

Project Portfolio Management

Using

Microsoft Project Server & Enterprise Project
Management

Preface

Most evaluations of Project Portfolio Management (PPM) systems focus on feature comparisons between vendor offerings rather than the operational issues that confront organizations in trying to obtain their benefits. This paper offers unvarnished commentary on the challenges and benefits encountered implementing Microsoft's Project Professional, Project Server, and Enterprise Project Management. The paper offers some realistic expectations which may differ considerably from what Microsoft or an integration provider talks about.

Focusing on just Microsoft's offerings allows this paper to be explicit in its discussion and critique. However, the discussion could apply to (roughly) a dozen other PPM vendors as the offerings are similar.

This paper assumes the reader is already familiar with the mechanics of project management and the general functions of portfolio management systems.

Introduction

Microsoft Project is the most popular project management tool in the market. Originally developed for internal use by Microsoft, the offering has been commercially extended and expanded over the years and is now a suite of offerings ranging from single project - single user to multi-project - multi-user, and from project management to the management of the enterprise value chain. The suite includes strategic and tactical elements found in Enterprise Resource Planning, Project Lifecycle Management, Business Intelligence, Product Portfolio Management, financial systems etc.

Microsoft's Enterprise Project Management offering competes with CA's Clarity-PPM, Hewlett Packard's PPM-Center, IBM's Rational Suite, Planview's Enterprise-PPM among others. Each product has its own strengths and differentiation, but further comparisons are not the point of this paper. *For a comparison of vendor offerings refer to "The Forrester Wave: Project Portfolio Management Tools" by Lewis Cardin available on the web.*

Project management is a complicated business process, and Microsoft Project has taken many arrows from practitioners who hoped for reduced complexity over the two decades of releases. While many improvements in the tool have in fact been made, scaling the offering to accommodate distributed work teams, web-based workflows, agile software methods etc. have added to its complexity even in the entry-level, single-project, desktop solution. When multiple concurrent projects, enterprise-wide asset assignment and capacity management functions are layered-onto the baseline project capabilities, increasing complexity is unavoidable. Learning how to apply these new capabilities and becoming skilled in using Microsoft EPM takes time and should not be discounted. This will be discussed further below.

Successful implementation of EPM highly correlates to the maturity of an enterprise's development practices. Companies with weak process management skills will not succeed with Microsoft Enterprise Portfolio Management or with most other enterprise-wide tools such as Enterprise Resource Management (ERP) or Customer Relationship Management (CRM). EPM tools do not create or define the project planning processes, but help communicate, coordinate and enforce workflows. If the existing process methods are random, then the result of an EPM rollout will be automated chaos.

EPM is not an "out of the box" solution to a business problem. There is considerable configuration, and often customization required to get the system running. The basic costs for the software licenses represent, on the whole, only a small portion of the total implementations costs. It frequently takes more than a year to implement even the initial stages of an EPM solution, so firms with short attention spans or those seeking quick fixes are not likely to be satisfied customers.

Once in place, PPM and EPM systems are "sticky" and difficult to move away from. Vendor support, mission stability and management commitment are needed to grow value from the investment. While

third party firms can assist in implementing or hosting a system, the enterprise must drive the planning, deploying and on-going governance.

This paper continues with the benefits and challenges in implementing Microsoft Enterprise Portfolio Management including Project Professional, Project Server and Project Web Access. This suite of offerings compares favorably to competitive offerings and is representative of the class of software tools available for a portfolio management solution.

Microsoft-EPM's strong points

License Cost

Microsoft Project's software licenses are inexpensive. The Project Professional client retails for around \$700 per seat and the Project Server starts at under \$5,000. For what these products do, this is appropriate considering what will be added to get them operational. Many EPM users report that implementation costs were many times the license acquisition costs; far higher than what they expected.

With the web access features built into Project 2007 and 2010, not every user needs a license. But customers typically buy more licenses than they need. There are likely thousands of unused and unnecessary Project licenses in existence.

The high failure rate of enterprise-wide systems (Aberdeen estimates the failure rate at 41%), a go-slow approach on license expenditures makes sense. As pilot implementation proceeds, a firm's ability to predict true licensing needs improves. Microsoft has attractive licensing policies that allow enterprises to ramp up over time and get credit for prior acquisitions. Hosted solution vendors will likely be flexible as well.

One version of the truth

The intent and philosophy of EPM is that all project and portfolio information is available from the Project Server database. One data repository means easier maintenance and much less reconciliation of variances between data systems. But the data comes from many sources.

The integrity of the data is a collective responsibility of the project managers, developers and product management. The IT department is not responsible for the underlying data integrity.

One version of the truth is a significant but hard to quantify benefit.

Accessibility

In a recently added capability, Microsoft provides secure access to project information via a web browser (the Project Web Access offering). Projects can be sorted / filtered and configurable dashboards allow drill-down into project details from anywhere in the world. The Project Professional client is not needed to view and interact with high-level project information. This global visibility is a big plus. Users who only infrequently interact with the system do not need the Project Professional client nor need they be highly fluent in its features.

Vendor / product stability

The history of this industry is characterized by consolidation and acquisition. Most of the major vendors got into the business via corporate acquisitions. IBM acquired the Rational, CA Clarity came from Niku, Hewlett Packard PPM-Center came from Mercury Interactive and Oracle acquired its core offering from Primavera. Microsoft is one of the few vendors to have developed much of their suite internally.

These vendors are large stable companies, and many now use their products for internal project governance. None is likely to be acquired by a third party. Nor is it likely they will abandon this market.

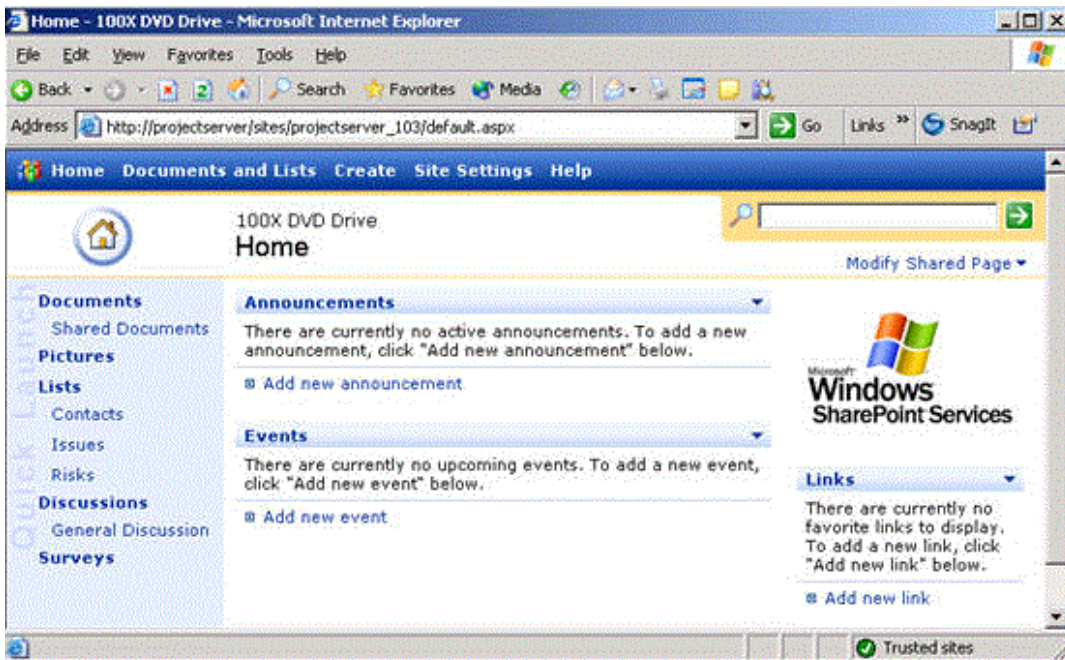
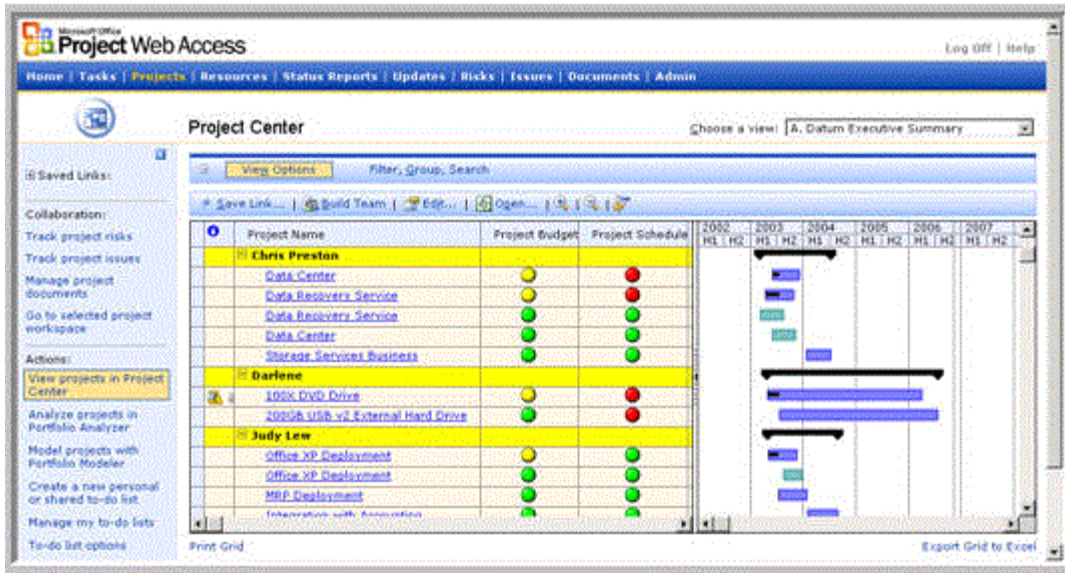
Microsoft's Project / EPM suite will probably remain the most popular portfolio management system for many years to come. As a consequence, there are more professional project managers familiar with MS-Project than any other system. It is relatively easy to recruit project management staff proficient with MS-Project. It is also relatively easy to lose this talent to others.

MS-Project has the largest support ecosystem. The server offering is available as a hosted solution from numerous application service providers. There is a lot of help available, both free and for a fee.

Microsoft has a history of continually improving its offerings, and this has been true for the Project suite. For all the griping about its complexity and user friendliness, no competitive system is substantially better. Implementing an EPM system, with all the one-time acquisition and startup costs, requires an investment in people and training. Even for experienced Project desktop users, the new skills and features of the enterprise-wide products can take months to learn. Becoming proficient with Project Server's centralized resource planning functions, for example can take 5 – 6 weeks.

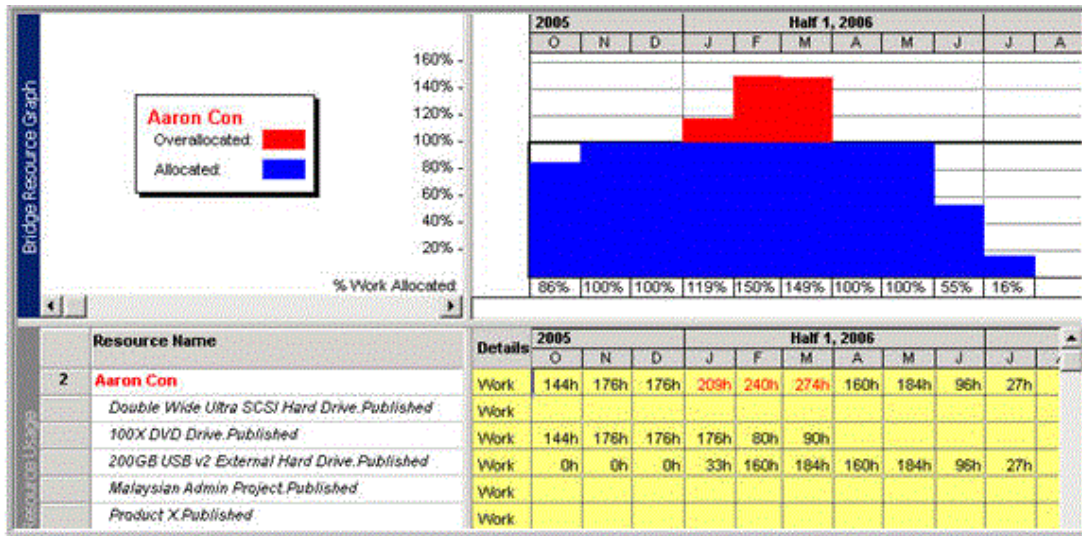
Collaboration

Project Web Access (PWA) is an effective way to collaborate. In Project Server 2007 and 2010, PWA is coupled with Windows SharePoint Services for team sharing and reporting. The two offerings have a highly consistent look and feel. Most developers and stakeholders find the integration comfortable and effective. For two products initially developed independently of each other, this turned out better than expected.



Portfolio Capacity Management

Microsoft Project Server provides a means to graphically view global resource load balancing. This is one of the most highly promoted features of the offering and its major advancement. Visibility into global asset assignments and projects helps stakeholder manage the organization's capacity for work.



Capacity can be viewed by project, by resource, by resource type, by department or in various aggregates. Visibility into constrained resources is a huge boost to project manager effectiveness. Unanticipated resource problems on one project can create a cascade of conflicts on downstream efforts and affect the delivery of multiple projects. Capacity management visibility provides time to adjust tasks and avoid the upcoming conflict.

While the graphics are useful, getting there is a bit clunky. Adjusting assignments to evaluate alternative solutions takes numerous steps on multiple screens and a “recompile” of the data before the revised graphics can be displayed. The functionality is non-interactive and not as helpful as it could be, especially for real-time decision support or scenario discussions.

Portfolio Analysis

Another part of the EPM offering helps stakeholders establish the value of projects. Stakeholders are led through screens that define and characterize the enterprise’s business strategies and operating tactics. EPM uses a multi-variable decision theory known as the Analytic Hierarchy Process (AHP) to quantify the subjective and objective attributes of projects under consideration. *For a detailed discussion on AHP, refer to Wikipedia on the web.*

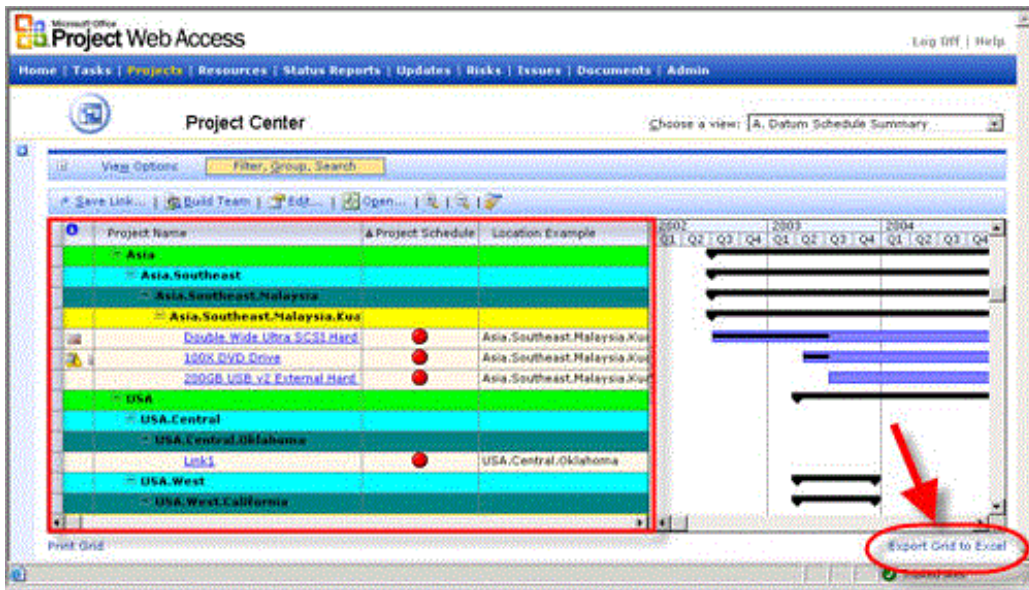
EPM uses a Wideband Delphi method to score the quantitative and qualitative factors that establish project valuation. This established quantification method is also described in Wikipedia. The resulting scores create the initial project ranking. Other methods will likely be added in future releases.

Frequently EPM’s portfolio analysis results in a clustering of projects around a particular value score. When arbitrarily small values separate clusters of projects, stakeholder intervention is needed to reconcile the rankings. While EPM administers this entire work flow, it is not be as user friendly as some wish, nor does it consistently facilitate arriving at the best final result. For example, a graphical

representation of the relative values between subsets of projects might have been a useful addition, especially as a collaborative decision support tool.

Excel exports

Microsoft Excel is the preferred analysis tool for just about everyone including project managers. Regardless of how easy it is to view data in a browser or on a server, employees want to analyze local versions of the dataset. The Microsoft Project suite allows virtually any table or worksheet to be exported to Excel at the click of a button.



EPM's Process Challenges

It's the people, stupid

This section starts with people and culture, the most important challenge to consider when contemplating the Microsoft EPM suite. Some of the issues are prerequisites, practices that should be well established prior to piloting the software. Others are cultural red flags warning signals of difficulties ahead.

Installing the entry-level Microsoft Project product is a choice often made by an individual project manager for their own personal use. Within the firm, other project managers can make the same or a different tool choice and each instance can operate effectively and independently of the other. But when departments or business units seek to share resources between project managers, tools that do not talk to each other become a limitation. Further, when enterprises want to evaluate their current and future development portfolios or allocate their worldwide development assets effectively, project management tool and process consistency is required.

Achieving process consistency is far more challenging, time consuming and expensive than bringing in Microsoft EPM software. It is a huge mistake to believe that EPM systems will by themselves create harmonized practices. People and cultures are surprisingly skilled at subverting unwanted software systems. Roughly forty percent of enterprise-wide software tools (ERP, CRM etc.) fail in implementation, primarily because of people and cultural resistance. So what are the cultural warning signs to look out for?

- 1- A culture that does not distinguish bad news from bad performance
- 2- A management culture that tends to shoot the messenger
- 3- Management that is unaccustomed to managing by the numbers
- 4- A management culture that seeks quick gratification on new process initiatives
- 5- The culture that creates initiatives yet fails to maintain support and commitment over time
- 6- A culture that undervalues staff training or process engineering
- 7- A culture that undervalues system administration and maintenance

It is interesting to note that the above list mostly deals with management practices.

For Microsoft Project Server and EPM to deliver value, it must be the data repository for all the projects and assets it is being purchased to analyze. It must contain accurate data and be authoritative. In most cases, it must be the sole data repository.

To accomplish this, everyone involved in EPM activities must become skilled with Microsoft Project Server and EPM facilities. This does not mean that there are not different levels of training and skills. But it does mean everyone, management too; no exceptions. If you think this is easy, you are probably going to stumble badly. Microsoft Project Server customers report that implementation costs greatly exceeded their estimations. User training is a big piece of this.

Customization

This brings up the topic of customization. To clarify terms, customization refers to custom programming, not the setting of the many configuration parameters that come with the product.

There are many third party integrators who can provide MS-Project server and EPM customization services. It is tempting to believe that this will ease the transitions between legacy practices and the EPM system.

We strongly urge caution. For one thing, custom programming drives the enterprise away from the standard Microsoft releases. Microsoft regularly makes improvements to the EPM suite, and one may want to take advantage of these in the future. Customizations will make this far more difficult and expensive.

Secondly, no matter how much customization is done, there will always be significant differences between a legacy system and the new one. It is a trap to think that customization will significantly reduce training costs and / or improve compliance.

Thirdly, it is a mistake to undertake customization without a firm understanding of the standard product and how it is actually being used in the organization. This suggests holding off customization until after the pilot phase, or even longer. Even then, stakeholder requests need to be rigorously tested for value considering the support baggage they create.

Global Resource Management

Project managers experienced with Microsoft Project have a new learning curve to climb when asked to administer global resources and portfolio optimizations. This task goes well beyond the mechanics of using the Project Server and EPM features and facilities. Strategic and tactical tradeoffs are at the core of portfolio management and the business skills needed may be beyond those of many senior program managers. These work flows require executive level thinking. The Chief Operating Officer, VP-Program Management or VP Product Management typically owns of the global resource management decision process. To evaluate the EPM reports, they must understand how the EPM tools work. The complexities introduced by Enterprise Project Management require training and on-going periodic use to keep skills sharp. The tool and global resource allocation process needs to work together smoothly.

The core issue is this; for stakeholders to do effective resource and capacity management, they have to know 80 – 90 percent of Project Server functionality, otherwise they are unlikely to do it well. The ability to create program scenarios, trade-offs and what-if cases are all features of the product, but are controlled through a long list of check boxes / switches with semi-obscure labels and non-intuitive interactions. Project Server and EPM are not like Adobe Photoshop, Excel or Visio where some value can be derived even with very little tool experience. EPM is a different beast.

Resource allocation and resource assignment are different processes each operating at different levels of granularity. The former serves a tactical objective, namely a high-level determination of whether an appropriate skill set is available to work on a project. The latter operates at a lower, more detailed level and determines which specific resource is assigned to what tasks over what timeframe. The two processes are comingled in Microsoft Enterprise Project Management which makes the tactical allocation analysis more complex and awkward than necessary. For example, to test different project and staffing scenarios, stakeholders must go to work breakdown structure details to enable / disable efforts, then rerun the analysis based on the new task / load scenario.

Support costs

Microsoft Project Server, Enterprise Portfolio Management and SharePoint are SQL database systems that require support and administration.

As the system grows in breath of application, or deployment within the enterprise, systems maintenance and administration require staffing. A reasonable expectation is one systems support engineer to maintain existing capabilities and one systems support engineer to focus on expansion projects. In addition, one administrator is needed to handle hardware and database responsibilities such as security, access control, backups, updates, patches etc.

Conclusions

The Microsoft EPM suite clearly targets large, multi-business unit operations where contention over investment resources has been difficult to manage. In tackling this problem, EPM (and its competitors) introduce other challenges like process uniformity, culture and customization.

Like all enterprise-wide systems, EPM tools struggle in responding to non-linear business dynamics, for example corporate acquisitions. Careful planning and effort is required in any acquisition integration effort, but Microsoft EPM adds another system to the scope of necessary integrations. As already described, the timeline for this integration is considerable. Businesses that require fast response and adaptation to frequent non-linear events may be poor candidates for enterprise-wide systems.

EPM suites are best suited for command and control management operations. They are less suitable in decentralized environments dependent on the abilities of knowledge workers and teams to shape a business response. Where decentralized agility is important, these systems tend to be an inhibitor.

Finally, enterprise-class systems are unrealistically promoted by vendors. Cherry-picked case studies emphasize the low hanging fruit and rapid payback, and analyst reports overly emphasize temporary feature differences. Proper buyer diligence should include evaluations at multiple accounts with an extended history with the tools, and with similar cultures and markets.

Microsoft EPM and its competitors serve a valuable role in companies that can properly harness its capabilities. This paper has described the benefits and challenges of harnessing these systems.