Multi-Project Management in Organization

A System Model of the Multi-Project Environment

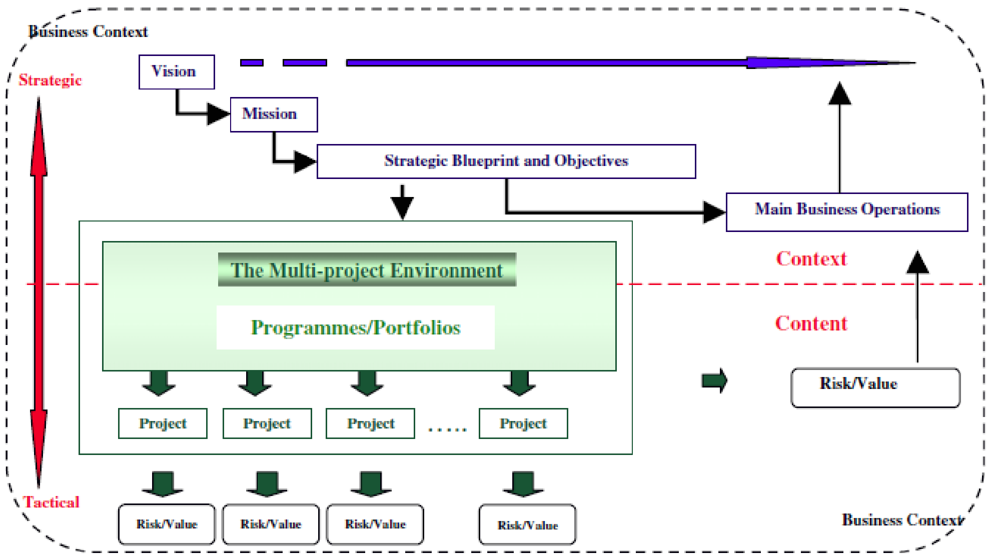

Fig. 2. A systems model of the multi-project environment.

Figure 1. A systems model of the multi-project environment

Projects Context in Organization (PMI)

Figure 2. Projects context in organization

Project management context in development of information system:

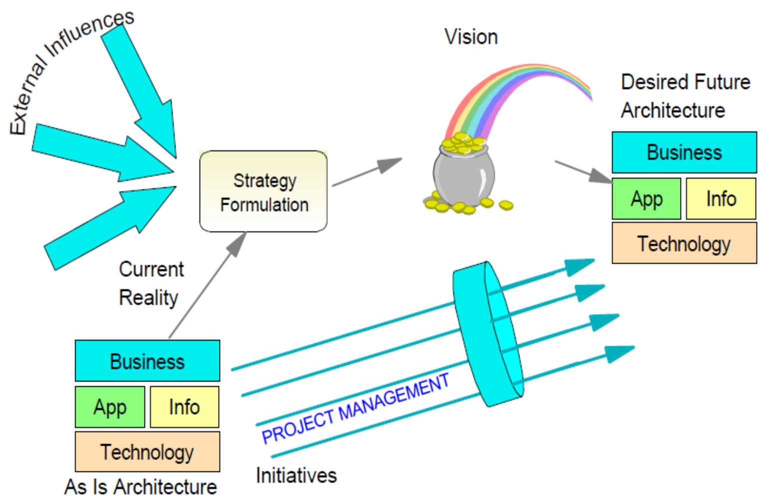

Figure 13 - Relationship between Strategy, Architecture, Program and Project Management

Figure 3. Project management context in development of information system

Organization of projects

- Project chain
- Projects portfolio
- Projects network

Pictorially:

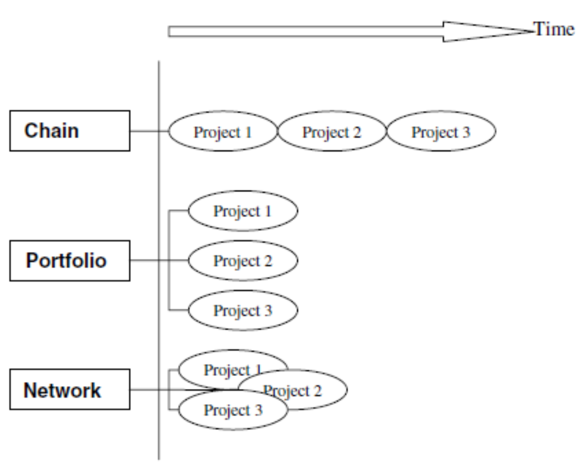

Fig. 2. Organisation of projects in programmes.

Figure 4. Projects organization I

Or like this:

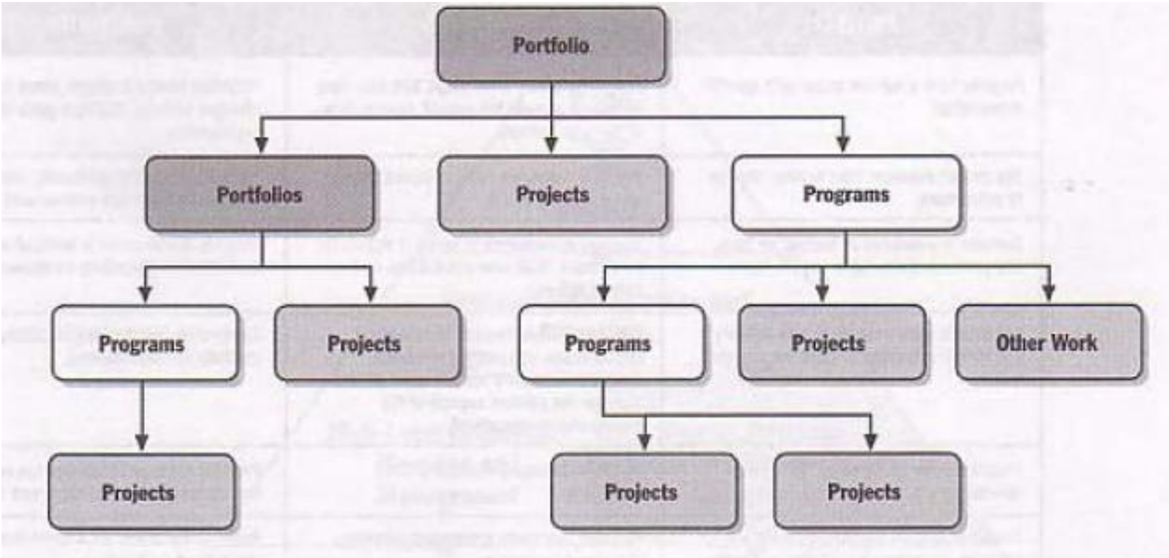

Figure 5. Projects Organization II

Portfolio

A Portfolio is a collection of programs and/or projects and other work that are grouped together to facilitate effective management of that work to meet strategic business objectives. Unlike a program itself, the projects or programs of the portfolio may not necessarily be interdependent or directly related. A portfolio may also be defined to contain support, operations, non-labor expenses, although those types of work do not have to be included if there are good reasons not to do so. The portfolio allows you to optimize investment decisions by prioritizing and balancing all work within the portfolio. For maximum effectiveness, a portfolio should encompass all of the work that draws on common resources such as that contained within an entire Business Unit or department. Work is not done at the portfolio level. Instead, the work is done through the projects, support teams and operational teams that are working within the portfolio

Program

A program is a group of related projects managed in a coordinated way to facilitate a level of management and control that is not available from managing the projects individually. Programs may include elements of related work outside of the scope of the discrete projects in the program. A program often implies that one or more projects are running in parallel with others. Thus, all of the projects in the program are related and all are set up to deliver portions of a very large deliverable or set of deliverables. Programs typically do not contain operations or "other work". If they do, it is only for a finite period of time when some deliverables need to be supported and run, while other projects are still working on other aspects of the final solution. A program could be contained within a portfolio, although the reverse would not likely be true

„Other Work“

Support work is work of an on-going service nature such as recovering from a service failure, fixing errors, answering questions from your internal users, researching questions and so on. Unlike a project, the work does not result in an obvious or manageable deliverable. Rather, it is a matter of some urgency requiring immediate attention, yet delivers value to the organization. Alternatively, the work may produce a stream of deliverables of such a minor nature that individually each does not warrant treatment as a project. The need to include this kind of work under the umbrella of a portfolio may be because the availability of the necessary technical skills is limited and must be drawn from resources otherwise available for the projects in the portfolio. Only in this way can the total capacity of the resources for the portfolio be estimated and managed.

Problems in Managing Multi-project Environments

- Project level activities - improper implementation of the pre-project phase; project progress monitoring is infrequent; too long projects
- Management of project-oriented business - project work is given a second priority and not rewarded systematically; no defined owner, business or personnel strategy for portfolio; rapid and recurring changes in roles, responsibilities or organization structure; many bodies are entitled to set up a project; “own” objectives of a unit
- Commitment, roles and responsibilities - unclear roles and responsibilities btw portfolio decision makers and the other parts of the organization; management does not seem to support project work; unclear roles and responsibilities at the project level
- Portfolio level activities - overlapping and non-integrated projects and tasks within one portfolio and btw portfolios; weak Go decisions: resources, value, and priority not considered properly; the roles and the responsibilities of a portfolio manager are not clear or digested; no feedback given to the project level; projects are not killed
- Information management - lack of information on projects. inadequate flow of information across organization; information flow from projects to other parts of the organization, and vice versa, is not defined; no common database of projects;
- Resources, competencies and methods - methods and guidelines for portfolio evaluation, and project planning and management are inadequate; human resource shortage, a lack of commitment and inadequate competencies at the project level; too extensive composition of a steering committee and a project team

Project Portfolio Management Methodologies as Solution

- The Standard for Portfolio Management (PMI, 2006)
- PortfolioStep Version 3.0. (TenStep)

Portfolio Management

"...the centralized management of one or more portfolios, which includes identifying, prioritizing, authorizing, managing and controlling projects, programs and other related work, to achieve specific strategic business objectives." (PMI).

Portfolio management is a business process that requires a set of detailed processes to be conducted in an interrelated continuous sequence. It facilitates decision making, through evaluation, selection, prioritizing, balancing, execution of the work, harvesting of benefits and feedback of results for process improvement. It presumes that the organization has a strategic plan, along with customary mission and vision statements, together with strategic goals and objectives (TenStep)

The three well-known objectives of portfolio management are:

- Maximizing the value of the portfolio
- Linking the portfolio to the strategy
- Balancing the portfolio

Pictorially expressed in Standard for Portfolio Management (PMI)

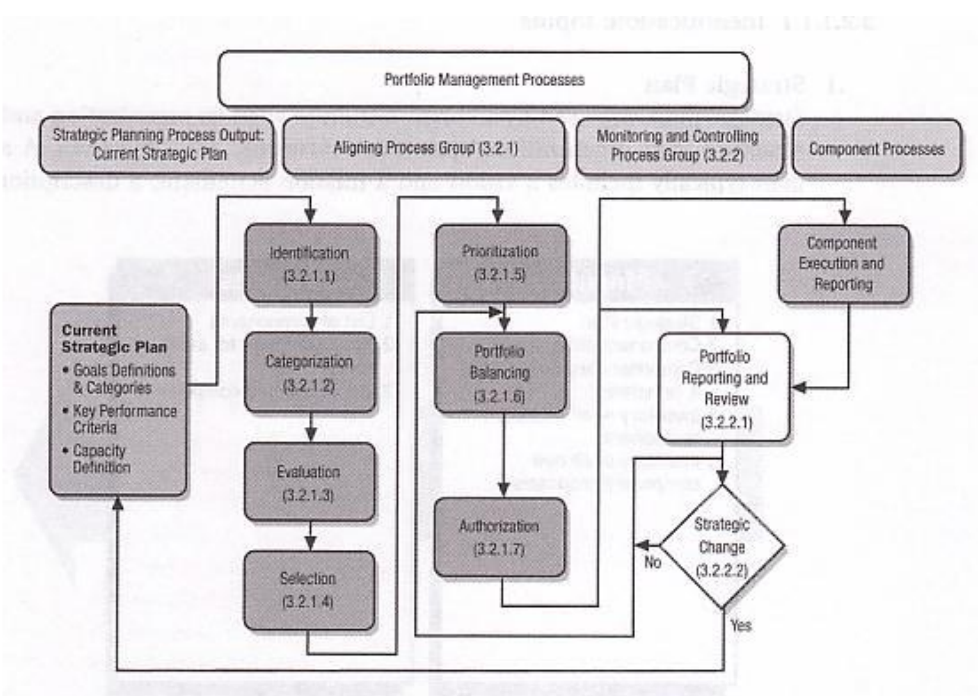

Figure 6. Portfolio Management Processes by PMI

In TenStep

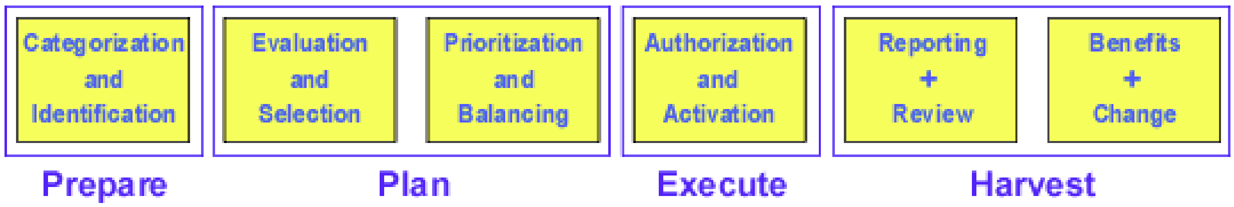

Figure 7. Portfolio Management Steps in TenStep

Step 1 – Portfolio Setup (Categorization)

Categorization - Aligned with the strategic objectives

- - Revenues
- - Increased profitability
- - Risk reduction
- - Efficiency improvement
- - Legal obligation
- - Market share increase
- - Process improvement
- - Continuous improvement
- - Business imperative

Step 2 – Identify Needs and Opportunities (Identification)

Identification - Define a common set of key descriptors

- - Component identification, number, name, description, etc.
- - Class of component- Project, Program, Business Case, Value Proposition, Sub-portfolio, Other related work
- - Strategic objectives supported
- - Quantitative benefits
- - Qualitative benefits
- - Resources required
- - Customer
- - Sponsor
- - Stakeholders
- - Timescale
- - Deliverables
- - Risks
- - Etc.

Step 3 – Evaluate Options (Evaluation)

Scoring models and graphical representations. The general questions to ask are:

- Is the option consistent with your strategic direction?
- How reliable are the respective Value Propositions, Business Cases and/or Project Charters? How reliable have they been in the past, given the nature of the business environment and the respective risks involved?
- In the case of each project, when will you get the benefit, not just the benefit enabler, i.e., the deliverable, but also the actual return on investment?
- How much will the component cost altogether, including production, marketing, ramp up and servicing?
- How risky is this whole project undertaking? Should you first invest in extra effort in the Business Case?
- If the project, i.e. the deliverable, is delayed, what will be the consequences?

Step 4 – Select the Work (Selection)

- Human resource capacity analysis
- Financial capacity analysis
- Asset capacity analysis
- Cost/benefit analysis
- Economic analysis
- Cash flow or pay-back analysis
- Financial sensitivity to risk
- Some other measure of benefit

Step 5 – Prioritize the Work (Prioritization)

Weighted ranking and scoring techniques. Ranking of portfolio components may be assigned according to some hierarchy such as:

1. Mandatory - You do not need to rank this work. It will all be authorized, although you may have some discretion in how much funding you provide and when the work starts.
2. Business critical - This category of work must also be performed; however, there is much more discretion in terms of scheduling, funding level and balancing
3. High priority - These projects are ranked in terms of value, urgency and alignment to your goals, objectives and strategy
4. Medium priority - As for high priority but at a lower level
5. Low priority - Everything else goes here. It is likely that anything in this category will not be funded

Step 6 – Balance and Optimize the Portfolio (Balancing)

Cost benefit, Quantitative, Scenario, Profitability Analysis and Graphical Analytical Methods. Portfolio Balancing is <u>the process of organizing the prioritized components into a component mix that has the best potential for collectively supporting and achieving your organization's strategic goals in terms of the benefits to be derived.</u> It means <u>establishing Balance Points</u> that require Executive decisions on the allocation of resources, financial or otherwise, between competing demands within a portfolio, such as between Operations, Projects, Other Work, and so on. The Balance Points may be set in terms of actual dollar amounts, but more usually are set in terms of percentages. For example, if you decide to keep high-risk projects to less than 10% of your portfolio, it would give a sense that your department is risk averse. Keep in mind that this balance represents your desired state

Step 7 – Authorize the Work (Authorization)

This process lists and sets aside requisite budget and resources to carry out the selected work. Actual authorization means that work has been approved by the Steering Committee and the managers that submitted the original requests are all notified accordingly. In most cases, work will be authorized pretty much as it was requested. In other cases, work may be released on a reduced basis. Either way, it is essential that the Steering Committee proactively communicate the funding situation so that managers can manage their work accordingly.

Step 8 – Plan and Execute the Work (Activation)

Management of the portfolio includes managing the resources, proactively communicating expectations, gathering progress status, confirming continued Business Case validity and project viability in terms of projected benefits. All resource allocation decisions are made in the context of how they will impact the overall portfolio objectives. The result should be that the performance of the entire portfolio is continuously optimized for the greatest benefit to the organization

Step 9 – Report on Portfolio Status (Reporting & Review)

The reason you gather portfolio metrics and feedback on resulting products is to determine if you are meeting your portfolio objectives and where you should be improving your portfolio processes. In general, the approach for measuring and improving the performance of a portfolio is:

1. Determine client expectations or help set expectations where none exist today
2. Establish objectives based on the expectations
3. Create performance targets (scorecard) that quantify the achievement of your objectives
4. Gather metrics throughout the year to determine how you are performing against your targets and to forecast whether you will achieve your objectives
5. Communicate the ongoing results of the metrics versus your targets to all appropriate stakeholders
6. Introduce process improvements as needed to ensure that performance targets and objectives are met

Step 10 – Improve the Portfolio (Benefits & change)

Over the longer term, that is, annually when products and other benefit enablers have been launched and the harvesting of benefits commenced, <u>the results of the Portfolio process can be collected. These results should be fed back from Operations to the Executive for information and to the Steering Committee for thorough examination and analysis.</u> These results should enable you to <u>assess the effectiveness of the portfolio process and propose changes to improve the whole cycle in the future.</u> Some of these changes may even imply or require changes in the Executive vision and strategy. Other changes may be focused on how the process itself is conducted but nevertheless involve any of the three main parts of the organization, the Executive, Project Management, and Operations

Roles and responsibilities in portfolio management

- portfolio manager
- project manager
- project sponsor
- steering committee
- project management office - PMO

Portfolio Manager

Is representative of the Steering Committee (Governance Board) to ensure timely delivery. Analyzes all of the current and proposed projects to determine and recommend a viable project mix, one that is capable of meeting the goals of the organization. Should constantly analyze portfolio performance and ways to improve it. This person plays important role in supporting the overall strategy of the organization and preparing information for Steering Committee meetings. Also evaluates new opportunities against the current portfolio and comparatively to each other, taking into account the organization´s project execution capacity. Regularly provides information and recommendations to decision-makers at all levels

Project Manager

Obviously, this is the person with the authority to manage the day-to-day work of the project. This includes leading the planning and development of all project deliverables and responsibility for managing budget, work plan and the appropriate technology management procedures and processes. Project managers should be responsible for managing a project from inception to closure as evidenced by successful delivery and transfer of the project's product into the care, custody and control of the Client or

Customer. Project managers are stakeholders in the portfolio management process, and may provide assistance though they do not have a formal role.

Project Sponsor

This is the person who puts forward project work during the Portfolio Selection process and has ultimate authority over the project if selected. For example, the Sponsor provides project funding, resolves issues and scope changes, approves major deliverables and provides high-level direction. He or she also champions the project within his/her department. Considers current and future business impact to the project effort. This person must be informed of project progress on a regular bases by the project manager

Steering Committee

This is a group of high-level clients and stakeholders who are responsible for prioritizing work, providing strategic guidance to the portfolio, prioritizes work for the portfolio and then monitors the portfolio during the year. If new work comes up or if changes occur in the authorized workload, the Steering Committee determines the impact on the portfolio and adjusts accordingly. This group may, or may not fall under the heading of PMO. However, if the Steering Committee is a completely separate entity, then the PMO can perform an important role in ensuring that members of that committee do not interfere with the day-to-day work of the project managers

Project Management Office (PMO)

Introduces portfolio management processes. Where there is any significant number of projects, it is simply not possible to conduct successful portfolio management unless there is <u>consistency of method</u> and <u>consistency in the resulting data being fed back to the management of the portfolio, that is, the Steering Committee.</u> This simply means that <u>there MUST be standard project processes and procedures in place</u>, and a PMO is the best vehicle to ensure that this happens. Where there are a significant number of projects, it is simply not financially efficient for every project to be carrying its own <u>contingency fund.</u> Better that these contingency allowances are identified and earmarked, but retained in a <u>central repository held within the PMO</u>. The PMO can ensure that <u>responsibilities are properly identified and correctly assigned.</u>

Portfolio Management (Information) System Model

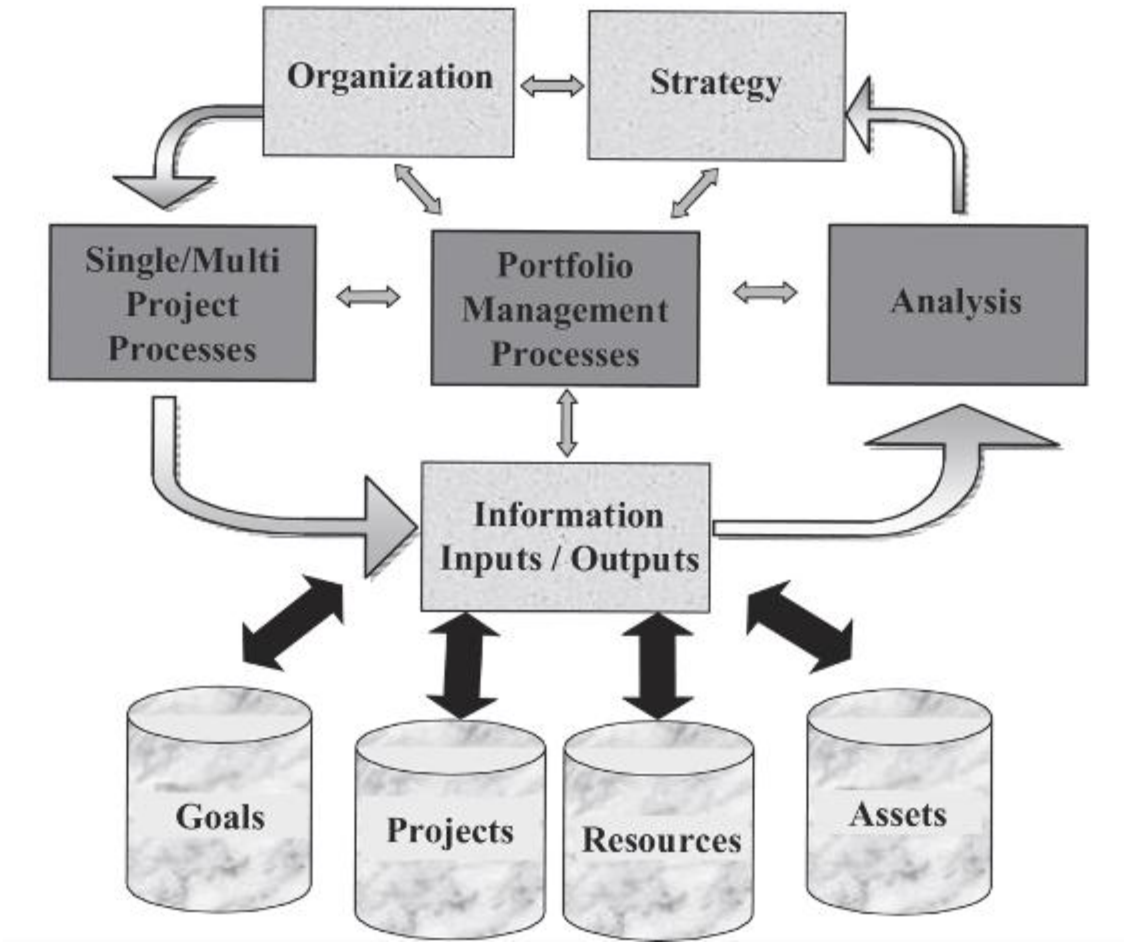

Figure 8. One Possible Portfolio Management Information System Model

The organization´s strategy is encompassed in a set of goals. To achieve these goals, the company exercises some kind of strategic planning process to determine the ideas it wants to implement to achieve those goals. The project portfolio manager supports the decision-makers by using processes such as prioritization, portfolio balancing, constraint management, and what-if analysis. The outcome of these processes is a viable project mix that every member of the executive team supports. Once senior management approves the project mix, there are processes to plan and execute the projects through the existing organization. The portfolio manager will be involved in project planning and execution to the extent that it has a significant impact on the portfolio performance. As data from the planning and execution of projects are analyzed, the portfolio manager uses monitoring and analysis processes to control and improve portfolio results through organization´s management resources. As a result of analysis, the portfolio manager transforms the data provided into information and recommendations to the portfolio management decision-makers – Steering Committee, Governance Board, etc. As new projects are proposed and current analysis and recommendations are acted upon, the portfolio and criteria for selecting projects are modified. The asset portfolio reflects the assets of the organization in terms of services and products, as well as infrastructure to support these sale of those products and services. Assets may include system applications, the hardware to support the software, buildings, or anything that can be legally identified as a taxable asset. It also includes those assets the organization has identified as essential to its business but not necessarily a taxable asset, for example the organization´s Web site.

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