IT Investment Management:
Portfolio Management Lessons Learned

A META Group White Paper

"The days when throwing information technology at a problem, produced business results are long since gone. Now, we have to be more and more careful with our IT investments, managing IT like a business. I don't know any other way, than IT portfolio management, to make that happen effectively."

Jane Walton,
IT Portfolio Manager
Schlumberger

Contents

Executive Summary 1

Introduction and Overview 2

The Need to Improve IT Investment Decision Making 3

The Changing Business and Technology Environments 3
Quantifying the Business Impact 4
Executive Pain Points 6

Current Market for IT Portfolio Management 6

Trends 6
Perspectives 8

Implementing IT Portfolio Management 10

Establishing Readiness 10
Goals of IT Portfolio Management – Driving Forces 12
Seeking Toolset Solutions 12
Measuring Success 14
Challenges 14
Benefits 15

Lessons Learned 16

Bottom Line 17

Appendix A: Glossary 18

About the Authors and Methodology 20

Executive Summary

As the IT organization's operating, maintenance and capital budgets represent an increasing share of the total corporate operating budget, chief information officers (CIOs) are under progressively more pressure to manage the IT organization as a business investment center. In doing so, CIOs and their business peers must rationalize investment choices and be able to manage the 'portfolio mix' of IT assets to optimize the value to the business. This means that the CIO must know, at any time, their:

- Current assets (hardware, software, and people) status and value
- Assets which are underutilized
- Assets that have a diminishing value
- Assets which are leverageable to increase value
- Program & Project status, schedules and dependencies
- Risks, benefits and cost impacts of all programs and projects under consideration and underway

CIOs must adopt a portfolio management methodology and related processes that allow for the effective and efficient categorization of all IT assets (including human capital). The portfolio management process should provide sufficient analytical data to support a means for prioritizing and sequencing the development and utilization of IT assets. Portfolio management should be established on a framework-based toolset that provides the decision-making analysis to balance investment risks and costs with business value. This toolset is necessary so the CIO can clearly articulate to the business the relevant risk-benefits tradeoffs and ensure the right projects are being funded, at the right time, at the right level of investment

This white paper provides a discussion of the benefits of adopting portfolio management through customer testimonials and case-study examples. It includes an overview of the hierarchical objectives critical for portfolio management, a review of the current portfolio management market segment, and demonstration of how to maximize the IT return on investment (ROI) by leveraging portfolio management tools and techniques.

This paper was commissioned by Pacific Edge, a software firm that provides businesses with project portfolio management solutions for the planning and measurement of project portfolios.

Introduction and Overview

Business spending on IT represents a significant piece of the overall business operating and maintenance budget. In good economic times, and increasingly more so during economic downturns, CIOs are under excruciating pressure to answer the question posed by the CEO/CFO and the board of directors: Is the business deriving the maximum value from its investments in IT? And in an economic downturn, it is understandable that the line of business executives, who have to ante up a portion of their budget to fund IT initiatives, will question if full value is being received from those IT investments.

Unfortunately, many of these same business leaders lack the information, processes, and toolsets to evaluate the IT investment portfolio and choose the appropriate options. This all too often leads to business edicts to reduce or contain IT spending across the board by some seemingly arbitrary percentage. With portfolio management, these cuts can be achieved by analyzing the business effects of individual line of business IT spending alternatives, and choosing the appropriate course of action based on financial realities instead of emotion. Therefore, savvy CIOs will adopt a portfolio management prioritization process that qualifies and quantifies IT investments and demonstrates alignment with an ever-changing business focus.

Whether consciously or unconsciously, all organizations are making IT spending allocations and commitments, sometimes, with little or no direct business involvement. Lacking a formal portfolio management methodology and toolset, determining which business projects are funded, given high priority and commitment of IT organization resources, can lead to a difficult and protracted process whereby the allocation, commitment, and prioritization of resources is achieved by those with the perceived political clout. In essence, “the squeaky wheel” or first in - first out approach often leads to the sub-optimization and inappropriate rationalization of IT investments that will not maximize the greatest return on investment. However, those who apply rules of governance and a portfolio management discipline will achieve much greater IT return on investment than their portfolio management-neutral or ‘agnostic’ rivals.

META Group research shows that companies with the ability to evaluate IT spending based on business impact and business value improve IT’s value to the business by over 25% annually. As a result, we believe that by 2005-06, greater than 50% of global 2000 CIOs will adopt portfolio management techniques and tools for IT project and asset management, and budget planning and monitoring. The portfolio management discipline enables the IT organization, with direct business knowledge, consent, and support, to target spending cuts and redirect increased investments to areas that improve efficiencies or clearly deliver business value to more strategic business units, thereby circumventing the politics of the ‘squeaky wheel gets the grease’ and a sub-optimization of IT assets.

As IT organizations face more project demand than they have capacity to deliver, the capability to make more informed IT spend decisions and project prioritization decisions becomes an increasingly critical business imperative. Gaining the highest business value from project resources necessitates tough project funding, allocation, and timing decisions. IT non-discretionary (core operations) fixed-costs generally represent a larger portion of the IT budget than projects, further driving the need for a comprehensive and integrated way to analyze IT investment options as they relate to project development costing, allocation, and deployment.

The need for many organizations to make increasingly holistic decisions, covering the lines of business units needs, corporate requirements, IT infrastructure stability, and local, regional, and global concerns, drives the need for new investment processes and analytical decision-support tools. The natural approach for most businesses is adopting IT portfolio management, which over the past four years, is growing at a compounded annual growth rate exceeding 20% in leading global 2000 companies.

The IT portfolio is a managed set of assets (hardware, software, human capital, processes and projects), mapped to investment strategies (based on risk tolerance and business goals), according to an optimal mix (the percentage or range of investment made in each business area), based on assumptions about future performance, (strategic and tactical growth expectations of the business), to maximize the value/risk tradeoffs (ensuring that the selected IT investments provide the desired level of business value for the cost and risk involved) in optimizing the organization's return on IT investment.

While portfolio management is not a panacea for IT organization/business alignment issues and not all business executives see the relevance of portfolios in IT management, when consciously pursued, it provides the enterprise (IT organization and lines of business) a disciplined framework to leverage IT management processes and IT asset investment and deployment decisions.

The Need to Improve IT Investment Decision Making

Several critical issues in defining the need to improve IT investment decision making are:

?? Understanding the business climate;
?? Quantifying the business value of good IT spending decisions;
?? Understanding the decision issues facing executives

The Changing Business and Technology Environments

"The shelf life of IT projects is 3 years, so it can't take 2 years to get out there. "

The business world now functions in "Internet time". To remain competitive, organizations must be able to anticipate, sense and respond to market changes, modifying products and services in ever shortening cycle times. Businesses must make more informed IT spending decisions faster and with a higher probability of success.

The top 20% of global 2000 CIOs recognize the need and have the ability to effectively implement IT strategy as a sustainable competitive advantage. This means that IT resources are allocated in line with business priorities, and opportunities and threats are quickly reflected in updated plans and budgets using techniques of IT portfolio management (sense and respond, rebalancing/shifting of IT assets).

As IT and business leaders are pressed to make IT investment decisions in shorter timeframes, the tendency to oversimplify complexity is a human trait that often is the only method to arrive at a decision. However, decisions made with minimal input must not compound risk by relying on false assumptions. Successfully predicting long-range outcomes will remain an art, but short-range analytics must increasingly be based on reasonably complete and complex models. Historically used analytical tools like Excel, are inadequate for the decision making tasks ahead.

In addition to the need for speed, our recent survey data shows IT organizations are facing a backlog of demand for IT projects resulting from 2001-2002 discretionary budget reductions. With flat to -2% IT budget growth for 2003, more chief information officers (CIOs) are adopting an IT portfolio management approach to the IT investment and project prioritization process.

Risk assessment and management are also increasingly important. If IT organizations are not assessing and aggregating the costs for high-probability, high-impact risks and factoring these into the risk/reward estimate for portfolio initiatives, only one side of the portfolio equation is being considered. Portfolio investment decisions based only on capital, implementation, and operating costs, without a concomitant focus on risk mitigation costs, result in unbalanced, uncertain future outcomes. The need for quick accurate decisions is demanding CIOs and business leaders provide more certainty to IT investment outcomes by enacting a risk assessment process that produces a risk contingency figure, based on mitigating aggregated major risks.

Quantifying the Business Impact

"Time is money and if we can get these things out of the chute faster there will be financial rewards for the company."

According to recent survey data, 60% of CIOs said the pressure to calculate return on investment is on the rise, while only 2% indicated it's decreasing. Almost 77% of the

CIOs who participated in the study indicated cost reduction as one of the return on investment metrics, yet no other return on investment method was cited by more than 60% of respondents. CIOs seeking to gain the mind share of CEOs/CFOs are adopting portfolio management techniques that go beyond measuring cost reductions. CIOs are beginning to espouse supplemental return on investment metrics such as economic value add, activity-based costing, and internal rate of return (IRR) to show business colleagues that they are capturing and reporting the economic benefits of IT investments.

CIOs are increasingly being asked to justify IT services, account for IT costs, and identify returns and value to the enterprise. While CIOs should justify IT expenditures, they must also avoid simplistic, short-term, cost-cutting measures that jeopardize strategic long-term business initiatives. We expect that in 2003/04 the top 25% of global 2000 CIOs will enable IT investment decisions through portfolio management resulting in exemplary records of continuous IT efficiency improvement, with some enterprises able to reduce costs by 20%-25% or more while improving effectiveness with enterprise-wide asset deployment and management. During that same time frame, toolsets advancements will enable better methodologies for improving decision modeling analytics.

CIOs who strive to maintain dynamic alignment between the business and the IT organization by adopting a portfolio management approach to balancing risk, innovation, and return on investment are helping reduce operating and maintenance costs by 20%-30%, while significantly increasing value. We expect that, through 2004, 60% of global 2000 CIOs will see their line-of-business colleagues willing (and proactively seeking) to invest money to save money, with a concomitant emphasis on reducing operating and maintenance costs.

Quantifying value, however, is not only about financial return. Important projects continue to get bypassed in many organizations because investment criteria focus only on return on investment (ROI), cost/benefit, or (worse) no pre-determined decision factors. As IT investment continues to experience intense scrutiny, selecting the right project investments becomes increasingly important.

Currently, 70% of global 2000 enterprises use single dimension criteria to quantify value (generally cost benefit analysis or some type of return calculation), while <10% use several levels of criteria (risk, lifecycle, return, planning horizon, etc.). The remaining companies still rely on a first come first served or squeaky wheel method of allocating resources to projects. Through 2003-4, IT organizations will evolve decision modeling for project portfolios to achieve higher returns from project investments. Decision models will continue to mature as portfolio management tools sets analytics mature, including additional criteria categories (term, scope, posture, etc.) that more closely mirror business environment complexities. Through 2005, investment in project portfolios will continue to grow slowly, demanding closer examination by the business to reduce the chance of investing in low-value projects. By 2006, >30% of global 2000 companies will use weighted, multidimensional project portfolio decision criteria as described below.

A valuation process (incorporating a prioritization and selection decision model) is emerging in IT organizations employing project portfolio management that includes various factors that are weighed to ensure the right mix of investments in IT projects. These multiple dimensions comprise term, duration, risk, size, scope, expense, posture, lifecycle, planning horizon and capabilities (see appendix A for definitions) to maximize corporate, line of business and shareholder value from IT project investments. Weighting varies by business and industry based on competition, regulatory restrictions, market position and long term business goals.

Executive Pain Points

"Senior management couldn't keep their finger on the pulse when everyone was using different tools and methodologies."

Making final decisions requires the business to compare the impacts and tradeoffs of each alternative against the goals to be achieved, however, business leaders frequently work with inadequate decision support information. Risk tolerance, business strategy, and economic and industry trends will all affect the final choices. The ability to model the affects of certain variables on the business fabric, increases probability of the right decisions being made.

The need for decision-making speed and accuracy exacerbates the decision maker's struggle of obtaining sufficient, useful information on which to base the decision within the available time. Being able to model the environment, and generate scenarios that illustrate the alternatives' impacts, greatly increases the decision maker's probability of making high-value decisions. In the absence of portfolio management, however, access to adequate information, in an easily usable format, generally frustrates this desire.

Current Market for IT Portfolio Management

Trends

Is portfolio management a mission critical process? *"Absolutely! It is one of our six mission critical processes"*

While the above quote represents a minority of companies (less than 5%), according to our recent survey data, IT portfolio management is one of the top five CIO processes to run IT as a business. As use of portfolio management grows slowly, CIOs are beginning to focus on the three C's of portfolio management: creating, capturing, and communicating how IT investments can increase EBITDA (earnings before interest, taxes, depreciation, and amortization) and ROI (return on investment) and how portfolio

management maximizes the business units' ability to add customer value and sustain growth and profitability. CIOs are starting to hire portfolio management staff with business acumen and an understanding of technology, who can create portfolio management processes, capture performance data, and communicate both IT investment and operational efficiencies to the business.

Repeating an IT trend of the 1980s recession, savvy CIOs are taking an introspective look at IT benchmark data and performance metrics, with a focus on IT value delivery. CIOs are beginning to:

?? Benchmark their IT organization and investment levels,
?? Adopt IT asset portfolio management techniques, and
?? Institute a performance engineering process that creates, captures, and communicates IT's return on value.

This prepares them to use empirical data to determine if the organization is invested properly and to clearly articulate the IT organization value proposition.

META Group sees that fewer than 20% of global 2000 companies have the portfolio management expertise or tools required to chart a course for competitive positioning through 2003. To turn this around, CIOs are increasingly providing their portfolio management staff with software tools for investment record keeping, performance measurement, and management reporting. Portfolio management software is being leveraged to provide portfolio management staff with time saving features important to asset management and prioritization, including portfolio rebalancing and the pooling of shared resources. A properly structured and tooled portfolio management staff can more efficiently provide the CIO with return on investment (ROI), return on assets (ROA) and return on equity (ROE) measures on IT investment selection/timing needed to fine-tune the portfolio management investment methodology and maximize expected returns.

Throughout 2003, leading global 2000 enterprises will extend existing project and program offices beyond the IT organization to create enterprise program management offices (EPMOs) to better manage application portfolios across the enterprise. By 2004/05, as these EPMOs mature, more effective EPMO organizational constructs will emerge that enable business users and upper management to better prioritize resource allocation across projects, infrastructure, and other areas. Improved project and program management tools will help support those efforts. Automated tools soon coordination across project management and asset lifecycle processes with portfolio management and analytics assisting global 2000 organizations in managing and prioritizing enterprisewide portfolios.

Another important trend, proactively managing human capital assets, implies adopting a portfolio management approach to sourcing, retaining, and managing people. The human capital portfolio should manage talents and skills in both breadth and depth. It will also refine the appropriate role of outsourcers and contractors as an ongoing exercise by creating a matrix of critical skills and periodically determining whether they should be

internal versus external. By 2004/05, more than 50% of global 2000 firms will institute a human capital portfolio approach to retain their best talent.

Perspectives

Project Managers
"At least I don't have to do 16 different status reports every month on my project anymore." Project Manager, Schlumberger

As portfolio management seeks acceptance alongside project management, confusion over the roles of both methods ensue. First-round attempts to clarify the differences resulted in simple aggregation of project requirements and resources into portfolios, leading decision makers to think that both disciplines are one and the same. Effective managers now see it differently: portfolio management is used to choose the right investments as they impact business performance (e.g., "do right things"); project management ensures that those investments are properly acted upon (e.g., "do things right"). Since most project managers are only interested in the success of their current projects, they need to be sold on the benefits of their active use of portfolio management.

Getting project managers on board takes time and a conscious effort to enhance their ability to be successful through the use of a portfolio management solution. Addressing the "what's in it for me?" question, several companies provide the following suggestions:

?? Some portfolio management tools provide a document management (really more of a document storage) system that can be used to help project managers by providing templates for project initiation, status reporting, schedule tracking, etc., with standard formats, and knowledge built into the tools.
?? Including human capital management into the portfolio makes it easier to negotiate resources for a project, based on skills, experience and availability, so less disputes between projects for specific individuals result.
?? It enhances intra project communications. Project team members like it because they have better visibility to the whole project, seeing status, schedule, changes, today's tasks, etc. in addition to how their project fits into the broader landscape of the business strategy.

IT Leaders
"It's the most obvious thing in the world. We should have been doing it for years." Previous CIO, Schlumberger

Alignment with the business remains CIOs number one concern after more than 5 years. Being able to engage business colleagues in holistic strategic planning (i.e. including IT), developing business-enabling project prioritization decision criteria, and improving awareness of IT investment choices are just a few of the reasons CIOs give for their push to improve IT/business alignment.

IT portfolio management provides a framework within which to more quickly create that desired alignment. As CIOs are better able to articulate IT concerns and questions in a business context, using business terms (the language of investment portfolios) and focusing on business value, their business peers are becoming more inclined to listen and engage.

IT portfolio management is giving IT and business leaders greater visibility into IT activities (where money is spent and where value is achieved). By analyzing IT asset portfolios investment/return, executives are improving strategic planning abilities (i.e., migration plans, value flows, performance targets, growth predictions). Leading companies are modeling portfolios (creating pictorial, graphical and numerical representations of options) to reduce risks and improve executive decision making.

Business Executives
"It's a project portfolio at this point, but we want to get 100% of IT spending into the portfolio." Executive, Georgia Pacific

"Portfolios improve quality of decisions, allows them to be made faster, with more confidence."

"Our executives have more confidence in project initiation estimates because of historical data and metrics from previous projects maintained in the portfolio management tool."

Business executives realize the highest value from IT portfolio management. Over 60% of global 2000 business executives require IT organizations to apply IT valuation methods to demonstrate business relevance of new or changed IT products/services. Project "break-even" dates are being required prior to project implementation and acceptance. By 2003/04, performance measurement within portfolios will enable tangible and intangible benefits to be monitored to validate project justification and hold business managers accountable for recurring benefits. IT portfolio managers will monitor IT projects as part of asset life-cycle management.

Business executives in companies already using IT portfolio management are becoming more knowledgeable about how IT impacts innovation and business growth, understanding the value and risk tradeoffs on investment decisions and how those decisions will impact the business. In short, IT portfolio management is allowing these managers to manage.

Implementing IT Portfolio Management

Establishing Readiness

"*No one is ever ready, you just have to start doing it*." Jane Walton, Schlumberger
"*Our readiness was determined by how much we were hurting.*" John Faria, BASF

While companies have vastly varying views of the processes and governance structures that need to be in place before starting IT portfolio management, our research shows unanimous agreement on the following:

?? An active, vocal, influential and committed sponsor leading a small group that provides functional area wide representation is the critical success factor;
?? It is more need (e.g. to cut costs, manage more projects, execute faster, provide accurate status more quickly) than readiness that causes businesses to start portfolio management.

Recent analysis of companies that have started down the IT portfolio management path shows some unexpected attitudes towards IT competencies required for IT portfolio management success. The following data represents responses based on hindsight, not what the surveyed companies had in place when they started. Companies were asked to indicate whether it was critical to have a capability in place before starting IT portfolio management, critical to develop it within the IT portfolio management environment, or if it was not critical to portfolio management.

Capability	Critical Before	Critical During	Not Critical
Standardized Project Management Process	10%	80%	10%
Change Control Board	10%	70%	20%
PMO	80%	20%	
Metrics/ Performance Group	35%	50%	15%
IT Steering Committee	80%	10%	10%
Risk Management		50%	50%
User Involvement in Decision /Prioritization Process	80%	20%	
Enterprise Architecture Group	50%	35%	15%
Defined Prioritization / Decision Making Criteria	20%	80%	

Given that META Group strongly believes that IT portfolio management is based on reducing IT investment risk, it is very alarming that half the companies surveyed view risk management as non-critical to starting or doing IT portfolio management. According

to published figures, North American companies are estimated to have spent more than $1 trillion on IT deployments and surrendered nearly $300B on late, over-budget, or failed implementations during the past three years (1999-2001). Many of the projects failed, not for lack of money or technology, but for lack of skilled project management and adequate risk management practices and because fewer than 20% of global 2000 have IT organization risk managers. As a result, we expect 30% of global 2000 CIOs to form an IT organization risk management function by 2003/04. The IT organization risk management group will initially focus on defining the risk ecosystem, instituting IT organization process controls, complying with government mandates, and determining how unresolved (residual) risks impact business and IT.

From the above mentioned survey, we learned that more mature companies (with more mature processes in the first place) put more emphasis on processes and governance being in place before starting portfolio management than did less mature companies, confirming what META predicted early in 2002:

> *"All IT organizations are ready for IT portfolio management. The differences in IT organizations' readiness are in their starting points and goals, maturity of existing IT processes, and the discipline they bring to the task. CIOs who spend time developing an IT portfolio management game plan that considers their capabilities and goals, have higher success rates with portfolio management startup, business alignment and value improvement. Many IT leadership functions enhance portfolio management. Since IT portfolio management is a practice that matures as it evolves from a communication improvement tool between IT and business to the primary management and decision process for technology, knowing the current competencies in these leadership areas provides clarity to appropriate next steps needed to develop portfolio management within the IT organization.*
>
> *CIOs reading the above table, and lacking many (or all) of these IT programs, functions and capabilities, should not despair. IT portfolio management is an evolutionary process and presents these CIOs with an excellent process and discipline within which to develop process maturity in these areas. Few, if any, IT organizations will implement fully mature IT portfolio management on their first pass through the process. While IT organizations with some or all of the above capabilities may mature IT portfolio management faster than those without, CIOs will benefit by establishing a clear view of the risk and reward parameters the business expects IT to perform."* Excerpted from Executive Directions research paper, Ready or Not! IT Portfolio Readiness (March 2002)

Goals of IT Portfolio Management – Driving Forces

"*Our overall objective is to improve visibility of project investments. Being able to easily create just about any kind of report is key." – Phil Burdett, Georgia Pacific*

"Our goals is getting the right people (properly trained), on the right projects (strategic to organization) at the right time (according to business priorities)." Ernie Neilson, Director of Enterprise Portfolio management, Brigham Young University

Survey participants indicate they started using IT portfolio management for different reasons. There are, however, common trends. Those companies currently using portfolio management toolsets describe the following goals from their business cases:

?? Create a single source from which to see all existing IT assets, initiatives, and potential investment opportunities
?? Provide visibility of IT projects to senior and middle management by providing the relative value of each project within the portfolio, rather just viewing each project on its own merit and status.
?? Select the best mix (holistic) of projects faster (Enable shorter, easier, more reliable initiation, evaluation and prioritization)
?? Facilitate executive decision making
?? Save money by prioritizing projects and assets relative to the overall project and IT portfolios instead of in their own right, resulting in fewer redundancies across projects and better sequencing of efforts.
?? Achieve demonstrably higher return on assets, resources and investments

In META's view, the goal of IT portfolio management is not simply to meet financial targets. Our research shows a conflict exists between IT investments and meeting short-term financial targets. An investment perspective should not be misinterpreted as a purely financial/cost cutting emphasis. Maximizing IT investments is accomplished by delivering only the most profitable IT products, and emphasizing overall productivity or financial returns on IT outputs. However, IT portfolio management must lead stakeholders from a short-range financial focus to a longer-range, holistic value management perspective. IT value is communicated in financial terms, but optimizing IT value must also manage subjective benefits (e.g., brand perception, customer satisfaction, staff morale, esteem value) and other so-called intangibles to maximize outcomes.

Seeking Toolset Solutions

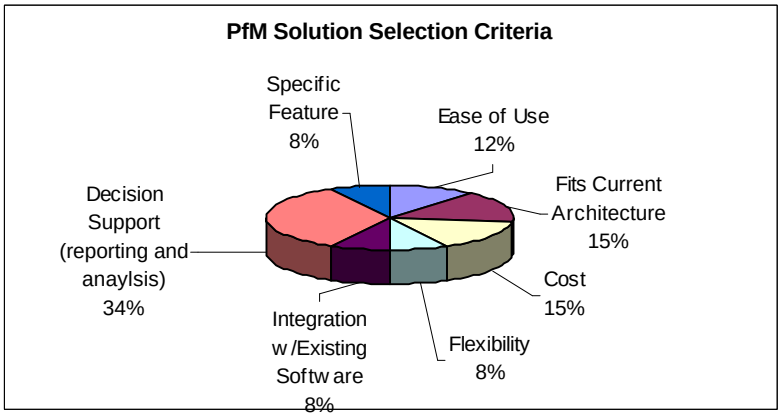
Companies not using portfolio management software fall into two categories: those just embarking on IT portfolio management with no formal portfolio processes and those with mature portfolio management processes (formal selection criteria, prioritization processes and structure, etc.) embarking on a solution search to automate. Both portfolio management maturity, which demands scenario/modeling and analysis capabilities, and

business demand for better decision support in non-portfolio environments, leads companies to explore portfolio management specific applications.

The difficult job of managing a complex portfolio (whether projects, asset investments, or other initiatives) is easier with tools that enable visualization of the portfolio across multiple dimensions. For decision support, portfolio management toolsets can help decision makers graphically model scenarios for each option being considered by adding, removing, or changing attributes. Analogous to developing scenarios in a portfolio tool is use of the Microsoft Excel loan calculator spreadsheet to gain decision input to mortgage selection. The spreadsheet represents a set of attributes (length of time, number of payments per year, interest rates, principle, etc.) or model into which various values can be placed until a combination that matches the goals of the individual interested in obtaining the mortgage is achieved or they realize they aren't ready to take on a mortgage! The portfolio environment will never be this simple to model, and Excel doesn't handle portfolio complexities due to the difficulty in developing the interdependencies between portfolio elements within the constraints of a non-relational environment. Portfolio management and analysis products, however, are maturing to begin addressing enterprise portfolio analysis.

Once the need for portfolio reporting and analysis is realized, companies beginning the search for IT portfolio management toolsets generally begin on the internet or by speaking with IT advisory firms. Common among all those evaluating software solutions is the need to reduce some pain within the business and IT. Our research shows that the criteria used to select a software solution are often quite specific to the pain the organization is hoping to ease. For example, companies with staff, skills and utilization issues, evaluation criteria focused primarily on employee time and activity tracking and reporting. Those with difficulties providing executive decision makers with timely project status reports, criteria narrowed in on integration with existing project management tools and summary reporting capabilities.

The chart below represents the most common criteria used by all organizations when selecting their IT portfolio management software solution.



In addition to these criteria, META encourages firms to ensure that:

?? Currency of data can be easily maintained

?? Process flexibility exists as many companies report that their portfolio management processes changed significantly as the company culture inculcated portfolio concepts. Had they been locked into a proscribed process, they would have outgrown their originally selected product.

?? Risk can be easily tracked at a summary level and on individual components within the portfolio.

Measuring Success

"If we can consistently estimate projects to within +/- 5%, then we'll be successful. Our portfolio management tool is providing the mechanism and information to do this. Without the tool, we wouldn't be able to achieve this."

Within META's portfolio management methodology, significant emphasis is placed on evaluating the success of portfolio management as a value-enhancing competency in addition to the success portfolio improvements brings to the business. Assessing portfolio management program execution seeks to answer the questions

?? How well is the IT portfolio management process being used?

?? What lessons learned can be applied to our process? and

?? Is the IT organization ready for this level (or less or more) of IT portfolio management?

None of the surveyed companies have developed this level of self-evaluation, however the following are the responses to how success of their portfolio management is determined:

?? ROA of 10%

?? Reduction in redundant projects

?? Staff productivity improvements (higher utilization)

?? Behavioral changes such as collaboration worldwide, consistent prioritization criteria used, and decisions tied to business needs.

Challenges

"We though our processes were in good shape before we started implementing portfolio management, but we had to work hard to update them to provide consistency across the company." Gary Melin, Trane Corporation

"Politics are grossly overlooked." Ernie Nielson, BYU

During the next five years, portfolio management adoption will face surmountable obstacles. Successful CIOs will develop strategies to overcome these hurdles:

?? Non-current business drivers will compromise model accuracy.

?? Individuals will fail in modifying existing project management tools to provide visibility into business reward and risk modeling.

?? Managers will fail to recognize that IT assets have a useful life and that such assets require an exit or replacement strategy designed and engineered as carefully as implementation plans are.

?? Because of the measurable performance details maintained, some staff, project leaders and managers will react negatively to IT portfolio management, seeing it as the "big brother" watching their every move.

?? Failing to learn from less successful ERP implementations, IT performance will be sub-optimized by implementing portfolio management without a concomitant focus on process.

?? The things decision makers will, by necessity, change. Oftentimes, an executive team will not be in alignment as to what "value" really is to begin with. Portfolio management processes must address the challenge of creating a common vision and set of definitions for value. Best in class portfolio management processes will help executives evolve their notion of value rather than setting it in concrete.

Benefits

"Every member (of the President's Council) can tell you anything about any of the 64 projects and the connections between projects."

"Team members can see what's happening on their project and other projects. They get better big picture vision and it's improved intra project communication"

"Our portfolio helped debunk the corporate myth that staff utilization was about 75%. Our human capital portfolio reveals its really about 55%. We can now do better resources estimates and have more on-time deliveries while working on figuring out and fixing why it's so low."

"This year our annual funding process used the IT portfolio to determine the appropriate IT investment level. Because the portfolio management steering team had been collecting project information all through the previous year and determining if they met hurdles, (evaluating them), when it came time to determine investments for the coming year, prioritization was easy because they already knew the projects. The steering team figured out which ones really needed to be done and then determined their comfort level in finding the investment dollars. IT funding went up to cover the projects the business chose. It was a big change from budgeting battles of previous years."

META research shows a laundry list of benefits accruing in organizations using portfolio management, many have been referenced throughout this paper, others include the following:

?? Executives have information they have never seen before, greatly enhancing their understanding of IT decision impacts and improving the quality of decisions. The value of IT to the business is less frequently questioned.
?? Managers more closely monitor costs and resources
?? Renegade (similar) development is greatly reduced, redundant projects eliminated and project scopes changed or combined with similar projects
?? The project taxonomy becomes more consistent
?? Connections between projects become more visible, enhancing resource use
?? A common set of goals and definitions are created around value, improving executives' ability to make effective comparisons

Lessons Learned

"It's not easy."

"You derive benefits based on the effort you put in to using it"

"Everyone is already doing this, whether its formal or not, so you can't sell this by saying "now we're going to start prioritizing projects and things will be better". You have to acknowledge the existing culture and processes to enable change and acceptance."

"Start by finding out what decisions makers need to improve their decisions and work backwards from there when implementing a solution and building delivery processes and mechanism."

"You'll change the way you do it several times as you mature – categorizations, reporting, decision making processes, etc. – so, make sure you set expectations for change and that your software tool is very flexible."

The following additional insights have been gathered from META's experience:

?? Ownership of the portfolio must be an executive level function to enable change, institute governance, and facilitate business decision making.

?? Be clear about the differences between portfolio management, program management and project management, (see Appendix A for definitions).

?? IT portfolio management must be integrated into the strategic and tactical planning and budgeting ecosystem.

?? Portfolio analysis requires specialized toolsets and collaborative processes.

?? An IT portfolio management tool with no clear IT portfolio management process will not produce the anticipated benefits.

?? Investment prioritization criteria must be instantiated in strong IT portfolio management governance.

?? Mature IT portfolio management processes drive the need for portfolio specific analysis toolsets.

Bottom Line

The case for investment management through IT portfolio management is clear. Managing the value of IT investments is where portfolio management pays off for the corporation. Cuts in IT budgets may be inevitable, but effective portfolio management ensures any IT budget decisions will be made with the requisite attention to business value, both short and long term.

Moving beyond return-on-investment decision criteria for IT projects enables businesses to invest in the IT projects that most closely match the desired business outcomes. Decision making about IT investment requires the business to understand the risk/value tradeoffs and their impact on the business. Balancing a project portfolio to ensure maximum benefit to the business requires consideration of various weighted factors that represent the complexities of the business environment, the capacity and capabilities of the IT organization, and the long-term goals of the company. Decision makers armed with reliable, easily analyzable data and IT portfolio management analysis tools are able to more quickly make investment decisions.

CIOs evaluating existing IT organization strength in areas such as program management, risk management, and measurement are positioned to capitalize on IT portfolio management by developing next steps that leverage present synergies. Where these disciplines do not exist, CIOs can use IT portfolio management as the process through which to develop them and the tool through which to fulfill them.

In conclusion, the IT organization consistently struggles to develop and maintain a close alignment with the business, thereby enabling better IT investment decisions and providing the highest value return to the business on those investments. IT portfolio management methodologies and toolsets enhance IT's ability to represent the trade-offs and impacts of investment options and provides the business with mechanisms through which those investments can be monitored.

Appendix A: Glossary

Global 2000: Top 2,000 companies worldwide, based on revenue.

Human Capital Assets (People): includes managing demographics, skills, proficiencies, work experience, location, career path and lifecycle (hiring, training, managing, reviewing, promoting, retiring/outplacing), succession, resumes, roles, project work, time and expense entry, etc.

Portfolio Analysis: Enables intuitive categorization, valuation and assessment of project and asset portfolios (and views) to optimize business impact. Functionality includes: risk, timing, and reward valuation techniques, budget control/impact, resource forecasting, user-definable, multiple views that highlight key comparisons (e.g., cross-portfolio interdependencies), and data import into a repository from relevant sources. Key is the ability to develop and to compare scenarios (e.g., what-ifs) that enable the selection of appropriate changes.

Process Management: Includes the ability to create and manage an inventory of best practice methodologies or approaches to ensure the execution of a consistent, targeted outcome that is in-line with business imperatives (examples could include but are not limited to processes for portfolio assessment, or life cycle management; COBIT, etc.). Core functionality includes procedural and event based workflow, intuitive editors, nested workflows, auto-escalation, conditionals, versioning, etc. Organizations should leverage methodologies to model future initiatives against past successful initiatives.

Program Management: Focuses on the ability to define and manage the interdependencies between projects, technology assets, people and business processes dedicated to a specific mission (for instance, CRM, supply chain, etc.). Functionality includes:

- Tracking: budget, timing, risk, value, resources and requirements to achieve program success and to support portfolio analysis;
- Viewing: capabilities and milestones to understand the interrelationships across projects, resources and assets to provide a higher level of abstraction and relevant business information.

As single projects become multiple projects that are then grouped into programs, complexities inherent in coordinating and managing them together grow astronomically. This functionality is useful to manage ongoing program support (maintenance, e.g., COE,

etc.) and evolving the business forward. While there are other "views" across the portfolio, the program view is significant enough that it is being called out separately.

Project: A time-bounded endeavor undertaken to create a unique product or service or to modify or retire an existing asset, product or service. "Time-bounded" indicates a fixed beginning and fixed end. Functionality should include project scheduling and planning, scope and change management, optimization and value.

Project Prioritization Criteria:

?? **Term.** A short-term project would be, for example, application development required to take advantage of a tax rebates available only for the current year. Long-term projects include changes demanded by regulatory bodies affecting applications and/or infrastructure and processes.

?? **Risk.** Business risk tolerance differs based on factors including aggressiveness, cash flow, ownership (public vs. private), etc. Within a business, however, risk factors and management process are usually known and outline what constitutes high versus low risk.

?? **Duration**. Tying up resources on a long duration project (2+ years) is a decision that generally is only made when other factors (regulatory, strategic benefit, high ROI, etc.) exist. Including this dimension in project prioritization helps focus on appropriate resource utilization.

?? **Expense**. Virtually all IT organizations consider this factor already, through spending authority, budget processes and cost/benefit reviews. As the sole criterion for decision making, however, it is exceedingly incomplete.

?? **Scope**. Unless customer intimacy if the primary value discipline of the business, projects with a global scope generally provide more value than those focused only on local outcomes. Within any value discipline, however, project decisions should consider the proposed solution's reusability (globally and locally).

?? **Posture.** Both offensive projects, like those focused on seizing market share, and defensive projects, that reduce the customer departure risk, are driven by lines of business tactics. As a component of a project portfolio, both can add value, provided other types of projects are also included in the portfolio.

?? **Planning horizon.** Juxtaposed to tactics, like those just mentioned, strategic projects are most often driven by corporate with the focus on business sustainability and improved management capabilities. ERP implementations are a good example of strategic projects and as many companies are finding, trying to justify ERP solely on cost benefit or return on investment is very difficult.

?? **Lifecycle**. Most frequently viewed as infrastructure (hardware) related (e.g. desktop refresh), asset lifecycles span the breadth of the business, including skills, applications, processes, business markets, and customer segments and will move through stages from new and valuable, to outdated and liabilities. Tracking the lifecycle of business components will provide project portfolio managers' awareness

of when it will become necessary to retrain, reengineer, replace, release or retire them and the project that will be spawned by those needs.

Technology Assets: The current state of hardware, software, and related management activities (e.g., maintenance) and include the following components:

- applications (supply chain, ERP, CRM, e-mail, collaboration, etc.);
- data and information (customer data, product catalogs, corporate data, process information, and documentation);
- infrastructure (servers, storage, networks, desktops, phones, operating systems, databases, and middleware);
- operations and services (network and system automation, process definitions and flows, help desk, command center, process support, consulting, engineering, security, etc.)
- human capital (IT staff, knowledge, skill sets, and human resource processes such as recruiting, training, career development, compensation, and resource allocation.

About the Authors and Methodology

For this white paper, META Group drew extensively from research from META Group's Enterprise Architecture Services, Application Development Services, Executive Directions service, (based upon daily, intimate interactions with and feedback from executives in large enterprises), and interviews with companies currently doing portfolio management. The analysts and consultants involved in the creation of this document have had extensive experience in developing and implementing IT portfolio management processes.

META Group helps companies make better information technology decisions by providing research and unlimited analyst consultation relevant to their specific business news. Offering advisory services, strategic consulting and interactive/research reports, META Group differentiates itself through a commitment to highly personal service (enabling "analysis in context"), bottom-line answers, and objectivity.