

- Serena's Mariner scores high in pure portfolio management. Mariner retains its position as a solid middle-of-the-pack PPM performer having earlier absorbed Pacific Edge. Mariner's strengths lie in both portfolio and resource management. To further its competitive position over the long term, Serena's Mariner solution must become a player in integrated IT management and continue to broaden its base of application technologies.[11]

• Oracle's stated business-centric product strategy is unique. Oracle views its PPM solution as an integral part of its larger enterprise application suite and retains its premium position in PPM financial management along with Compuware. The vendor is evolving Oracle Projects to position the product for market leadership among best-of-breed vendors. To stay competitive among the competition, Oracle needs to bolster its application portfolio management component and edge up its functionality in several offerings.[12]

Strong Performers: Not To Be Ignored

• SAP is serious about PPM. SAP has made strides in its portfolio and project management offerings to build on its resource and financial management software foundation. The vendor has a solid audience with its reporting capability. Its strategic focus on PMO organizations that includes midmarket as well as large enterprises will advance its competitive position. xRPM is a viable offering against best-of-breed vendors assuming SAP further develops its PPM methodologies and integrated IT management offering.[13]

• Daptiv's strength lies in its demand, project, and resource management offerings. For medium-sized businesses that need a simple predictable pricing model and the hassle-free advantage of a pure SaaS solution, Daptiv is a great choice. With their solid, and apparently loyal, customer base, Daptiv will become a stronger competitor when it beefs up its portfolio management, IIM, and workflow offerings.[14]

• ITM-Software has built its solution for the CIO who needs IT-centric portfolio management. ITM excels as an IT business management tool with little sizzle and lots of steak. It understands the IT space intimately, and that translates well into product capability. Strong in reporting and heavy on function, the solution does need to expand its intuitive out-of-the-box offerings. With further development in resource management and IIM, ITM will become a stronger competitor.[15]

• Artemis International Solutions offers breadth and depth in financial and resource management. The solution's more business-centric offering is coupled with strong reporting functionality. Artemis' strategy is to remain focused on enterprise project and portfolio management. The vendor has a loyal and long-standing customer base, some of which is running out of patience with the vendor's protracted re-visioning process with Versata. While playing catchup in its portfolio management offering, more focus on methodology and its application and infrastructure portfolio management will firm up Artemis' competitive position.[16]

• Cardinis is making its mark with rapid growth and aggressive software development. Though relatively new in the PPM space, it is doing a lot of things right to gain competitive position with the bigger North American players. While relatively strong in project and portfolio management functionality, Cardinis' heavy investment in the development of several PPM functions and the nurturing of key business partnerships should strengthen its resource and financial management offerings. Cardinis needs to snare a couple of brand name customers outside of Europe to get brand recognition firmly established.[17]

SUPPLEMENTAL MATERIAL

Online Resource

The online version of Figure 3 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings.

Data Sources Used In This Forrester Wave

Forrester used a combination of three data sources to assess the strengths and weaknesses of each solution:

- **Vendor surveys.** Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.

- **Product demos.** We asked vendors to conduct demonstrations of their products' functionality. We used findings from these product demos to validate details of each vendor's product capabilities.

- **Customer reference calls.** To validate product and vendor qualifications, Forrester also conducted reference calls with a sample of each vendor's current customers.

The Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria to be evaluated in this market. From that initial pool of vendors, we then narrow our final list. We choose these vendors based on: 1) product fit; 2) customer success; and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of lab evaluations, questionnaires, demos, and/or discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in the Forrester Wave document — and then score the vendors based on a clearly defined scale. These default weightings are intended only as a starting point, and readers are encouraged to adapt the weightings to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve.

ENDNOTES

1 IT portfolio management is a key governance process that assists organizations in maximizing the value of their IT investments while managing risk and costs. See the October 31, 2007, "Getting Portfolio Management To Level 5 Maturity" report.

2 MOOSE is spending to "maintain and operate the organization, systems, and equipment." An old saying states that "you have to spend money to make money." Sometimes you also have to spend money to save money. See the September 20, 2007, "IT MOOSE Management — 20 Best Practices" report.

3 The essence of IT governance is the processes and decision-making around investments. See the November 6, 2007, "Use Business Cases To Make PPM More Effective" report.

4 View the vendor summary for more detailed analysis on how HP fared in this evaluation. See the December 18, 2007, "HP Is A Leader In The PPM Market" report.

5 View the vendor summary for more detailed analysis on how CA fared in this evaluation. See the December 18, 2007, "CA Leads In Many Offerings In The PPM Market" report.

6 View the vendor summary for more detailed analysis on how IBM fared in this evaluation. See the December 18, 2007, "IBM Maintains Its Leader Position In The PPM Market" report.

7 View the vendor summary for more detailed analysis on how Planview fared in this evaluation. See the December 18, 2007, "Planview Is An Undeniable Leader In The PPM Market" report.

8 View the vendor summary for more detailed analysis on how Primavera fared in this evaluation. See the December 18, 2007, "Primavera Is A Leader In The Large Enterprise PPM Market" report.

9 View the vendor summary for more detailed analysis on how Compuware fared in this evaluation. See the December 18, 2007, "Compuware Continues To Be A Leader In The PPM Market" report.

10 View the vendor summary for more detailed analysis on how Microsoft fared in this evaluation. See the December 18, 2007, "Microsoft Advances As A Leader In The PPM Market" report.

11 View the vendor summary for more detailed analysis on how Serena fared in this evaluation. See the December 18, 2007, "Serena Brings A Portfolio Focus To The PPM Market" report.

12 View the vendor summary for more detailed analysis on how Oracle fared in this evaluation. See the December 18, 2007, "Oracle Brings An Integration Focus To The PPM Market" report.

13 View the vendor summary for more detailed analysis on how SAP fared in this evaluation. See the December 18, 2007, "SAP Brings Strong Governance To The PPM Market" report.

14 View the vendor summary for more detailed analysis on how Daptiv fared in this evaluation. See the December 18, 2007, "Daptiv Is A Strong Performer In The SaaS PPM Market" report.

15 View the vendor summary for more detailed analysis on how ITM-Software fared in this evaluation. See the December 18, 2007, "ITM-Software Is An Emerging PPM Player With An Innovative Services Approach" report.

[16] View the vendor summary for more detailed analysis on how Artemis fared in this evaluation. See the December 18, 2007, "Artemis Holds Its Position In The Crowded PPM Market" report.

[17] View the vendor summary for more detailed analysis on how Cardinis fared in this evaluation. See the December 18, 2007, "Cardinis Is An Emerging Player With An Innovative Approach In The PPM Market" report.

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