

## Understanding Product vs. Project Portfolio Management

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Managing project and product portfolios involves a variety of data and activities. Companies that understand the differences and the overlap between these types of portfolio management will be well-positioned to judge risk vs. opportunity.

## WHAT YOU NEED TO KNOW

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Software for portfolio analysis and prioritization continues to grow in scope and variety. Increasingly, such functionality is available in modules of broader project portfolio or product life cycle management solutions. Assess your product development needs and the nature of product development projects compared with other types of projects in the corporation before deciding whether a single software solution for project portfolio management will fit your needs.

## ANALYSIS

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Managing multiple projects effectively and efficiently is an important discipline known as project portfolio management, but managing the product portfolio is an equally important, related, but distinctly different, discipline. The acronym "PPM" is used primarily for project portfolio management, but occasionally for product portfolio management, resulting in some confusion. The following clarifies the overlaps and the differences, and provides a decision framework as to how to use these disciplines in a complementary fashion and support them with software tools.

Planning and scheduling new products and projects is often performed in a fragmented manner, lacking an overall portfolio view. More-capable, disciplined (and profitable) companies study their product portfolios to understand market acceptance of products. They compare those products to new opportunities. They then evaluate the risks associated with the new-product development and weigh the trade-offs of risk vs. opportunity.

For new opportunities with the highest priorities, leading companies leverage common technology for multiple products. Effective product planning leverages resources for reuse, such as when one software development or electronics design effort can be applied across multiple products; knowledge gained from the development effort can be leveraged. Furthermore, for example, if a high-technology company prioritizes one set of products over another for development, the selection may determine whether the company will need to prioritize software development to use it across one product set vs. prioritizing electronic design, which would have had higher importance if the company decided to prioritize the other class of products. This will also influence priorities for engineering and manufacturing resources.

Based on these product priorities, these companies assess the nature of product development programs and identify projects that have the highest priority. Often, single projects can contribute to multiple product families that have a sound architecture. The availability and cost of resources with requisite skills to support those projects also influence the decisions. Therefore, decision makers must make trade-offs among projects and have a portfolio view that enables improved allocation of skilled resources and opportunities to leverage technology investments for priority projects. Management of the product portfolio affects planning, as products in the portfolio come up for replacement or enhancement, but extends further to address equally important issues of product profitability, product line balance (for example, between newer, more-profitable products and older, high-revenue producers) and more.

### Terminology

"Portfolio" refers to a set of like items that individuals or companies own and must continuously manage and update. For example, in financial portfolio management, individuals or organizations manage a set of investments (for example, stocks, bonds and commodities).

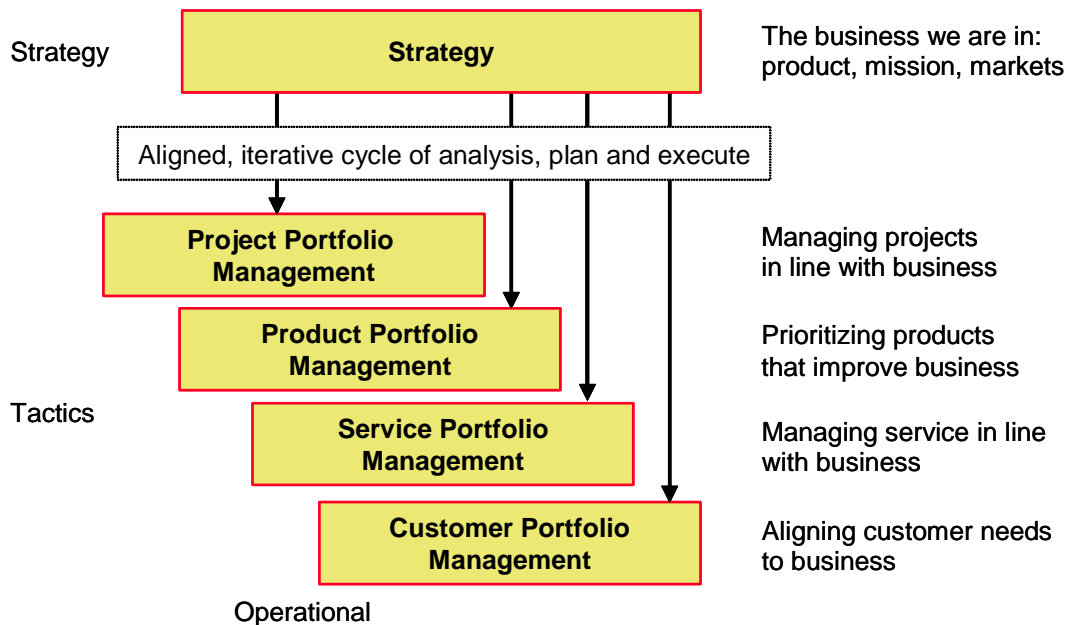
- *Project portfolio* involves managing a set of projects (for example, software development projects or new product projects).

- *Product portfolio* involves managing a set of products (for example, investment programs, insurance or healthcare plans, value meals at fast-food restaurants, stock-keeping units among retailers, consumer electronics products or automotive products).

*Portfolio management* refers to managing the broader scope of the set, rather than a single project, product or investment. In the case of project portfolio management, it addresses multiproject planning. *Product portfolio management* addresses a broader scope than product management and includes the sum of products that are: becoming obsolete, hopeful, being developed or that are needed but generate little revenue (for example, orphan drugs), or are cash generators.

Product and project portfolio management are interrelated when it comes to portfolio analysis and prioritization, with the aim of finding the right set of projects to yield the right set of products (see "Creating Project Plans to Focus Product Development," Steven C. Wheelwright and Kim B. Clark, Harvard Business Review, 1992; "Project Management: A Managerial Approach," Jack R. Meredith and Samuel J. Mantel, Wiley & Sons, 1995; and "Project Portfolio Selection Techniques," N.P. Archer, 1996). Portfolio management for products identifies the project needs. Project portfolio management influences the product portfolios based on capacity, time and resource availability (see Figure 1).

**Figure 1. Example of a Business Strategy**



Source: Gartner (May 2006)

### Decision Framework

The selection of techniques and tools to manage project portfolios or product portfolios depends on what a company is trying to address. If the company seeks to improve market presence, align product strategy with input from multiple organizations (for example, sales, marketing, service and manufacturing) and from suppliers and customers. To increase revenue by better managing the balance of products in its product portfolio, then applying techniques and tools to analyze, organize and control the product portfolio will contribute more to those goals. If a company also seeks to improve the use of resources during product development projects, reduce product

development and introduction times and decrease associated costs, then project portfolio management (PPM) tools and techniques will help companies plan, schedule and allocate resources to the right set of projects.

These types of portfolio management are interdependent, with decisions regarding organizational responsibilities taking precedence over application use. Management must make key structural decisions regarding organizational roles and responsibilities before PPM applications can become effective. We advise that enterprises first determine where on the continuum ("synergistic" to an "agile" or "autonomous" enterprise) they fall. Synergistic enterprises are generally more centralized, operating in a more narrowly defined market with more-cohesive product lines, and seek to gain efficiencies via integrated business processes, economies of scale and standardization. At the other extreme are autonomous enterprises, which are generally decentralized and operate in disparate markets (perhaps having grown by acquisition and in multiple regions), and seek to optimize business processes and decision making more locally.

After determining what level of decision making is appropriate and defining organizational roles and responsibilities, implement a process at the appropriate level (centralized, divisional, business unit or even product group). For example,

Step 1: Define product initiatives (in common format)

Step 2: Evaluate initiatives — with objective framework, for example, categories include mandated, strategic, net present value (NPV)\*risk, other

Step 3: Prioritize initiatives (to balance the portfolio)

Step 4: Match priorities to resources (per availability)

Step 5: Manage the portfolio (against goals and assumptions)

Only Steps 3 to 5 may be strongly supported via PPM applications, although capturing and tracking initiatives in Steps 1 and 2 is advisable. Do not expect to enter information routinely for the system to calculate a definitive answer. A system will not, for example, be able to determine whether a product initiative or project is mandated (for example, by legislation) or strategic (for example, per the CEO); however, the system can help with Step 2 evaluations (for example, calculating NPV\*risk, based on input assumptions).

Given that product and project portfolio management disciplines are interdependent, once organizational issues are addressed and processes understood, they can benefit from tool support.

- When requirements are concentrated on product portfolio analysis, new product development (NPD) methodology and resource allocation, consider PPM tools with a product-development focus (see Note 1).
- When key requirements also include product development collaboration, NPD workflow support and product design or product data tool interfaces, consider portfolio analysis modules of broader product life cycle management (PLM) solutions, which may also offer planning and resource allocation features.
- When key requirements also include multiproject scheduling integrated with resource management, project selection, tracking and costing, consider PPM applications that enable analysis of project priorities in light of resource availability, reporting of time and progress vs. plan, and that support defined processes (for example, workflow for approval of project changes). Such visibility can influence product strategy.

For example, managers might delay a product development effort because needed resources are involved in a more-critical effort, or postpone a proposed change because of its impact on other product development projects. Without such visibility, managers might assign critical resources to a new effort or change without appreciating the implications to the overall workflow within the company.

Software vendors combining product and project portfolio management functionality are positioning their capabilities for product development. From a theoretical point of view, they may be justified in doing so; for practical deployment, end users may be better served by vendors with more experience applying these techniques to product development. The varied and complementary resources in product development are not as interchangeable as assumed. Vendor's experience will influence the ergonomics of the user environment, vocabulary of the user interface and skills of support personnel. Some companies have product and project portfolio management requirements for integration with software specific to PLM and new product design.

Examine the trade-offs between the cost of software ownership, the business value of more PLM-specialized solutions, and the maturity of newer software variants targeting product development. If a PPM solution is effective in another business unit (for example, the IT organization or professional services), then consider implementing it in product development only if key requirements focus on multiproject scheduling and resource management, and not on product development collaboration, interfaces (for example, to PLM) or NPD methodology. Likewise, if a company is successfully using PPM software that originally targeted a product development environment, it may find that the software is not the best fit for other activities, such as IT projects.

## Key Facts

- Project and product portfolio management are interrelated with regard to portfolio analysis and prioritization.
- Effective product planning leverages elements for reuse.

## Note 1

### Sample PPM for Product Development Applications

Agile Software ([www.agile.com](http://www.agile.com)) — The Agile 9 platform helps enterprises manage their requirements, design development and manufacturing programs, and maintain the quality of established products and extended supply chains.

Artemis International Solutions ([www.aisc.com](http://www.aisc.com)) — Artemis 7 supports project management, program management, portfolio dashboards, resource management, financial tracking and pipeline management for new product development.

Centric Software ([www.centricsoftware.com](http://www.centricsoftware.com)) — Centric inherited this PPM capability when it acquired Technologies and ActiveProject. Centric rebranded ActiveProject as Centric Project and includes it in its "Product Intelligence" software suite.

CA ([www.niku.com](http://www.niku.com)) — CA entered this market through its acquisition of Niku during 2Q05. It positions its Clarity offering for portfolio management, program management and new product introduction.

Integrated Development Enterprise ([www.ide.com](http://www.ide.com)) — IDeWeb offerings include: project management; program management; idea management; and capabilities to manage processes, resources, costs and time.

MatrixOne ([www.matrixone.com](http://www.matrixone.com)) — The Matrix10 PLM environment features collaborative and life cycle applications. Product Central and other role-based modules are geared toward product planning, development and sourcing, and manufacturing enablement. (Dassault Systemes agreed to acquire MatrixOne on 2 March 2006. We expect the deal to close during 2Q06.)

Primavera ([www.primavera.com](http://www.primavera.com)) — Primavera Enterprise's Primavision module features a portfolio analyst tool, which gives managers a summary view of project data. Managers can view product development programs at many layers of detail.

SAP ([www.sap.com](http://www.sap.com)) — SAP's cross applications, xRPM (cross-resource and program management) and xPD (product definition), support resource management, program management and idea management.

Sopheon ([www.sopheon.com](http://www.sopheon.com)) — Accolade supports early stage decision making and resource allocation, and project and program collaboration.

UGS ([www.ugs.com](http://www.ugs.com)) — Teamcenter offerings include modules for collaboration, project management, requirement management and visualization.

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