Success in the Real World
The Phases of Project Portfolio Management

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Introduction

Portfolio management is a technique to evaluate how well an organization's investments deliver value to the organization. Though still in its infancy for evaluating resource, project and service portfolios, many organizations find these techniques useful to make IS decisions. To be effective and not just theoretical, portfolio management must be driven by secure, accurate and scalable tools to collect metrics. Without both the summary level across multiple projects and programs that management executives expect, and detailed activity and assignment information, portfolio management is based on emotion and guesswork.

Project management has become the core competency in an integrated suite of management solutions that offers relief from many challenges facing many of today's world-class Information Systems (IS) organizations. Evolving from the visibility project management has gained with executive management, the technique of project portfolio management is now being touted as a way to give financial and business managers of an organization the information they need for high-level strategic and tactical decisions. We suggest portfolio management is a worthwhile endeavor, but that implementing portfolio management practices will only be effective as the culmination of organizational resource and work improvements.

Project portfolio management begins with creating and monitoring project plans, and then goes through several distinct phases of development and integration before the benefits of portfolio management can become real. This position comes from our real-word experiences with some of the most innovative and committed IS groups within Fortune 1000 and leading organizations. While the fruits of portfolio management are a worthy goal, wise IS organizations recognize that phases are required, enjoy the benefits each of those phases brings, and use this knowledge to set expectations with their executives and other constituents.

Unique Challenges of IS Project Management

IS organizations have unique challenges that tax traditional project management techniques. Because the continued drive toward eBusiness means that IS has become ever more critical to the success of the organization as a whole, IS project managers face more pressure and visibility over failed initiatives. IS organizations are typically dealing with chaotic, technology-influenced projects which generate knowledge--a virtual product versus a bridge or a fighter jet. The quality of knowledge-generating projects is also most heavily affected by the skills and intellectual capital of the project team. People are key, yet human capital is the most constrained of the resources that an organization leverages.

Since IS projects are often unique, there exist few roadmaps to kick off effective management processes, as there are in some of the classical project management fields like aerospace and construction. Creating and leveraging knowledge-based communities of interest (COIns) is claimed as one way to offset the lack of process in the IS-project-management field. Yet knowledge management initiatives are themselves high-risk projects with typically a good business need, but hard-to-define return on investment.

We hear from IS organizations that want to learn what work they're doing for which clients, but it takes weeks of going to multiple management systems just to gather data, and more weeks to sanitize it. When they add new projects, these organizations want to know what the effect will be on existing projects. They ask to find out where their resources' time is going, and what percent actually goes to project work as opposed to support, maintenance, and standard activities. They wish to discover what skills are causing bottlenecks in project schedules. What are the skills gaps for the next six months? Twelve months? Eighteen months? They want a way to identify project risks early and create mitigation plans.

Today's IS project managers also have to provide accountability to their clients, their stakeholders, partners, even internal IS groups who support the lines of business within the same organization. Because of fierce competition from outsourcers and the drive to reduce overhead and enhance profitability, many IS organizations now find themselves having to justify their existence. Professional services organizations, who are in the position of selling their knowledge and expertise, must take special care to create accountability and generate revenue from billable hours and/or milestones met.

The Goal of Project Portfolio Management

A project portfolio is usually directed toward maximizing either benefits or revenues. IS groups typically analyze their portfolios by the value or benefit a project or program delivers to the organization. Professional services groups, on the other hand, typically evaluate efforts for the profit or revenue streams they bring. Each group tracks different metrics and uses different analytics, though a single manager may manage both types of portfolios. Portfolio management also requires that portfolio assets be categorized in ways to enhance to make sure that investments are balanced in terms of size, risk, and projected value and business advantage. For instance: investment, venture, core, discretionary, non-discretionary, process support, etc. are terms that can be associated with projects and other work. Managers make a judgement on the appropriate category as new work is added. It's important to note that often the lines of business, business units and divisions in an organization will see the same new project in varying ways, depending on their core competencies.

Investment analysis provides a way to dedicate resources to those investments with the greatest return and least amount of risk. Tracking opportunities early in the project lifecycle, helps new projects to be evaluated before they're authorized. Business teams can also compare initiatives on a long-term basis, adjusting the investment mix when needed, when priorities or strategies shift.

One of the other benefits claimed of portfolio management is that an organization can use resource capacity as one of the factors in project prioritization and feasibility analysis. We typically work with organizations

who wish to move from purely theoretical displays to performing effective, organization-wide actions that improve performance. They want improved productivity, realistic project schedules, and improved customer relations.

Phases of Organizational Maturity

Wise IS organizations know that a centralized management system that can solve the issues of IS portfolio management will also inevitably create a culture change. Making such a change should be an iterative process. From our experience, phased roll-outs help to contain the chaos, and creating a cookbook as you go helps to leverage and disseminate knowledge and experience.

Our customer roll-outs are typically structured around business units or (especially for global organizations) geographic locations. Setting expectations is a part of the business needs analysis. Successful organizations always start their roll-outs with a project plan, a dynamic one, recognizing that processes and business rules will inevitably change as the new centralized system is leveraged. At the beginning, portfolio management is only a carrot to drive the change, but with maturity, it does become an achievable goal.

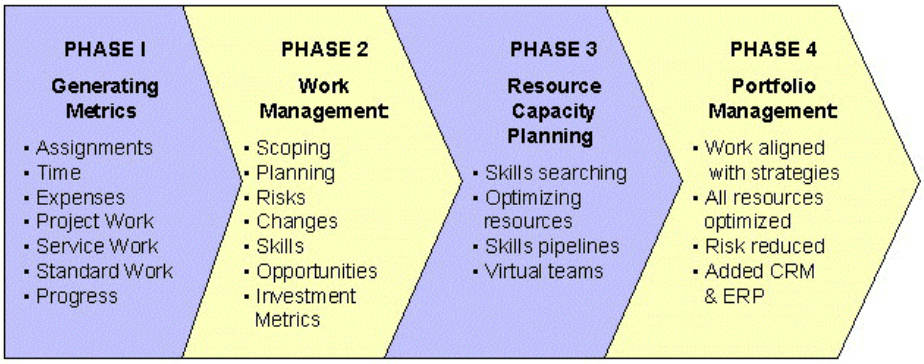

Exhibit 1: The Phases of Organizational Maturity

Our typical clients are mature organizations with a variety of legacy software tools and some organizational processes and governance procedures. They're also often globally distributed, and usually want to projectize their organization around virtual project teams to maximize resource productivity and gain value from the intellectual capital of their people. They've "moved past the band aid of their early project management efforts and are now looking for lasting benefit" (Meyer, 2001). The success rate for their new management initiatives is much higher if our customers acknowledge and work through the phases of organizational portfolio management.

Phase I: Generating Metrics

Time and Billing. The top-down technique of portfolio analysis is of little benefit without detailed activity and assignment information and metrics on the performance of the organization. We suggest that for IS

organizations to get their hands around the work being done and capacity of their people, there is no substitute for true metrics. Probably the cultural change with the most effect, time and expense accounting can be mitigated by choosing a web-based technique that takes only 10-20 minutes a week. Determining resource capacity is important, so team members should be allowed to log time against service and maintenance "buckets" as well as their project assignments, and the software tool used should also account for standard activities. For most organizations this includes vacations, holidays, meetings, training, etc. Setting up contract terms, if applicable, as they apply to timesheets, especially billing rates, begins to improve project accounting even at this early stage.

Leveraging these actual metrics on how your organization is doing and what projects and other work it has can help justify the new management initiative to senior managers. Our user organizations promise their senior managers a half-day training on the new software tool to learn to pull reports and status information from the new system. But this training isn't scheduled until there are at least 8-12 weeks of time and expense reporting metrics in the central repository. Training the executives is accomplished using actual production data. Instead of theories about what the new initiative was going to do, senior managers create status reports during training with actual, rich data.

Phase II: Work Management.

Resource, project and service management at the enterprise level is implemented in Phase II. The art and science of project management now comes into play for most of our user organizations. This can include best practices and work estimating, whether internal or a subscription service, issues tracking, formal risk escalation, and change management are also features that begin to be addressed in Phase II.

Revenue and performance analysis leverage the time and expense reporting and the project accounting from Phase I to new levels. Collaborative workplaces can help with content and knowledge management for project teams and across the enterprise. Opportunity and contracts management begins here to help align the new work of the organization with strategic business goals. The infrastructure for this is best served with a central repository that can be accessed in real-time by each of the many roles that support centralized management, and displays only the information and granularity their role requires. In his article on portfolio management in *CIO Magazine,* "Do the Math," Scott Berinato asserts that putting all projects into one database is the required first step of portfolio management.

Program and portfolio management starts becoming real with Phase II. It's important to provide managers, executives and other stakeholders, and contributors with information on their projects, service-level agreements, resources, opportunities, and budgets according to their role in the organization and their rights and authorities to the data in the central repository. Allow each user to create, save and modify filters that further group their data according to portfolio parameters across the organization, and then make sure they have quick and easy real-time status at varying levels of granularity. Typically, high-level information is what your senior executives want as they compare performance across multiple project and program portfolios.

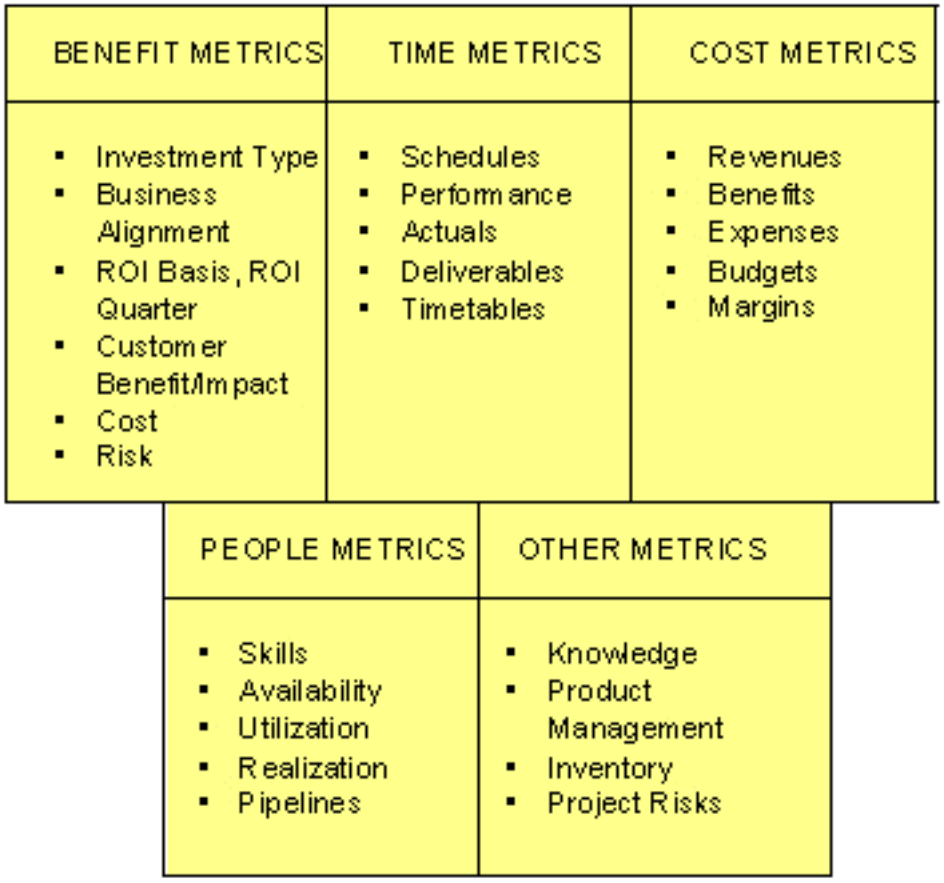

Exhibit 2: Five Categories of Metrics Helpful in Project Portfolio Management

Attaching to the projects in the central database some additional metrics or valuations for the purposes of filtering, sorting, and prioritizing can also be useful. Some of these can include: Future return on investment, ROI basis, earned value, actual versus project costs (both direct and opportunity), cost forecasts, expected returns, net present value, net present value adjusted by various parameters to give economic value, economic value sourced, strategic alignment, customer satisfaction, and more. There are also multiple techniques for identifying and storing these project scores. Valuations can be input. There can be a link to an external spreadsheet for external parameters, such as Cost of Money, or Internal Rate of Return. Formula-based valuation that supports the organization's unique management and culture can also be tracked and reported.

Phase III: Resource Capacity Planning.

Creating a skills database on the central repository is key, and should contain both staff and contractor information. Finding the right person for the right work is then supported by multi-variable searches (skills,

proficiences, rates, etc.) that can include true resource availability as well. For forecasting, a skills pipeline analysis can help drive recruitment and procurement initiatives.

Organizations we work with track not just major projects, but also: ad hoc projects, service work, maintenance and operations work, and standard work (vacations, meetings, training, etc.). Existing work is displayed in a management tool in a combination Gantt chart and resource histogram. Managers dynamically view and status all their work, by portfolios if wanted, and also see where resources are allocated work for other groups. From the metrics in Phase I, overbooking and under-use are identified. Even better is if they're displayed as a color-coded resource profile. The effect of new projects on existing work is then immediately apparent, giving managers knowledge about the reality of their project schedules at the time they are created so they can reallocate, push back milestones, etc.

A software tool called a resource scheduling engine is a key component of resource capacity planning. It integrates the skills database with a dynamic model of resource availability to create resource capacity planning. Managers can use the resource scheduling engine to search and allocate new work to the right person, knowing that the resource has project time available for it. A best-fit algorithm in the engine ranks resources with longer availability lower, so that they can be saved for longer projects. Flexibility is also important for the engine: availability for project work is often a key criterion of a search, but not a requirement. Since high-value resources are often redeployed from one project to another when priorities change, the interface for search criteria should be able to toggle strict availability on and off. At that point, the "soft skills" of the project manager come into play as they build a case with other managers for a constrained resource to be reallocated to their team.

Project Cost/Benefit Analysis

Project	Customer impact/ benefit	Project Cost	Business Alignment	Risk of project failure	ROI basis	Total Score
CRM Website	10	10	20	10	12	2.40 ✓
HR Server and LAN Upgrade	10	12	12	10	15	2.16 ✓
Install New Network Routers	20	10	10	10	15	3.00 ✓
PARMS Implementation	5	10	12	6	12	0.43 ●
PlanView & SAP Financial Integration	5	12	10	10	12	0.72 ●
SAP Oracle Server Migration	10	10	12	6	15	1.08 ▲
Strategic Systems Review	10	10	20	10	8	1.60 ▲
Tax Accounting Update 2002	5	10	10	10	8	0.40 ●
Update NT Servers to Windows 2000	10	10	10	10	15	1.50 ▲
Vendor e-Commerce Readiness	10	5	20	1	8	0.08 ●
Web System Development Template	10	12	20	10	12	2.88 ✓

Exhibit 3: A Portfolio Report Highlighting Project Performance.

Phase IV: Portfolio Management.

And here it is, finally. Portfolio management provides a way to dedicate resources to those investments with the greatest return and least amount of risk. In this stage, the business needs analysis and documents that often begin a new project are integrated deeply into the management of the organization. Only projects that align with the business goals of the organization are initiated. Customers, partners and other stakeholders are

kept integrated and updated, to the levels appropriate, on work that affects them. They receive reports monthly or even weekly on real-time status. Executives can make comparative analyses across all the work of the organization, or within groupings (portfolios) as they need. The effect of adding a major program, or even a lesser project, can be modeled through what-ifs and baselines. The organization is agile, and able to adjust for changes. At this stage, many IS organizations also successfully integrate project + service + resource management with a customer relationship management (CRM) process on the front end, and enterprise relationship product (ERP) management on the back end.

Conclusion

Portfolios are an effective way to use project management to support investment and performance decisions. Their use in IS project management is just beginning. We believe that just as important are the phases leading to portfolio management. Gathering metrics that allow an organization to get its hands around the projects and other work it has is a critical first step. Management processes to inform the governance models ensure resources are being used wisely. Performance tracking and collaboration help to execute the work in the most productive manner. The final result is an organization that has the processes and tools in place to initiate the right projects and reduce the risk of wasting its high-value resources.

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