

Realizing the Benefits of Project and Portfolio Management

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This *Strategic Analysis Report* examines the increasing importance of project and portfolio management and offers guidelines on how enterprises can successfully implement PPM.

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ANALYSIS

Management Summary

This *Strategic Analysis Report* examines the increasing importance of project and portfolio management (PPM) and offers guidelines on how IT organizations can succeed at project prioritization, planning and control. In doing so, it presents these Client Issues:

- What planning processes are emerging as the most effective to achieve perceived value of IT and business/IT alignment?
- How can portfolio management be employed as a new tool to facilitate joint IT and business planning for technology?
- What are the essential steps in the governance process for investment prioritization?
- What organizational approaches will help companies and government agencies reduce their exposure to IT project failures?
- How can a project office support procedures that address the design, development and implementation issues that arise in business IT projects?
- What project management tools, processes and techniques are required for delivering high-quality, on-time and on-budget applications?

1.0 Introduction

As the broad trend toward a post-industrial economy proceeds, the shape of the information- or knowledge-based economy becomes more apparent. Unlike the repetitive, assembly-line work processes of the industrial economy, more labor effort in the information economy is expended in one-time "project" work (that is, efforts with beginning and end dates and defined — but variable — deliverables). In IT organizations — which are often key to facilitating an enterprise's progress in the information economy — these differentiated deliverables generally offer more promising returns to the enterprise than do IT operational efficiencies or service-request fulfillment. Although typically representing only 20 percent to 35 percent of the IT budget, the new and different deliverables of IT projects represent a far higher proportion of potential value — and far higher risk. Ultimately, the discipline of PPM can reduce risk at the same time that it can improve the selection and delivery of high-value IT projects.

Repetitive processes (for example, claim processing or standard product assembly) that are increasingly automated are being overshadowed by nonrepetitive work processes with variable deliverables, which tend to organize knowledge workers into projects that are coordinated via a schedule. Consequently, the project manager role becomes more prominent — and is, increasingly, a training ground for general management.

PPM is being adopted because of its benefits to project-intensive businesses. Companies such as AXA Advisors, Campbell Soup and eBay report:

- Best choice among opportunities for investment (that is, the biggest returns)
- Expense reductions
- Clear focus on the business value of IT
- Improved risk mitigation and scope management

- More-accurate estimation
- Quickened prioritization and cancellations
- Nimbler resource allocation

Many IT organizations do not have the skills or the discipline to avoid being swamped by the flood of proposals and projects. Some enterprises adopt PPM mainly driven by the need to prioritize; others want to halt low-value projects, or those that falter or overrun budgets and schedules, or whose business case lapses. When fewer projects are prioritized, and troubled ones are terminated, the freed-up resources can then be reallocated to higher-value initiatives. In other cases, early visibility into troubled projects enables intervention and remediation to avoid major disruptions to the business. This gives enterprises a choice between obtaining the same value for less investment or more value from the same investment.

In adopting PPM discipline, the first thing an IT organization must do in preparation is to define a standard set of "macro" processes for project work and adhere to them. These processes are not strictly sequential. There are feedback loops at each step. Although approaches vary, this report describes four key phases that are needed at a minimum:

- 1) *Chartering* — This phase involves how an IT organization receives work requests and manages its queue.
- 2) *Prioritization* — Here, the queue is established periodically and carefully maintained to respond to new needs but avoid costly "churning" in the order of which projects are most important and which can be undertaken with available skill sets. Note that prioritization of projects in the queue depends on information from the following phase — execution — to perform the *resource allocation* process of matching the high value projects with the available resources in an optimal way, considering internal and external options.
- 3) *Execution* — The project team builds the project deliverable under the direction of the project manager. Feedback regarding progress, and the implications for future resource availability, is given to the prioritization phase.
- 4) *Closure* — Provides the opportunity to learn from the work done via project reviews, benefits realization reports and analysis of metrics.

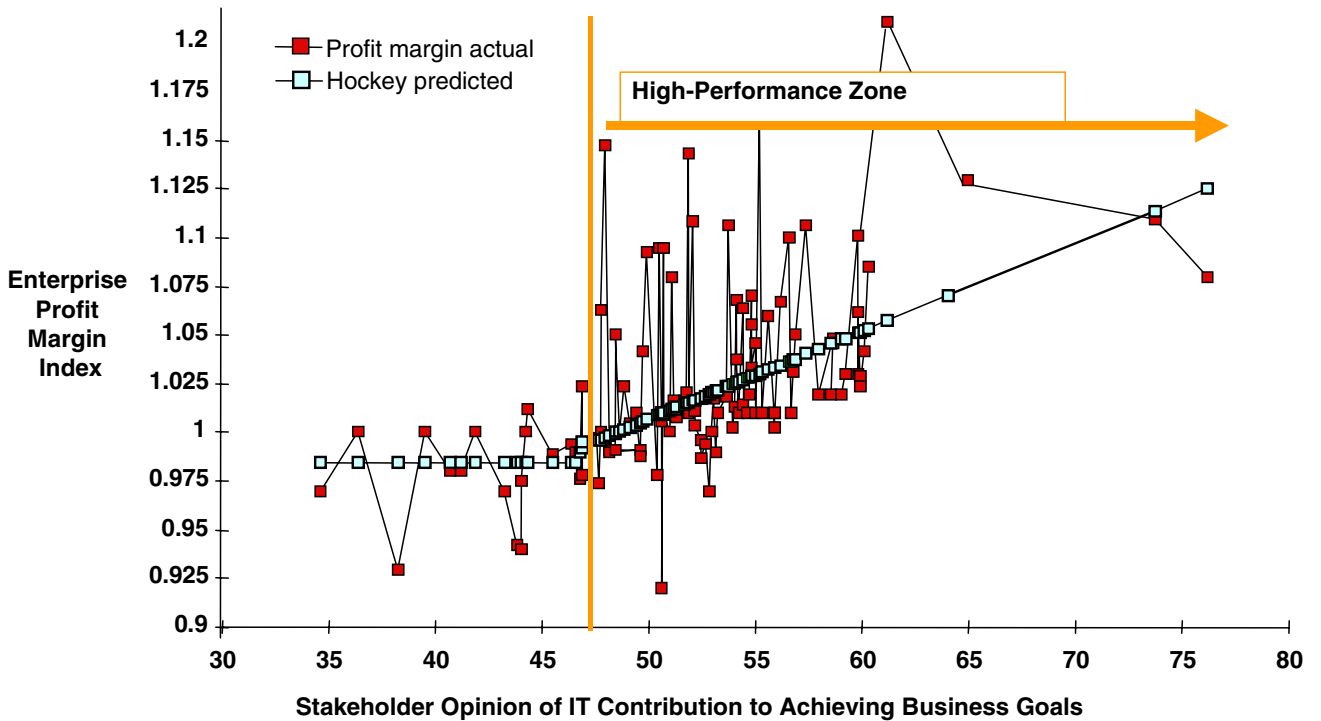
1.1 Good IT Planning Pays Off

Client Issue: What planning processes are emerging as the most effective to achieve perceived value of IT and business/IT alignment?

There is a connection between IT planning and the relative profit performance of a company. This assertion comes from field research among more than 200 commercial firms in various industries. In each case, the firm measured the "effectiveness" of the IT organization — defined as the subjective opinion of stakeholders within functions or lines of business (LOBs) that are the *internal* customers of the IT organization — regarding the degree to which the IT organization contributed to achieving the unit's objectives.

In other words, did the IT organization make a direct contribution to achieving the business-unit objectives? The firms that scored well here demonstrated a strong, positive correlation with above-average profit margins in their industries (see Figure 1).

Figure 1. Good IT Planning Pays Off



Source: CogniTech Services

A critical characteristic of the firms that scored well was good planning processes — especially those that used joint, interactive processes between business and the IT organization. Hence, if business and the IT organization collaborate on effective joint planning — and the money is spent in the right places — the enterprise is likely to have above-average profit margins. This report focuses on how to make that happen.

1.2 Business Impact of PPM

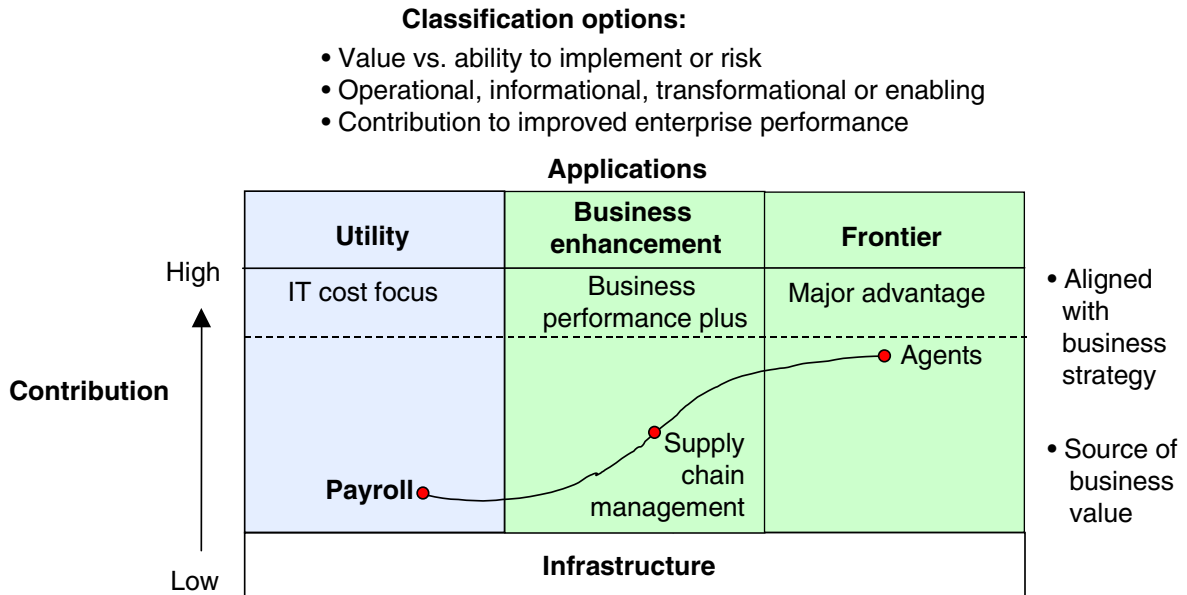
Client Issue: How can portfolio management be employed as a new tool to facilitate joint IT and business planning for technology?

Portfolio analysis (of application and project portfolios) often offers managers a better view of the impact of IT spending than traditional distributions. Historically, IT budget spending was analyzed by resource category (for example, hardware, software, internal staff, external services providers (ESPs), voice/data charges and facilities) or by activity or function (such as new development, application support and maintenance, infrastructure and administration). These two views, which are flawed in showing how IT contributes to enterprise performance, were developed during an era when IT spending was viewed as purely an overhead expense to be challenged relentlessly. The distribution of IT budget by resource category does not reveal whether an enterprise is spending appropriately for its needs.

Spending was analyzed through this prism to manage capital expenditures and judge the evolution of markets, which is useful for IT vendors but is a poor guide for decisions within the enterprise. The distribution of IT budget by activity or function will not indicate if the enterprise is positioned to realize a growing return from its IT investments. These line items give a sense of how much spending is going toward potential productivity gains and economic returns, but they tell nothing about whether these gains will be realized.

In determining the degree of business impact (that is, one of four criteria to be applied in prioritization), the IT investment pool can be classified into useful categories and analyzed as a portfolio. Although a number of useful categories may be applied, one categorization approach is gaining wide acceptance. This view, developed by Gartner, makes it much easier for a business and an IT organization to develop a common view and share consistent opinions about the topic of alignment and the business value of IT (see Figure 2).

Figure 2. Business Impact Seen via Portfolio Management



Source: Gartner Research (December 2004)

The essential basis of the categorization is whether the project or investment contributes to improved enterprise performance. When applied to IT infrastructure investments, no direct improvement in business performance occurs. This is true, even though it is clear that the infrastructure is, essentially, an enabling platform — a prerequisite to the performance of applications. The applications, which deliver a function or perform a task, can be divided into three levels of business performance contribution:

- Low contribution
- Medium contribution
- High contribution

Respectively, these are called *utility* (that is, mission-critical, but not improving performance, such as payroll), *business enhancement* (such as supply chain management) and *frontier* (such as the use of intelligent agents — a potentially big payoff, but with high risk). Only enhancement and frontier (that is, improving performance) can be aligned and offer direct value.

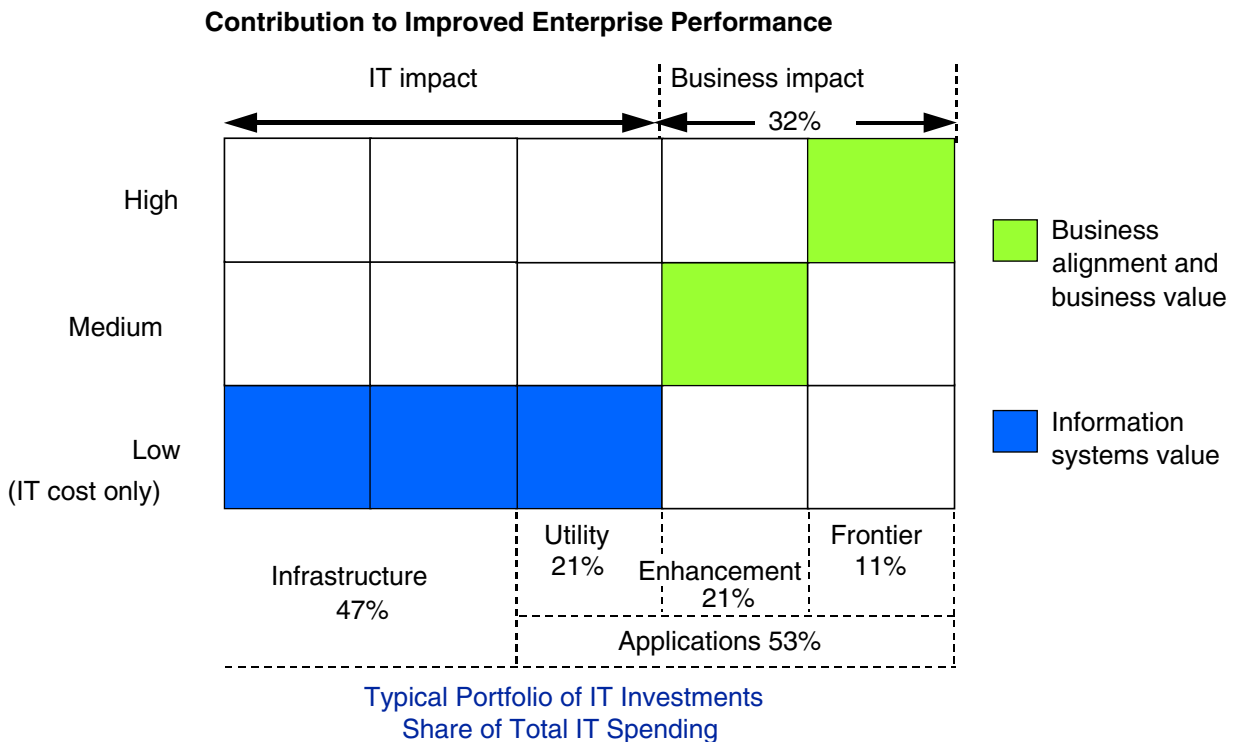
2.0 Share of IT Spending Delivering IT Value and Business Strategy Alignment

Strategic Planning Assumption: By 2008, more than 50 percent of large enterprises will use portfolio management techniques and tools for planning, prioritization, justification and communication (0.7 probability).

Enterprise leadership is continuously in search of the value of IT. Moving beyond the gross number or percentage of revenue devoted to IT and digging into the ways the money is spent forms a key guide to strategy. Reviewing the IT budget distribution by portfolio management analysis categories (that is, frontier, enhancement, utility and infrastructure) can help enterprise leadership determine how much of IT spending is allocated to generating new revenue or improving enterprise performance.

The typical distribution of spending across the defined portfolio reveals insights that can change expectations for an IT organization. The percentages come from a survey of 500 Gartner clients that reported their total IT spending divided into the four portfolio classifications. The first breakdown shows that 47 percent of total spending can be ascribed to *infrastructure* and 53 percent to *applications*. For the applications area, the spending is 21 percent for *utility*, 21 percent for *enhancement* and 11 percent for *frontier* (see Figure 3).

Figure 3. IT Value: Only One-Third of IT Spending Improves Business Performance



Source: Gartner Research (December 2004)

Details are described as:

- Frontier Projects and Applications:* Comprising 11 percent of the average IT budget, these applications produce a major change in business performance that can alter the competitive landscape. However, they tend to be risky at the outset. Being "first in" with a new system or application can give an enterprise a competitive advantage for 18 months. Examples include the introduction of automated teller machines, package tracking and Web-based transaction systems for online securities brokers.
- Enhancement Projects and Applications:* At 21 percent of the IT budget, these applications enable better corporate performance as measured by speed, convenience, cost of business operations, working capital requirements and quality. By enhancing

business performance, an enterprise can potentially differentiate itself from the competition. Many of these applications were once frontier applications that were reclassified after business benefits were realized by all industry competitors. Examples include enterprise resource planning (ERP) packages for manufacturers and Internet banking systems.

- *Utility Applications:* These applications, which take up an average of 21 percent of the IT budget, are essential, but not differentiating. They may be mission-critical (for example, payroll and human resources), but they do not contribute to improved enterprise performance. Many of these applications were once in the frontier or enhancement categories. From a value perspective, the best way to demonstrate that this cost pool is being executed in a cost-efficient manner is by benchmarking against similar enterprises.
- *Infrastructure:* At 47 percent of the IT budget, infrastructure comprises essential elements, such as networks, PCs, development tools, training and the help desk, and the maintenance required to deploy, run and support applications within the enterprise. As with utility applications, value and cost efficiency are demonstrated by benchmarking.

The combined categories of *infrastructure* and *utility*, shown in blue in Figure 3, account for 68 percent, or more than two-thirds of all IT spending; however, they make no direct business performance improvement. They can only contribute by lowering the cost of IT. Lowering IT cost is certainly good, but it is of less interest to the business management team. The remaining one-third is the source of business performance change; therefore, it can readily be seen as being aligned with the business strategy or contributing business value. This is perfectly normal and acceptable. The majority of IT spending should not be "aligned," but, rather, focused on efficient, routine operations and creating strategic capabilities ahead.

2.1 IT Portfolio Management and Survey Results by Industry

2.1.1 Keeping the Interest of Enterprise Leadership

One of the surest ways of changing a CEO's view of "IT for efficiency's sake" to "IT for business effectiveness" is to view IT spending categories according to their impact on the business.

IT portfolio management can stimulate interest and attention during discussions with the CEO. However, the primary focus must be on the enhancement and frontier categories, which can directly influence the performance of the enterprise as a whole; therefore, they are direct contributors to business objectives and alignment. Many enterprises use discussions about performance improvement categories to justify the need for periodic and consistent funding of infrastructure initiatives.

The results of a recent Gartner IT Spending and Staffing Survey show the distribution of the four portfolio management categories by industry (see Figure 4). These figures are useful for simple self-evaluation.

Figure 4. IT Portfolio Management Distribution by Industry

Percentage of IT budget devoted to frontier applications, enhancement applications, utility applications and infrastructure:

	Frontier	Enhancement	Utility	Infrastructure
All industries:	11%	21%	21%	47%
• Distribution	21	34	20	25
• Education	3	11	15	72
• Financial services — all	12	25	22	41
- Banking	10	27	25	38
- Insurance	13	24	20	42
- Securities/investment	12	44	12	32
• Government	6	14	26	54
- Federal agencies	13	22	22	44
- Local/municipal	3	12	30	55
- State agencies	5	12	24	58
• Health services/hospitals	12	20	28	40
• Information technology	10	10	20	60
- Hardware/network	12	10	25	53
- Prepackaged software	8	10	19	63
- IT services	9	10	16	64
• Manufacturing	8	19	22	51
- Discrete only	8	16	24	52
- Process only	7	22	21	51
• Petroleum	3	22	20	55
• Telecommunication	36	17	14	33
• Utilities	3	26	18	53
- Electric utilities	3	24	16	57
- Gas utilities	3	29	20	49

Source: Gartner Research

However, IT managers often get bogged down in the planning process, managing against sets of numbers that are not a realistic basis for comparison. Each company is different, and so are the percentages of the IT budget that should be allotted to the various portfolio management categories. The power of this budget framework is in comparing internal goals to the framework and allowing for changes in the percentages based on environmental changes. For example, one large energy company consistently devoted 2 percent of the IT budget to frontier applications, but recently the firm's leaders agreed that this percentage would be increased to 4 percent to support future e-business functionality necessary for competitive advantage. If this company had blindly followed Gartner's industry averages, it would have underfunded those initiatives (that is, 2 percent, instead of 4 percent) with a direct impact on future company performance.

Ultimately, IT managers use portfolio management alongside the traditional frameworks for communicating the IT budget to the company. Opportunities to communicate the value of IT will be lost and corporate performance can be affected if companies and government agencies are not aligned; thus, portfolio analysis can help maintain the fusion between the IT organization and the business.

3.0 Prioritization of IT Candidate Investment Projects

Client Issue: What are the essential steps in the governance process for investment prioritization?

Strategic Imperative: The basis and rationale for selecting investment candidates need to be broadly understood for effective planning. The criteria may vary by project class and can be as much qualitative as quantitative, but they must be clear.

To select the best possible investment projects, it is necessary to have a clear means of evaluating and ranking each one. The basis for ranking starts with selecting and weighting the criteria to be applied (see Figure 5).

Figure 5. Criteria Used to Prioritize

Four perspectives:	Sample weight
Financial — economic cost and benefit	0.25
Business impact — contribution to business performance	0.35
Risk — likelihood of success or failure	0.25
Architectural fit — compatibility with guidelines	0.15
Ranking process:	1.00
<ol style="list-style-type: none"> 1. Simple scoring — everyone votes, one to seven (favorable) 2. Case for score is presented — open to debate 3. Use the information at hand 	

Source: Gartner Research (December 2004)

The four criteria shown in Figure 5 represent best practices. Architecture has grown as a factor. The determination of relative weight in overall scoring should suit the current company environment and may vary by type of investment. The assigned weights are not changed within a planning session, but they may be shifted as overall company strategy shifts based on other factors (for example, funds are very short for capital investments).

The process of evaluating and scoring is generally undertaken by a group of 10 to 30 people. Each participant votes, using a score of one to seven (or equivalent) applied to each project, which is presented by the relevant party or sponsor. Votes are public, and substantial debate can occur about why a certain score is justified. Everyone learns. The mix of participants may vary; but, ideally, it is a balance of IT and business staff. Every project gets a summary score by criteria, as well as an overall weighted result.

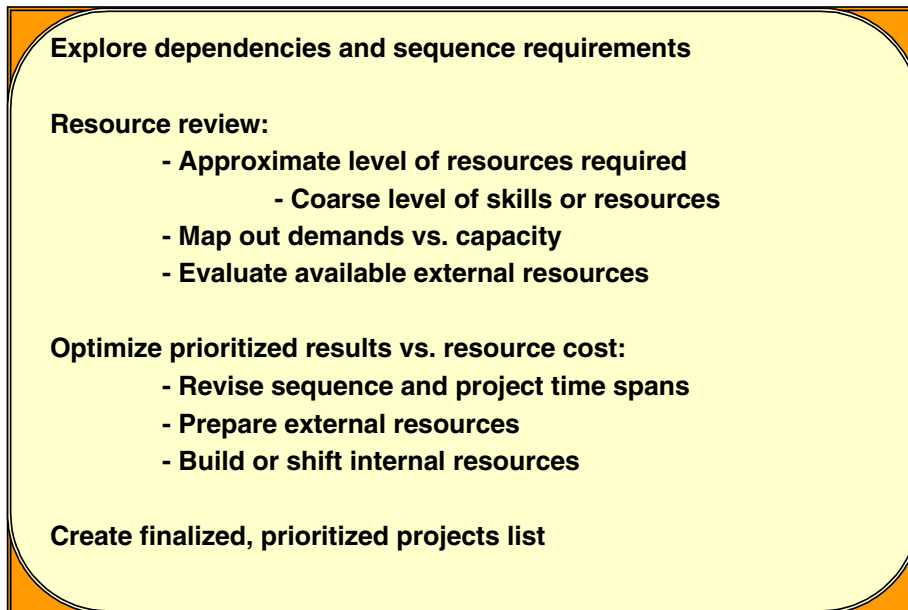
3.1 Matching Priorities to Resources

The first prioritized list must go through two additional steps before it becomes final. The first step is a check for reasonableness. This includes a review of the relative spending across dimensions (such as the portfolio) for balance, the departments that are benefiting, the comparative risk level and other factors. If out of balance, a reordering may be wise. This must be reviewed and decided by the governance council.

The second step is matching projects against available resources. This can also incorporate any necessary requirements in sequencing or building order, or other types of dependencies among

projects. Because the projects are laid out in sequence, the impact on available resources must be assessed. This is done based on a coarse level of detail regarding staff skills, among other things. Projects are then manipulated regarding start and completion times, total time span to achieve maximum use of available skills and least demand for supplemental resources (see Figure 6). Trade-offs of completion dates and the addition of resources are made. This also becomes input to overall resource capacity planning.

Figure 6. Match Priorities to Resources



Source: Gartner Research (December 2004)

4.0PPM: Get a Grip

Client Issue: What project management tools, processes and techniques are required for delivering high-quality, on-time and on-budget applications?

Client Issue: How should enterprises select the first processes to subject to time-based transformation?

Strategic Planning Assumption: Through 2008, three out of four successful \$500,000-plus projects will be planned and tracked with project office support, while three of four failed projects will not (0.7 probability).

Strategic Planning Assumption: A majority of IT organizations that have adopted a "repository"-style project office will migrate to a "coach" approach through 2008 (0.7 probability).

Strategic Planning Assumption: By 2009, most IT organizations will have adopted a set of PPM application Web services to plan project portfolios, allocate resources to projects and support tasks, support team collaboration, and track resource utilization and costs (0.6 probability).

Strategic Planning Assumption: By 2009, new license revenue for PPM applications will exceed \$600 million annually, much of it driven by the PPM for IT, professional services and product development market segments (0.6 probability).

Enterprises struggling with frequent postponements of high-value application work, failed projects or inefficient resource utilization have been seeking new ways to "get a grip" on their project portfolios. To do so requires a PPM process. To function well, this process must be enabled by the appropriate organizational mechanisms (such as a project office) and applications.

When the process is working well, near-real-time decisions on project priorities, cancellations, risks and remediation become possible. However, with limited visibility into project status, resource utilization and other metrics, only "reactive" decision making is possible. The creation of a dashboard — validated against business requirements — is an imperative for enterprises looking to remain competitive and proactively manage application delivery.

In 1998, Gartner offered a framework for validating the portfolio of IT and application projects and stressed the importance of a dashboard process and the tools to proactively manage the delivery of technology services. Some IT organizations have progressed toward such a PPM approach, supporting organizational and procedural change and metrics collection with the use of project or resource management applications. As a result, most IT organizations now have a form of project office with responsibilities that include training in the tools and generation of the dashboard reports for a project review board.

4.1 The IT Project and Portfolio Dashboard

IT and AD management work within the context of a multiconstraint model. Constraints include — but are not limited to — budgets, resource capacity, skill sets, customer expectations and technology infrastructure. Against the background noise of such common comments as "I had to have it yesterday," "do more with less" and "just one more change, please," managers can gain efficiency, productivity and some peace of mind by setting up and monitoring a management dashboard.

A dashboard comprises a set of organization-specific metrics pertinent to project delivery and enables managers to "manage by exception" (that is, take action when a tolerance range has been exceeded). Data-gathering processes must be set up with senior management support, and they should focus initially on the IT and AD groups' key areas of concern. A comparative benchmark can help identify areas of relative weakness; however, management can typically identify key goals (such as improving application quality, reducing cancellations, estimating more accurately and cutting maintenance costs).

Procedures for collecting specific data are then built into the current process, with the conviction that they are key to problem prevention and process improvement and will yield substantial payback. Normally, an authorized project manager, perhaps working out of a project office, should execute these procedures. Tools (such as estimating, testing or time collecting) will support these procedures. Savings gained by assessing and applying the knowledge derived from the new procedures should be quantified and publicized.

Gartner research has indicated a variety of project metrics; however, other categories of metrics may be more-immediately useful, depending on organizational context. An enterprise may need more, or it may require a different set. Many applications are available to help plan and schedule projects, as well as allocate resources based on skills and constraints, and to track progress, costs and other metrics. These tools, many of which emerged from the project/resource management market of the 1990s, now generally leverage Web-based technology for real-time alerts, as well as for project discussions and the handling of project documents. In addition, such ERP II vendors as Lawson Software, Oracle, PeopleSoft and SAP have recently added significant PPM modules.

Although promising, the actual implementation of such tools should be secondary to the creation of the dashboard process and the identification of key organizational metrics.

Examples of specific metrics include:

- Project management:
 - Milestone achievement
 - Earned value
 - Critical-path slippage
 - Variances (budget, schedule)
 - Scope creep (that is, changes)
- Resource management:
 - Resource loading
 - Bottlenecks
 - Performance rating
- Web services use:
 - Number of services incorporated
 - Time finding or analyzing Web services
 - New services contributed
- Quality:
 - Requirements accuracy
 - Customer satisfaction
 - Defect arrival and removal rates
 - Maintenance expense

With limited visibility into project status, resource utilization and other metrics, only "reactive" decision making is possible. The creation of a dashboard — validated against business requirements for AD — is an absolute imperative for AD organizations that wish to remain competitive and proactively manage application delivery. A lack of practices, tools and information to facilitate near-real-time control can frustrate PPM.

Thus, project-intensive "Type A" organizations that seek major advantages through IT, but that have ad hoc processes for managing their project and application portfolios, can realize significant returns, including productivity and satisfaction improvements, by better defining these processes and supporting them with suitable applications. Improved planning, resource utilization, project change management and project communication will provide most firms with significant return on investment.

5.0 Project Offices Are Key Components of IT Governance

Most business initiatives result in many related projects being grouped into programs, many with substantial IT components. As the project office has become a widespread organizational approach, some IT organizations are struggling with its role in IT governance. Unfortunately, the

experience of enterprises that have governance structures that are ill-defined or dysfunctional has driven the prioritization process for projects with strong IT components into the IT organization and even into the project office, which can be a serious error.

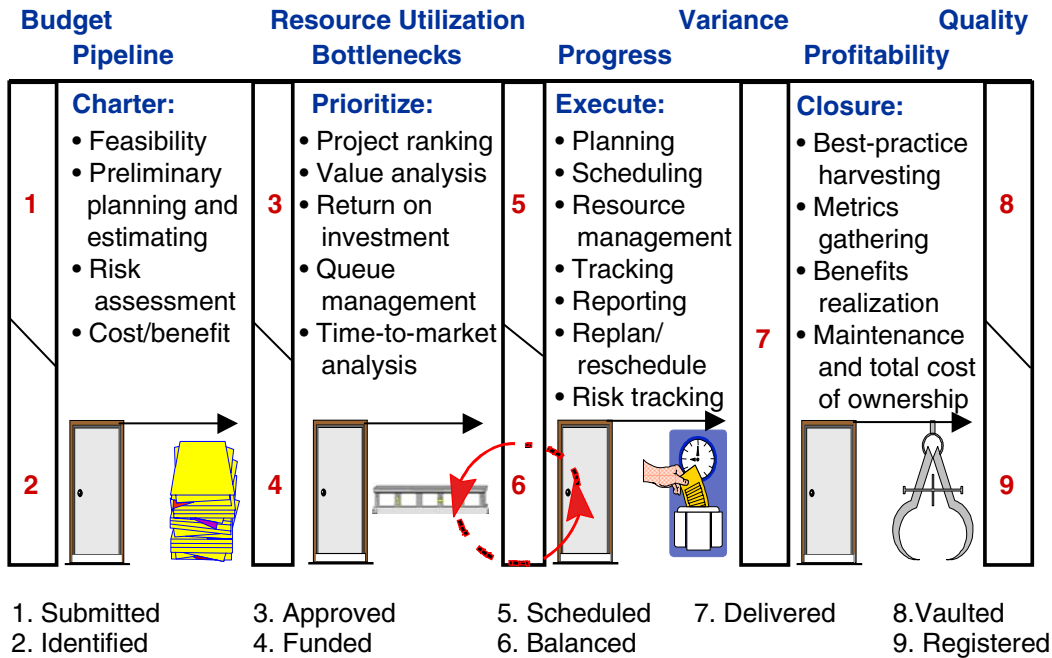
In some cases, the project office — often called the project management office (PMO) — has performed well in this role or, at least, more effectively than an absent or dysfunctional process. However, this is an approach to prioritization that is fraught with risks. Although the PMO is involved with planning and controlling strategic projects, it is charged with the tactical execution of those projects, rather than specifically with strategy — including prioritization.

Nevertheless, the project office can play an important support role in IT project prioritization and governance. When the delay of a key project can doom an entire initiative, or when those chartered and funded are insufficient to realize the strategic initiative, a PMO can provide an "early warning system," as well as recommend alternative solutions to the governance board — sometimes known as an investment council or project review board — at its regular (that is, perhaps monthly) meetings.

With most companies, business units compete during annual budget periods, when conflicting priorities can be resolved at the executive level with reference to strategies driving the budget. However, during the rest of the year, conflicts involving specific resources and budget allocations will occur. Only in small firms can a CEO "referee" a majority of budget conflicts, monitor the progress of projects against budget and adjust priorities. In most other enterprise, the project office lacks the necessary membership and neutrality to manage budget conflicts. A project office in the IT organization may itself hoard resources for too many nonaligned "pet projects." Furthermore, a project office established outside any specific functional area will lack sufficient executive authority to provide governance.

Regular project review meetings are essential to optimizing project portfolios. The usual tracking of individual projects against plan with a mix of time and status reporting does not help with cross-project prioritization — or with balancing "kill/fix" decisions against "go/no-go" decisions regarding new project opportunities — nor does it help with scheduling scarce, specially skilled resources. To help IT and application delivery (AD) organizations prioritize and schedule, account for costs, and efficiently apply resources across their project portfolios, Gartner recommended in 1998 that IT and AD management not only analyze the project portfolio's mix, but continuously validate it. Figure 7 provides a high-level view of such a process, in four "macro" phases. The bar across the top shows a panel of sample indicators for continuously evaluating projects against one another and against business goals.

Figure 7. Project Portfolio Process and Key Indicators



Source: Gartner Research (December 2004)

For example, in the chartering phase, a growing imbalance between innovative or "frontier" projects and maintenance or "utility" work could provide a warning signal. (For a discussion of the "utility-enhancement-frontier" framework, see "The Gartner Portfolio Management Tool for IT Investment," TU-14-0675.) To avoid excess overhead, management will need to set a threshold (for example, three person-years) below which work is not subject to a full "chartering" review; however, such work would still be entered into the system's chart of accounts to enable time capture.

The cycle of iteration depicted between Phase 2 (that is, prioritization) and Phase 3 (that is, execution or "micro" project life cycle) signifies the reprioritization and rescheduling of projects based on portfolio validation. These phases interact fluidly, so a project's place in the queue is changeable. Senior management must establish the high-level prioritization criteria, but the availability of key resources can demote those projects in the queue that will require those resources (see "Note to AD Managers: Stop Prioritizing Your Projects," TG-16-2831). Corporate PPM applications can be used to plan and control this. Thus, the "gate" involves a reverification of a project's critical success factors, including resource availability and the continued validity of the business case with the business sponsors. In addition, shifting business, technology and market conditions can rearrange priorities, as with many e-commerce projects during the past few years.

The closure phase begins with the post-project review. How long did the project really take, what was its actual size and what functionality was delivered vs. requirements? Quality and defect metrics are collected during this closure phase via a shakeout period of about three months; and, as defects are corrected, any reusable components can be "hardened" for possible reuse.

Increasing defect rates or late delivery can provide warning signals. A project office is appropriate to provide the project portfolio reports and forecasts required by IT/AD management. Organizations similar to project offices are increasingly used to provide project managers or project management training, as well as to log new skills and knowledge gained, capture best

practices, track defect rates, and provide reuse services and related work. Most IT organizations can gain speed and quality from the establishment of a project management competency center.

5.1 The Project Office

The project office administers the project request process and is the conduit for the project chartering template by which important prioritization information concerning business goals, customer impact, competitive drivers, initial cost/benefit analysis and so forth is gathered.

The project office mechanism supports IT governance via:

- *Governance Board*: Directs and reviews the project office
- *Project Office*: Mechanism for analysis of project portfolio information, providing revised prioritization, remediation and other recommendations
- *Coordination of Governance*: Via the project office enables rapid adjustments to the project portfolio, but a project office cannot do this by itself
- *Monthly Governance Meetings*: Will be too long, ill-prepared and unproductive without the support data, analysis and alternative recommendations a good project office provides

5.2 Quick, Good Decisions

Properly constituted, a governance board can meet regularly to track progress toward strategic objectives, make resource decisions and resolve conflicts at the executive level when new priorities arise, or when project costs or delays become excessive. However, making such decisions requires good, consistent information, because different business units and functional areas may have quite different ways of monitoring their work.

One functional area might simply track costs against budget, without an accurate sense of progress. Often, a business unit may track a project's completion percentage simply by asking the project manager for a rough estimate; others may track it against the number of planned tasks, and still others may only consider milestones on the critical path.

For a governance board to make quick, correct decisions, a best-in-class project office will provide a realistic overall picture of the project portfolio, with reporting that is standardized across the business units and functional areas. When the governance board does make decisions (such as to cut one project's scope, add resources to another or kill a third), the project office can communicate this critical information back to the project managers.

5.2.1 Coordinating the PMO With the Governance Board

A normal process by which the project office supports the governance board is to handle meeting logistics, report circulation and contribute agenda items. The project office administers the project request process, except for "lite" forms of a "virtual" project office, without dedicated staff (see "The Project Office: A Spectrum of Organizational Styles," SPA-18-8919). Normally, this is the conduit for the project-chartering template by which important prioritization information concerning business goals, customer impact, competitive drivers, initial cost/benefit analysis and so forth is gathered. It provides this template to the managers proposing projects, often requiring a vice-president-level signature to do so. For newly proposed projects, the PMO may prepare a "what if" analysis for the governance board.

The project office submits a project portfolio status report before the meeting to all governance board members. Typically, the report delineates the programs or sets of peer projects, sometimes

in the form of bubble charts, along with a "dashboard" report, with the project office gathering and loading data into its PPM tool of choice, through which it manages the repository of project data. Updated schedules or progress reports are sifted through for details to highlight. These may include descriptions of events and variances, bottlenecks, trends, and delivery assessments for the upcoming month and quarter.

When there are important problems or opportunities, analysis and recommendations should be provided, complete with dissenting opinions. Less-significant problems or opportunities, as well as measures taken since the last meeting by the project office, may be listed, with additional analysis or backup provided on request. Backup should include data on project risks, costs and progress.

Consequently, coordination of and cooperation between a governance board and a project office should be established, so that a company can more-easily make rapid adjustments to the project portfolio (for example, to take quick advantage of opportunities or to cancel some projects and reassign bottleneck resources to speed up others). Prioritization ranking can be revisited with less political friction. A project office can do little of this by itself for long, and a governance board comprising executive management will often find monthly meetings to be too long, ill-prepared and unproductive without the support data, analysis and alternative recommendations an effective project office can provide.

5.3 Organizational Styles

Client Issue: What organizational approaches will help enterprises reduce their exposure to IT project failures?

Gartner has described a range of styles for the project office, each offering unique functions that define its role within the project development-to-management life cycle.

The project office concept has gained wide acceptance during the past four years. The project office — or PMO — can be implemented in various manners, but a "one size fits all" strategy for setup and operation is unlikely to work. Often, the project office has a key role in monitoring contracted projects. Enterprises should select an approach that matches the urgency of their need with their level of project management maturity, depending on their governance style (see Figure 8).

Figure 8. The Project Office: A Spectrum of Organizational Styles

Success factor: Fit the project office scope to governance style

- Initial goal: understand the status of key initiatives
- The "lite" approach — part-time roles for maintaining and disseminating the "repository" of information on project management methodology and standards
- Support tools for project design, management and reporting
- No project oversight
- Companies with business-centric project ownership or weak central governance
- Project managers report to, and are funded by, business units

Source: Gartner Research (December 2004)

Three basic styles of project office have emerged, which Gartner arranges on a "spectrum." These three styles range from a "lite" or "repository" method for collecting and disseminating best project management practices and methodologies at one end of the spectrum to an internal

consultancy model or "enterprise" project office that directly provides project managers to run projects.

In between these two ends of the spectrum are variants of a "coaching" model — a project office that provides project expertise and oversight for the business, sometimes directly providing project managers in addition to advising on project set-up, reporting (for example, via "dashboard reports") and facilitating post-project reviews and metrics collection.

5.4 Project Management Methodology

Client Issue: How can a project office support procedures that address the design, development and implementation issues that arise in business IT projects?

A best practice for a project office is the creation and use of a full project management methodology. Flexibly applying a scaled-down, less-rigorous version of the methodology to smaller or less-risky projects can encourage acceptance and is a best practice (see Figure 9).

Figure 9. "Just Enough" Project Management Methodology

Best Practice: Flexibly apply a scaled-down, less-rigorous methodology to smaller, less-risky projects.

Minimum project management methodology:

- Common terminology for projects
- Project charter template
- Schedule template
- Formal client-feedback procedure
- Defined project-meeting formats
- Scope statement templates

Source: Gartner Research (December 2004)

A project management methodology should provide, at a minimum, the items listed in Figure 9. Many other elements should be included as appropriate, in areas ranging from risk assessment and mitigation forms and procedures to communication plans, change requests, standard contracts and timesheets. For those enterprises with little or none of this in place, project management consulting firms and some application packages may have suitable offerings.

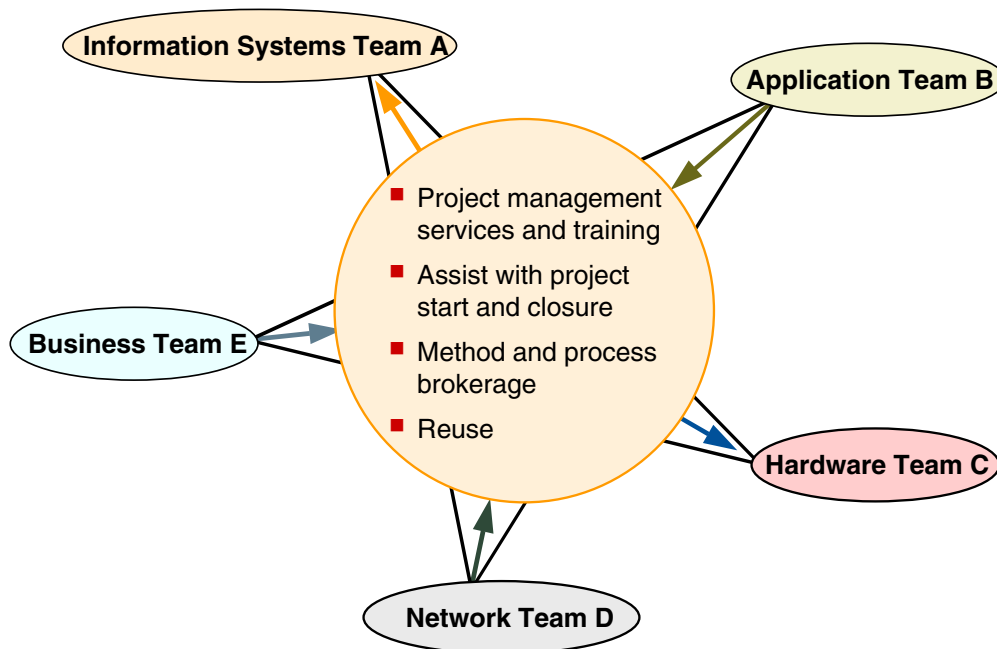
5.5 Organizational Style Migration

Strategic Planning Assumption: A majority of IT organizations that have adopted a "lite" or repository-style project office will migrate to a "coach" approach through 2007 (0.7 probability).

The "coach" model (via a project management center of excellence) approach is common in companies that empower distributed project ownership or those with weak central governance. It assumes that the company has at least adopted a cohesive set of tools for project planning, tracking and reporting. It is often used as a first step to log projects and introduce the idea of consolidating or sharing project management practices, but it does not impose direct project oversight — although, occasionally, it may provision project management "masters" on request for particularly complex or daunting projects.

In the coach model, project managers (or "project leads") continue to report to their business units; however, projects of any significance are registered, and the business-unit project managers are assisted in project modeling and set-up and offered training and support as needed. Senior project managers ("coaches") facilitate the sharing of project manager practices across business units, document new processes, compile methodologies and — on project completion — perform the project closure activities that are typically neglected on the breakup of a project team (see Figure 10).

Figure 10. Project Office Coach Approach



Source: Gartner Research (December 2004)

Because the project office is permanent and monitors most project activity, a "dotted line" reporting relationship often evolves between business-unit "project leads" and the senior, project management professionals in the project office, promotion into which often evolves as a career path for successful project leads. The coaching style of a project office is typically funded via a fixed allocation for staffing and administrative support.

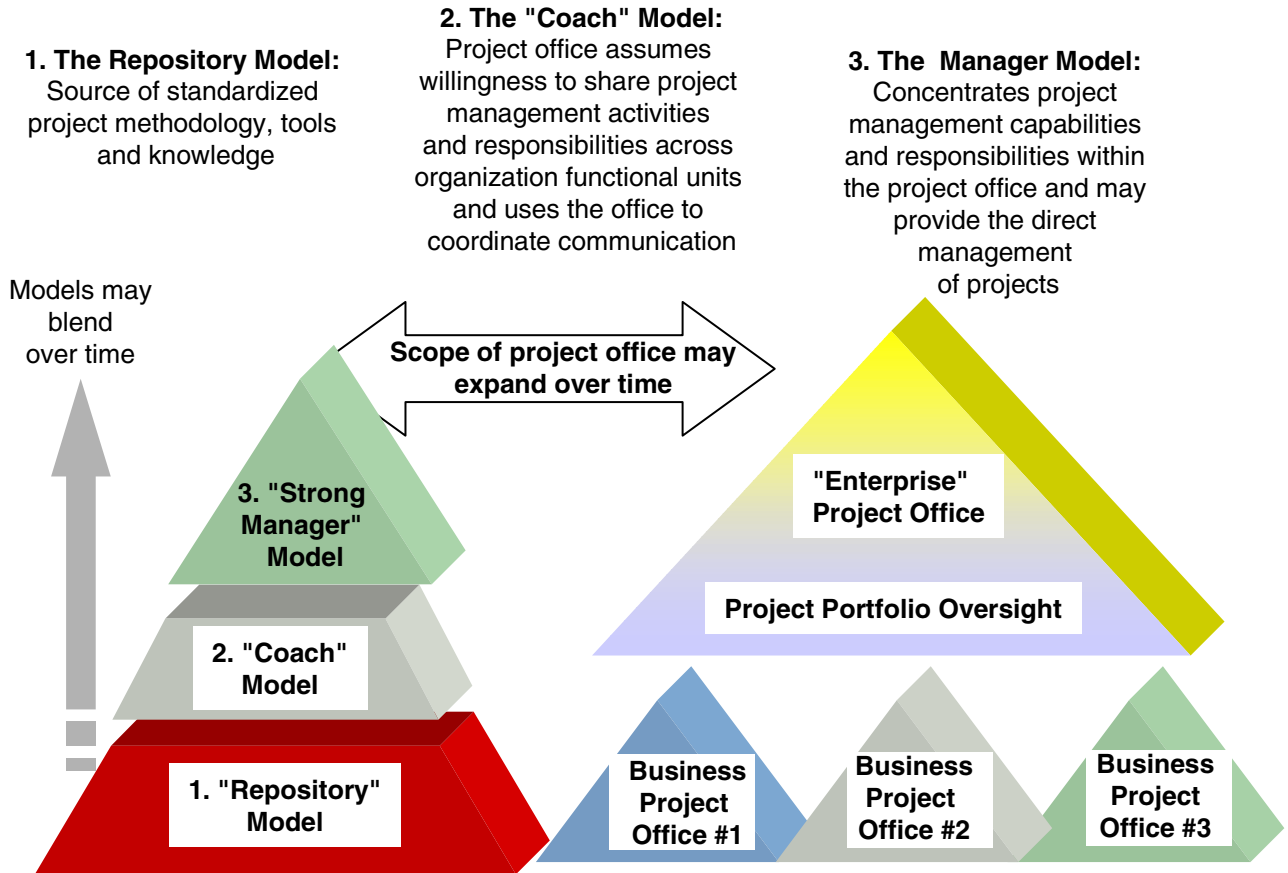
5.6 The Strong Manager Approach

Strategic Planning Assumption: Through 2007, a centralized, "strong manager" project office approach will continue to be implemented in fewer than 10 percent of enterprises but with greater concentrations in small-to-midsize firms and in large (that is, "enterprise") IT organizations (0.7 probability).

A consolidated project office organization concentrates project management within a project office that provides oversight, and often direct management, of the major projects throughout most of the company (see Figure 11). In some cases, all or most project managers are actually staffed from the shared service and consigned to projects as needed. In large firms, an "enterprise" project/program office may receive reports on the project portfolio from various business-unit project offices, which themselves may be of a "lite," "coach" or more-centralized "strong manager" style. This model also assumes a governance process that involves the project office in all significant projects, enabling it to assess scope, allocate resources, and verify time,

budget, risk and impact assumptions before the project is undertaken. Funding is generally a combination of direct, budgeted allocation for baseline services and a fee-for-service charge for others.

Figure 11. Evolution of the Project Office



Source: Gartner Research (December 2004)

6.0 Smart Enterprise Suites and PPM Packages

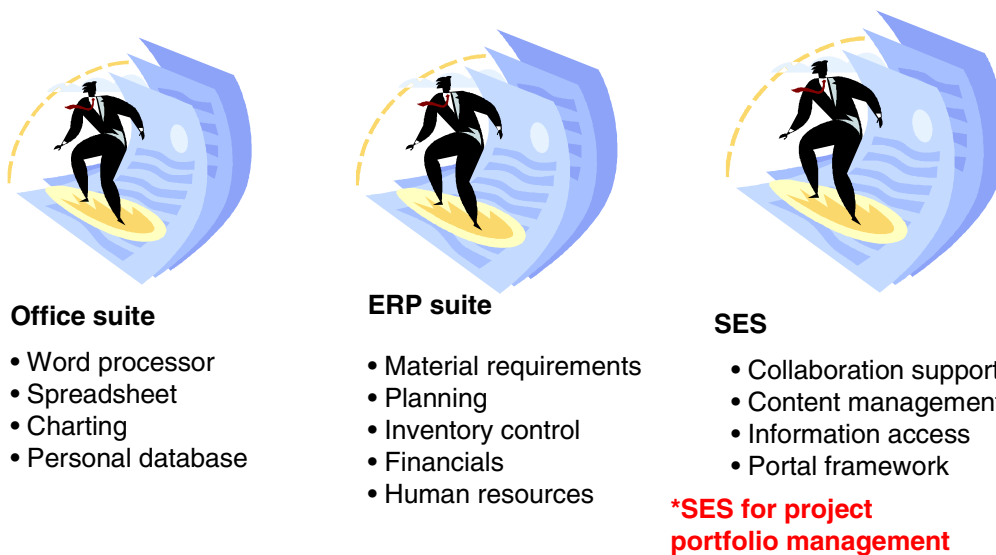
Strategic Planning Assumption: By 2007, more than 50 percent of all project and portfolio management functions will be packaged as flexibly configurable, modular Web services (0.8 probability).

Time-honored project-planning techniques were used first in PC tools for individual project managers in the 1980s. They aimed to simplify the analysis of a project's "critical path" (that is, determining duration), to support accurate estimation and ease boundary time calculation. Often taken for granted on smaller projects, identifying earliest start, latest finish, allowable float and other parameters becomes progressively daunting on larger, more-complex projects, until estimation and reliable delivery on unfamiliar types of projects (that is, like many in IT) becomes virtually impossible without the computer. To first-generation scheduling tools, project applications added time/cost tracking and resource-management features in the 1990s, and additional features supporting more "virtual" enterprises and quality management are now being integrated in the PPM "flavor" of smart enterprise suite (SES).

During the next three years, these applications will incorporate a growing range of Web-based, interenterprise collaborative features.

The SES is to unstructured information and knowledge as ERP is to structured corporate data. An SES includes a consolidation of functionality that could rival ERP for its potential impact on business functions. Portals, content management and collaboration — as stand-alone applications — are fading. Companies with enterprise-level portal projects or knowledge management programs have integrated these three functions and others (such as e-learning and project management). Companies that have not begun large-scale SES integration have a new opportunity to get the integrated capability without doing it themselves. In the PPM area, applications have emerged to address project team collaboration, project knowledge management and role-based project portals. As Web services technology enables further enhancement and design around the end user, the market for SESs will grow dynamically (see Figure 12).

Figure 12. SES — A New Wave of Software Consolidation



*** Nine Management Processes, *The Project Management Body of Knowledge (PMBOK)* --Project Management Institute**

1980s: Time (schedule). 1990s: Communication — cost — risk — resource.

2000s: Procure — scope — quality — integration

Source: Gartner Research (December 2004)

6.1 Magic Quadrant for Project and Portfolio Management, 2004

Client Issue: How should project/process management groups for an IT organization be set up, and what support tools should be used?

Client Issue: How should IT costs be identified to best facilitate IT chargeback?

Client Issue: What governance mechanisms are required to render IT chargeback successful?

Strategic Planning Assumption: By 2009, most IT organizations will have adopted a set of PPM application Web services to plan project portfolios; allocate resources to projects and support

tasks; support project team collaboration; and track schedules, resource utilization and costs (0.6 probability).

Strategic Planning Assumption: The dynamic PPM market is poised for compound annual growth of 10 percent to 15 percent through 2008 (0.6 probability).

IT organizations have turned increasingly to more-integrated, "smart," PPM suites for planning and controlling IT projects and other portfolios, to support IT governance responsibilities (such as prioritization), to track costs against plan, to allocate IT service requests to appropriate resources, and for portfolio analysis and related functions. As this dynamic application market evolves, its growth will accelerate, driven — for example — by the need to comply with The U.S. Public Company Accounting Reform and Investor Protection (Sarbanes-Oxley) Act of 2002.

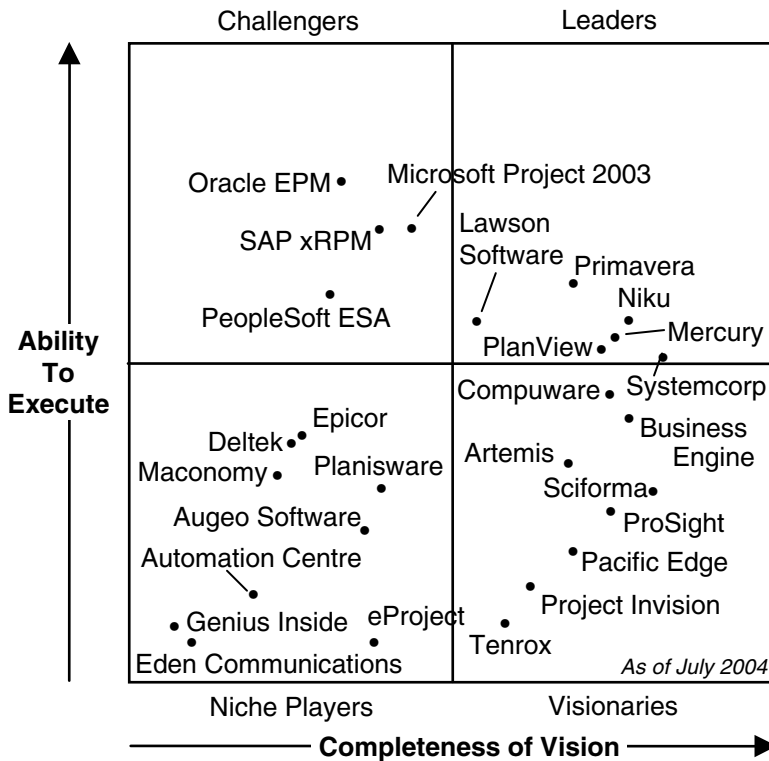
Although dubbed PPM suites, these applications are not limited to portfolio analysis or project management functionality. Because competitors have emerged from a variety of historical markets, their original focus and strengths vary from time reporting and human resource allocation to project collaboration and scheduling to pure-play portfolio analysis to project cost accounting.

Some PPM suites have also evolved with the collaborative, content management and portal functionality characteristics of SESs. Vendors are likely to have the most opportunity to differentiate themselves in the area of integration management.

6.1.1 Evaluation Criteria

In tracking PPM suites, Gartner conducts surveys and vendor briefings, reviews product demonstrations, and speaks with vendor references because more than 20 vendors are ranked according to "ability to execute" and "vendor vision" criteria (see Figure 13). Because the criteria can only be applied in a general way to produce a Magic Quadrant, Gartner encourages enterprises to apply them more specifically to their situations and consult with Gartner for clarification as needed. To help enterprises do so, this report provides the primary evaluation criteria Gartner uses to position the market offerings.

Figure 13. Magic Quadrant for PPM, 2004



(From "Magic Quadrant for Project and Portfolio Management, 2004," 2 July 2004)

Source: Gartner Research (July 2004)

Ability to Execute: The vertical axis of the Magic Quadrant primarily involves six factors. First, Gartner assesses vendor viability during the three-to-five year planning horizon, examining such factors as the level of the vendor's revenue, revenue growth and profitability. Low or negative profits cannot be sustained over the long term, but can be offset in the analysis if revenue is relatively high or growing (that is, if profitability is achievable), and lower levels of profitability are due to strategic considerations (such as intensive R&D or merger and acquisition activities). A substantial installed base can contribute to vendor viability, as can strong investor support.

A second criterion is the vendor's management team. Gartner assesses its relative level of business experience and its understanding of software markets in general, as well as PPM and related markets in particular. The educational levels of management team members are also considered.

In addition, integrity is an important factor to examine in the vendor's dealings with its customers, suppliers, partners, press — and analysts — and employees. Hence, Gartner assesses the level of commitment of senior management to the company and to the industry as a whole.

Elements of the vendor's "track record" in PPM and related markets also require consideration. When enhancements or new releases have been announced or promised, the vendor's reliability in delivering them may be more or less consistent. Whether the vendor has kept pace with technology changes is important. The level and quality of support the vendor has provided is part of its ability to execute. Levels of customer satisfaction in these and other areas correlate with the vendor's track record.

The functional depth of the PPM application's tools is another important factor. It has been said that it takes 10 years to build a great application — functionality tends to deepen over time, so that a broadly conceived application suite matures and evolves. The PPM market has seen its share of "slideware," that is, presentations regarding an application's range of functionality, some of which may have been developed only superficially, if at all, and sometimes disguised by advanced version numbers (such as when two-year old applications are in "v.8").

Service and support capability is important to enterprises. A vendor's vision critically affects its ability to provide great service and support. Vendors may scale back on support to drive profit margins, or they may find their capabilities stressed by a few major customers. Ensuring that such "marquee" clients' discounts are not so steep that extra support goes unfunded — with the result that it is drawn off from other clients — is a problem vendors do not always address effectively. Timeliness of response, the tenure of the support staff and the strength of service partners are factors here. Sales and marketing also affect a vendor's ability to execute. Although sales channels are important — for example, through systems integrators — a strong direct sales force is equally important, if not more so. An inexperienced technical sales staff, or one with too few resources, can cripple a vendor, as can an unrealistic reliance on third-party consultancies as a channel, as if the old ERP model pertains or is even still working. Reaching international markets, and supporting customers outside of a home country or region, significantly boosts a vendor's ability to execute; but this is a function of sales and marketing, as well as product attributes. In the age of the virtual enterprise, the lack of internationalized features and international marketing adversely affects vendor execution.

Vendor Vision: The horizontal axis of the Magic Quadrant primarily involves seven factors. The first is package breadth, in which Gartner assesses how a vendor's solution extends — or will extend — beyond the basic allocation of resources, tracking their time and some superficial planning features. This vision may not yet be fully realized. Functional depth is assessed as part of the ability to execute axis; Gartner assesses the sincerity of the expressed vision here. Some vendors see opportunity beyond the PPM market as Gartner has described it, often with compelling notions that must be considered. Many vendors augment their applications' native functionality in support of PPM processes with key integrations (such as operational IT service management, project scheduling or project accounting tools). A second criterion is the range of platforms supported. In addition to the operating system environments (such as Microsoft Windows or Unix), platforms include databases (such as DB2, Oracle and SQL Server); application servers, for example, Java 2 Platform, Enterprise Edition (J2EE) and Microsoft .NET; and ERP systems from Oracle, PeopleSoft, SAP and others. Many vendors target a single platform in these categories. Over time, they may port their solutions to others (for example, an additional variant of Unix or an additional database). A broader view of the market includes a range of target customers, providing enterprises with more platform options.

An important dimension for many PPM users is the extent of collaborative features for workflow, project knowledge management, document handling and related functionality. Stakeholders from executives to team members require role-based portals to access portfolio, project and task information, as well as workflows to automate alerts and approve changes. Increasingly, project-intensive organizations are demanding greater collaboration. Hence, applications that do not enable collaboration with third parties, or do not automatically route project documents or time sheets for review or approval, for example, may not meet some customers' expectations.

PPM solutions often provide industry- or discipline-specific features. Many vendors target multiple markets with applications that share approximately 65 percent to 80 percent of such core features as planning and scheduling, resource profiling and allocation, and time-and-expense capture. Additional features and functions may target a specific discipline (such as IT management). In keeping with Gartner's enterprise/IT clients' primary focus, PPM solutions suitable for IT management are identified, including vendors providing methodology support (such as Capability

Maturity Model integration); facilities for IT project cost estimation; support for such nonproject service requests as minor software changes; use of IT terminology; resource databases established to reflect IT skill sets; and integrations — or, increasingly, native functionality — for requirements management, change management or other application delivery management functions. Some vendors targeting PPM for IT also market PPM for professional services, product development, or other industries or disciplines, while some vendors focus only on non-IT markets.

A limited vision of resource management may simply involve keeping a searchable database of skills. Naming those skilled resources and tracking their commitments provides a deeper view of resource capacity. Resource management needs often include resource allocation, loading and leveling, performance management, and pipeline and capacity analysis. Such efforts often involve contractors and external preferred providers of resources in the virtual enterprise.

The final vendor vision criterion involves support services — the vendor's level of commitment to providing integration, consulting and other support. One measure of a vendor's vision is its reliance on third parties for integration, change management and other services. Over-reliance indicates a lack of commitment to excellence, which can result in uneven service by undertrained ESPs. Profit margins on services are relatively lower than for product sales, but PPM applications are not simple plug-and-play tools. Appropriate use of trained and committed third-party service partners can be helpful, but a willingness — and ability — to provide a full range of fairly priced services, and sometimes an insistence on their inclusion — and their price — shows a longer-term vision beyond the single deal. Positions in the market have been challenged by the cumulative events of recent months. The emergence of some potentially strong players looking to extend and "freshen" their product lines will pose a challenge. At the same time, some vendors have been weakened by the recent IT depression. Many innovations that were heavily weighted in evaluating vendor vision during past years now offer less differentiation. Market requirements will increasingly tie project and service planning and cost tracking to effective prioritization support, portfolio analysis, control and accountability.

6.1.2 Recent Developments

In a rapidly changing market such as PPM, some of the developments that take place in the course of a year pertain to individual vendors, some emerge from the demand side and others occur as a result of market trends. From the demand side, companies seem increasingly unhappy with applications that are strong in only one or two areas of PPM (such as time and expense) but weak in others. An inexperienced service or support staff and excessive dependence on third-party service providers are also cited as complaints.

The economic downturn has taken a toll on this market, leaving some vendors weakened, even as additional large players have entered this space via acquisition. Vendors' vision is challenged by users demanding functionally rich, well-rounded PPM solutions with services to match. Providers' ability to execute is challenged by large vendors from such adjacent markets as ERP.

Several noteworthy developments have taken place since mid-2003:

- *Artemis International Solutions* has launched a PPM line under a new framework called Investment Planning and Control. The applications target Information Technology Management (ITM), New Product Development (NPD), Fleet Asset Optimization (FAO) and Public Investment Management (PIM). Artemis has also promoted company veteran Patrick Ternier to president and CEO and raised \$9 million in the form of a private placement of preferred stock with an investor group that includes Emancipation Capital, Trilogy Software and Potomac Capital.
- *Business Engine* has resolved its senior executive question by naming acting CEO Douglas Dickey as CEO. Formerly the CFO, he brings stability to the executive ranks,

which had experienced CEO turnover twice in two years — the first via a well-planned and phased turnover, and the second via an untimely death. On the product side, v.5.2 focused on improved reporting, with a new central reports catalog and by abstracting its reporting technology. Business Engine will release a version adding workflow management of documents, integration with the new Microsoft Office Project 2003 (v.5.3) and support of Crystal Reports 9.0.

- *Compuware* acquired *Changepoint* in May 2004 (the acquisition was announced in April) for \$100 million cash (see "In Buying Changepoint, Compuware Enters IT Governance Market," FT-22-8434). Compuware is a \$1 billion-plus company with a focus on software testing and reliability, along with a growing presence in the AD methodware market with its Compuware Application Reliability Solution (CARS). Changepoint's integrated PPM product introduced Oracle 9 support in 2003 and offered improved prioritization and analysis features (see "Changepoint Gives a Portfolio View of Projects and Costs," P-21-5132). If the acquisition is handled well, with the acquired company maintaining semi-autonomy and the parent company increasing reach and innovation via R&D resources and sales support, it should boost Compuware's fortunes during the next few years.
- *IBM* announced in October 2004 (after the Magic Quadrant in Figure 13 was published) its intent to acquire Systemcorp. IBM plans to integrate Systemcorp's operations and PMOffice product into its Rational line of business to round out its line of products for managing software development projects and provide interfaces to other IBM tools (such as Tivoli and WebSphere). After closing the deal in November 2004, IBM changed PMOffice's name to IBM Rational Portfolio Manager. IBM states it will continue to support PMOffice customers, many of which are also IBM customers, and continue to offer Portfolio Manager as a stand-alone PPM product.
- IBM already held a small interest in Systemcorp and had spent substantial time and effort redeveloping PMOffice as a J2EE-based product supporting IBM's DB2 for use by IBM Global Services, a major PMOffice reseller, as well as Oracle databases. Rational Portfolio Manager will help enable IBM Global Services' enterprise transformation practices, which draw heavily on PPM.
- IBM's action, which comes on the heels of similar acquisitions by Mercury and Compuware, adds momentum to the PPM market, and could spur further acquisitions by other large vendors. IBM Rational may also develop and market Portfolio Manager narrowly to software development groups, not as a broad PPM product addressing a full range of business IT projects.
- *Mercury* has consummated its acquisition of Kintana and rebranded its product "IT Governance." V.5.5 has been launched, with additional project scorecards, portfolio "what-if" scenarios, some predefined IT workflows and executive dashboards. With this release, Mercury is also emphasizing a new Fast Start program for an introductory two-week implementation, providing a baseline of the project portfolio based on the major projects and a set of portfolio dashboards (that is, for IT and other stakeholders).
- *Microsoft* Office Project 2003 v.5.3 has been released, emphasizing integration with the rest of the Office suite and synchronizing release timetables with it. Microsoft is emphasizing collaboration features at the project team level, especially via enhanced Outlook and Sharepoint integration for calendaring, workflow and project document handling. Efforts to drive further enterprise (vs. team) sales of Project Server may have struggled as a result, but the company is laying a workgroup foundation. Third-party tool vendors and service providers will continue to address users' PPM needs with Project-

based solutions, although the PPM sales cycle and the level of training necessary for sales, implementation and configuration may limit the short-term success of Project 2003. Microsoft has also developed and promoted its Six Sigma Accelerator atop Microsoft Project, reflecting the trend toward using Six Sigma for quality management in service, as well as the manufacturing industries.

- *Niku*: With the launch of v.7, described as coupling "top-down portfolio analysis with bottom-up project, program, financial and process management," Niku has rebranded its product "Clarity." It announced the retirement of Niku Portfolio Manager (which was based on a Microsoft Java Virtual Machine that is also being retired). Niku has also introduced a "1-2-3" program for users to upgrade to Niku 6 or Clarity, promising popular pricing for those current on maintenance.
- *PeopleSoft* has introduced Program Management to its Enterprise Services Automation (ESA) suite, providing rollup of project data in the system, which leverages PeopleSoft Projects for effective project cost management. It has trailed the competition in some areas of PPM functionality (such as portfolio analysis); however, it has been improving with a module of ESA it calls Project Portfolio Management, which focuses on prioritization and alignment, rather than full PPM. Users seem to be combining PeopleSoft Projects with PeopleSoft Expense (for time and expense reporting). PeopleSoft has also released ESA Portal, which provides a role-based view into all ESA modules. With Oracle's announced acquisition of PeopleSoft pending, we expect ESA to be maintained and enhanced for the PPM for Professional Services market, while the Oracle Enterprise Project Management suite is the strategic PPM platform going forward for such segments as PPM for Construction, PPM for IT and PPM for New Product Development (see Section 6.2).
- *PlanView* became a Platinum partner of Business Objects, which indicates the increasing importance of an integrated view of portfolios, resources and costs in PPM and the need for advanced analysis and reporting functionality. Via the expanded alliance, PlanView is embedding Business Objects' data analysis and reporting tools into PlanView's IT PPM solutions. It also introduced a bridge to Remedy for enhanced support of help requests, it has a budding relationship with PricewaterhouseCoopers, and it has introduced a Six Sigma approach to its Prisms set of repeatable IT processes.
- *Primavera* completed its Evolve acquisition, organizing its product line into five PPM solutions: Primavera Information Technology, Primavera New Product Development, Primavera Professional Services, Primavera Engineering & Construction and Primavera Maintenance & Turnaround. It consummated an original equipment manufacturer agreement with iManage for the medium term, providing workflow and document management features. Primavera also leveraged Evolve's portfolio analysis features across its other PPM products.
- *ProSight*, a best-of-breed portfolio analysis/prioritization tool vendor, introduced an integrated Microsoft Project/ProSight PPM solution with its "Bridge for Microsoft Project Server" in 2004. In recent years, several full-fledged PPM vendors (including former ProSight partners) have introduced portfolio analysis/prioritization modules similar to — and sometimes modeled after — the ProSight tool. With the Microsoft Project Bridge, users of ProSight Portfolios in a standard FastTrack implementation can map data fields from the portfolio level to the execution of projects and services. This provides a more-complete PPM solution, which ProSight lacked. Because of this, Gartner has included ProSight in this year's Magic Quadrant. ProSight has been among the leaders in meeting U.S. federal government requirements from the Office of Management and Budget and the General Accounting Office for IT project justification.

- SAP's xRPM V2 emerged from the V1 "ramp-up" phase of SAP's rigorous product release cycle and into general availability in November 2003, with "referenceable" accounts in IT (including a major pharmaceutical company and a government IT organization). A "cross-app" for resource and portfolio management, xRPM is SAP's flagship composite application, using the NetWeaver development environment to integrate aspects of SAP with customers' tools and data. In addition, its cProjects 3.1 project management tool, now available for two years, is part of the xRPM environment and has become a capable project-scheduling alternative. SAP has customers using xRPM in three initial, focused business scenarios: PPM for IT, PPM for Professional Services and PPM for Product Development. With improved portfolio analytics and the ability to leverage SAP cost management functionality, xRPM is maturing as a product.
- *United Management Technologies* is a best-of-breed portfolio analysis/prioritization vendor (see "Cool Vendors in Application Development," COM-22-2094) that is offering its Portfolio Builder, Optimizer, Planner and Portfolio Dashboard modules. It is coming to market with a more-complete PPM solution that, like ProSight's offering, links to Microsoft Project for scheduling and tracking project execution. It is building referenceable accounts that Gartner expects will soon confirm it as a full-fledged PPM solution provider.

As part of their efforts to strengthen IT governance, IT organizations should leverage PPM applications to help:

- Justify costs and plan projects strategically
- Gain visibility into important projects
- Coordinate stakeholder decision-making
- Support estimation and process improvement throughout the project life cycle

Enterprises evaluating PPM products should recognize that further market acquisitions and new entrants through 2007 will affect their selections (0.8 probability).

6.1.3 Functional Areas for PPM Applications

PPM applications address most of the nine functional areas described in the PMBOK:

Three Core Functions: *Time management* deals with deliverable activity timelines and deadlines for programs, projects, tasks and assignments. *Resource management* involves the allocation of available personnel using a resource profile repository and enables resource loading and leveling (that is, natively or, at minimum, via third-party tool integration). *Cost management* tracks resources and other costs and facilitates the approval of project expenses, including those associated with billing, chargeback, travel, equipment or other material.

Additional Functions: *Scope management* involves preliminary requirements planning, including the definition of project deliverables. It may also include tracking proposals or estimates against actual costs. *Procurement management* supports the procurement of external resources (such as contractors) and project-related goods — including computer hardware.

Communication management involves data distribution (for example, discussions, e-mail and chat) and project intelligence gathering to enable participants to collaborate, maintain, manage and share project knowledge. Tools may include knowledge- and document-handling systems, as well as a workflow management tool and a template repository. *Risk management* takes a macro view of multiple projects to identify and quantify risk and cost value to select the right mix of

projects. Portfolio management tools can be used to balance risk tolerance with profit maximization to select the right mix of project portfolios.

Quality management involves the use of corporate or industry standards, methodologies, project models, standardized templates, project knowledge, and defined process efficiency measurements and metrics to ensure the quality, consistency and efficiency of executed projects and their deliverables.

Integration (that is, portfolio) management provides business intelligence to improve portfolio alignment, planning and project or service delivery. Dashboard tools provide an integrated view of program and project status, resource capacity, service levels, strategic alignment and other features. Integration can also include back-office systems. Portfolio data gathered enables companies and government agencies to manage their pipelines, report and forecast project progress, and perform analytics.

6.2 PPM for Other Industries

To project-intensive enterprises beyond IT organizations, PPM functionality has wide applicability, so that a range of vendors in some major market segments has emerged.

PPM for Product Development: Provides features for differentiated phase-gating of product ideas, monitoring product life cycles, and various integrations, such as product data management (PDM) tools. It characterizes PPM for product development applications (such as Integrated Development Enterprise's IDweb, MatrixOne's Matrix10 and Sopheon's Accolade).

PPM for Professional Services: Emphasizes billability and invoicing, multicurrency, professional development, customer management and pipeline analysis (such as for profitability). Applications include tools from OpenAir, QuickArrow and Tenrox, as well as some modules of ERP applications from vendors such as Epicor Software, Lawson Software and PeopleSoft. Other industries targeted by PPM vendors include construction, where Oracle and Primavera are significant providers, and utilities (that is, maintenance and turnaround), where Primavera and Welcom Software Technology are strong.

7.0 Conclusion

IT organizations should cultivate joint, interactive planning and prioritization processes between business and the IT organization. If business and the IT organization collaborate on effective joint planning (that is, with investment in the right places), then the company is likely to have above-average profit margins. Furthermore, an effective project office regularly engaged (for example, monthly) with an IT governance board or other decision-making body is a cornerstone of success in project and portfolio management. For larger firms, applications may make a significant contribution.

The dynamic PPM application market is poised for compound growth of 10 percent to 15 percent through 2008 (0.7 probability), as users look to tie their strategies to more-effective planning and control. IT organizations are under increasing pressure to justify and report IT project and other costs — for example, from Sarbanes-Oxley.

To improve system quality, as well as project and service delivery levels, evaluate PPM services and the project office organizational approach to providing PPM oversight internally and with ESPs. Consider also PPM applications using the criteria described in this report.

Appendix A. Acronym Key

AD	application development
CARS	Compuware Application Reliability Solution

ERP	enterprise resource planning
ESA	Enterprise Services Automation
ESP	external service provider
FAO	Fleet Asset Optimization
ITM	Information Technology Management
J2EE	Java 2 Platform, Enterprise Edition
LOB	line of business
NPD	New Product Development
PDM	product data management
PIM	Public Investment Management
PMBOK	Project Management Body of Knowledge
PMCC	project management competency center
PMO	project management office
PPM	project and portfolio management
SES	smart enterprise suite

This research is part of a set of related research pieces. See "How to Meet the Twin Challenges of IT Project and Portfolio Management" for an overview.

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