Program Management

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Program Management

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1. Background and Definitions

A good place to start an introduction to the subject of program management is with some definitions and an explanation.

Many enterprise IT and business organizations find that they need to tackle large, complex efforts that combine the delivery of software elements, new and changed business models, and overall changes to organizational structure and capabilities. In some instances, within enterprise business organizations, these efforts have little (or no) software components.

Typically, these efforts involve planning and carrying out a number of parallel projects—that is, multiple work streams with their own requirements, and expected results which are components in an overall needed outcome. Managers are finding that "traditional" project-management approaches fall short for such undertakings (some of these shortfalls will be reviewed in this whitepaper).

Consequently, many IT and business professionals are turning to the substantial body of experience, and the smaller body of documentation, which supports the discipline of program management. This discipline describes approaches, strategies, mechanisms, and desirable results for managing large-scale efforts comprising parallel projects.

Having said a little bit about program management, let us look at some definitions:

Program

A program is defined, variously, as:

A portfolio of projects and activities that are co-coordinated and managed as a unit such that they achieve outcomes and realize benefits.

Source: Office of Government Commerce¹

A group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. Programs may include elements of related work outside of the scope of the discrete projects in the program.

Source: (draft) Program Management Standard, PMI²

What are the common elements in these two definitions? First, they both identify a "program" as being a group, or collection of multiple projects. Second, there is some implied overall leadership and control exercised upon all of the projects within the boundary of the Program. Finally, all of the projects within the Program boundary share in a common "set" of needed outcomes or results.

Now let us look at the definition used in the IBM Rational Program Management method:

A related "set" of projects with a common goal or success vision — under integrated management — consisting of people, technology, and processes, aimed at implementing significant business and/or technology change.

This definition shares all of the elements that are common to the first two definitions. However, it goes beyond them in two important dimensions.

First, the projects are "related'. That is, there is some linking bond, contents, direction, which they all share; and which excludes other projects that do not share this "link". Without this "link", it might be possible to randomly select 10 projects, and declare them a program, by managing them together.

Second, while sharing the common element of implied overall leadership and control, this element is made explicit by the use of the term "integrated management". This states (rather than implies) that the projects within the boundary of the Program are managed together, as a unit.

Program Management

Program Management is defined, variously, as:

The co-coordinated organization, direction, and implementation of a portfolio of projects and activities that together achieve outcomes and realize benefits that are of strategic importance.

Source: Office of Government Commerce¹

The centralized coordinated management of a program to achieve the program's strategic objectives and benefits.

Source: (draft) Program Management Standard, PMI²

Again, the common elements in these two definitions are those of "coordination" and of benefits and results, which matter at the strategic level of the organization undertaking the Program effort.

The definition of project management used throughout the IBM Rational Program Management method:

A management discipline, process, and role-set which directs, integrates, and focuses the work effort of program constituent projects; and which contains overall responsibility for the achievement of the strategic outcomes and results defined by executive management for the program.

This definition also shares the elements common to the two other program management definitions; those of coordination (implicit) and a need to achieve benefits.

It provides, however, more qualifications of the dimensions of program management, as including a discipline (a body of approaches, practices, and knowledge previously proven to be effective), a process (a work lifecycle); and, a set of well-defined and understood roles (which segment and enable work).

This definition also specifically charges the exercise of program management with the responsibility to achieve needed results as defined by executive management.

2. Enterprise Business Strategy — A "Typical" Originator of Programs

For many years, businesses have defined and used processes to create and qualify goals that they must achieve in order to prosper within a specific time period.

With review and discussion, the business' understanding of its goals evolves, and the business records the goals, and the evolving understanding of them, in a document called, typically, the Enterprise Business Strategy. This document acts as a blueprint of the business' goals by spelling out the expected results that, once achieved, will allow the business to prosper.

As a business constructs, discusses, and refines an Enterprise Business Strategy, its focus shifts from answering the question: "What goals and their specifics must we achieve?" to answering the follow-on question: "What mechanisms will we create and implement to enable us to reach these goals?"

One of the mechanisms a business creates takes the form of a "Program". As mentioned, above, a program (or Program effort) is:

A related "set" of projects with a common goal or success 'vision', under integrated management, consisting of people, technology, and processes, aimed at implementing significant business and/or technology change.

A program is, then, a "device" or a "mechanism" (one among a number) that is used to both frame and to drive efforts to succeed in achieving some goal(s) (or goal components) in the Enterprise Business Strategy. The size (which we have not yet discussed) and potential impact of the results achieved by a program, often (but not always) cause it to be associated with some component in the Enterprise Business Strategy.

3. Program Characteristics

Let us move beyond the definition for a program, and, draw a "picture" of it, by identifying and discussing some (but not all) of the characteristics of a program.

We will explore the characteristics of a program in four dimensions (no particular order):

- Size (in multiple dimensions)
- Organization and Structure
- Nature of the Undertaking and Needed Results
- Risk Scale

Program Size

Typically a Program effort is *large to very large* when measured, for example, in terms of the overall number of work hours consumed, the associated budget in absolute dollars or yen (or other currency), and the number of staff assigned.

It may also be considered *large to very large* as described in terms of the percentage of total available resources it consumes, the percentage of infrastructure devoted to it, and the percentage of available floor space it consumes.

What is considered *large to very large* as a size dimension? The answer will vary from one organization to another. Here are some examples of programs, and, these may help to provide a scale for "large to very large":

- Development of the B2 Spirit Bomber (United States Air Force)
- Development of the Aegis Cruiser (United States Navy)
- Manned landing on the moon (United States of America)
- Development of the A-380 passenger plane (Airbus Industries)

Program Organization and Structure

As stated in the definition of a program, it is comprised of multiple projects. Each of these projects has its own project manager, work plan, and assigned set of deliverables and results. It is the Program that provides an overall framework that contains and integrates the work of all of the constituent projects. There is a single program director/manager, an overall program plan, and an expected set of needed results and outcomes for the entire effort, in which the results-sets of each of the projects participates.

An organization chart for a program might look like the following:

Samples

The Renaissance Program Organizational Model

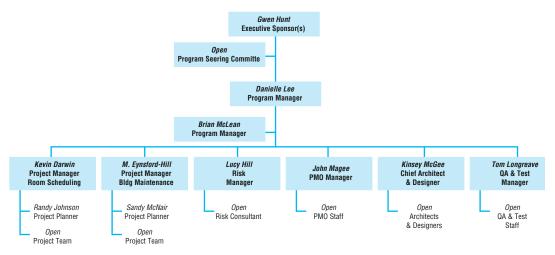


Figure 1: An Example of a Program Organization Structure

As you can see in Figure 1, the individual Project Managers report to the Program Manager, in a "line" relationship. You can also see that — in this instance — the Project Management Office — PMO (which we will discuss, later) is also part of the "line" structure, with the PMO manager reporting to the Program Manager.

Each project has its own manager, and its own project team. A Steering Committee acts — in this instance — in an advisory capacity to the Executive Sponsor for the Program.

Nature of the Undertaking and Needed Results

As you can see from the discussion of "size" for program efforts, they are typically large, as measured in a variety of dimensions. This "bigness" arises from the nature of the work that is being undertaken. It is usually complex, spread over a substantial portion of time, and produces results that are of very substantial importance to the overall business or mission success of the organization or enterprise.

Results are another "driver" (after size and complexity) for the application of the Program structure and approach to an undertaking. An organization will—at any point in time—have a number of initiatives going forward. These are not equal in terms of "value" to the organization. Some initiatives are what might be called "housekeeping". Some initiatives are part of "running the business". They need to be done, but non-performance will not have a high-order adverse impact on the continuation of the business, or the achievement of the mission.

Some initiatives, however, are an essential component in the overall Enterprise Business Strategy. They are a major enabling vehicle for a significant goal or goal component in that strategy. In some instances the future (or a major slice of it) of the Enterprise is in the balance for success of this effort. With such an effort, there can be no question of non-performance (or, of wrong performance).

Risk Scale

This set of characteristics is a logical follow-on to the previous one. Initiatives that are complex, and/or large, executed over a lengthy period of time, and whose results truly "matter" are — almost by definition — high risk, or, have major risk elements. The additional management, tracking, and administrative elements; and the management and control enablement, which are inherent in the Program mechanism, reduce risk and provide risk mitigation. These elements will be discussed later in this whitepaper.

However, it can be said, here, that this risk reduction arises from: the existence of a Steering Committee of responsible executives, functions within the role of the Program Director/Manager, and the existence of an effective and well-staffed Program Management office.

4. Enabling Mechanisms and Roles

In this section of the whitepaper, we will briefly examine a few of the basic concepts, in the form of enabling mechanisms and roles, inside program management. These mechanisms and roles are basic "building blocks" for the use of program management structures, approaches, and practices.

The Program — A Mechanism

We have already defined a program as:

A management discipline, process, and role-set which directs, integrates, and focuses the work effort of program constituent projects; and which contains overall responsibility for the achievement of the strategic outcomes and results defined by executive management for the program.

The Program is an additional management structure and approach for the initiatives within the organization. Some determination must be made that this approach will add value, reduce risk; and improve the chance of success for a needed initiative. This identification or determination may occur in a number of instances.

For example, the need to apply a program approach may be recognized during an annual planning process across the organization, which develops (or refines and extends) the Enterprise Business Strategy. Or, this need may be recognized, later, at the start of mobilization and planning for an initiative, with a realization that the size, impact, risk, and complexity require something other than a definition and approach for the initiative as a "project".

The use of a program structure or approach may be mandated by the organizational level policies or governance standards for the organization, when applied to initiatives with expenditures above a certain threshold.

It is important to understand that "recognition" (a program is needed or the best fit) is different from "definition and commitment" to a program mechanism. (This topic is beyond the scope of this whitepaper.).

In short, there is a substantial body of work which defines the contents of a program, and which validates the organization's commitment to its use; and that these are a prerequisite to the mobilization of a program.

Program Director/Manager — The Role

There is a need for a "role", and a set of associated responsibilities, in which an individual is responsible for conformance (and alignment) of the Program effort to specific goals and goal components in the Enterprise Business Strategy (this is the origination of the Program effort). This individual provides overall leadership and management for the Program effort.

The usual role name for this capability and set of responsibilities is that of either "Program Manager" or "Program Director".

The actual range of responsibilities (and degree of authority) will vary from one organization to another. It is also true that experts in the application of program management practices will have differing views about the contents and the exercise of this role.

Basic ideas associated with the Program Director/Manager role, include:

- Accountable to the Executive Sponsors for On-Time, On-Budget, Quality Delivery for All Program Elements
- Accountable to the Executive Sponsors for Needed Results That Are Within the Boundary of the Program
- · Leads High-Level Planning Worksessions for Program Plan and Schedule Development
- Reviews/Approves Projects Plans for Conformance to Program Strategy, and Program Plan and Schedule
- Acts as the Communications Conduit to the Executive Sponsor(s) and Steering Committee
- · Conducts Periodic Briefings/Status Updates
- Escalates Decisions to Executive Sponsors as Needed

Program Executive Sponsor — The Role

The incumbent in this role is a member of the executive staff of the organization, and, likely one who is responsible for success in one or more goals or goal components in the Enterprise Business Strategy. This role is the senior decision-making individual associated with the Program effort. Some basic ideas associated with this role include:

- Contributes to and Facilitates Delivery of the Business and Technical Strategy Used by the Program Effort
- · Exercises Governance over the Program
- · Requires and Participates in Periodic Review and Oversight Sessions for the Program
- · Provides Needed Decisions and Guidance

The Program Steering Committee — A Mechanism

A mechanism is required, at the Executive level, to ensure that all of the major organizational segments (and also sometimes business partners), which are dependent upon the results of the Program effort are: represented, engaged, informed, and — where needed — involved in decision-making.

This mechanism is typically a committee in which a Senior Executive represents each major business segment.

Steering committees can exercise their function across a broad range of authority and decision-making. This will vary according to the management "style" of the organization, its culture, and the specific needs of the Program. An important component of the effective use of a Steering Committee is the need to define the areas over which the Steering Committee exercises some authority, and to strictly and specifically define its decision-making capabilities. This is especially true of the relationship between the Steering Committee and the Executive Sponsor.

The Program Management Office (PMO) — A Mechanism

In many organizational contexts, there is a function, and a collection of roles identified as a Program Management Office (PMO). This is variously identified as: the Enterprise PMO, the Project Management Office, and so on. This PMO function is a significant component of the overall application of the Program Management structure to an initiative. The Program Management Office (within the context of the IBM Rational Program Management Method) provides support and enablement across multiple workspaces and dimensions, in the form of services and implemented practices to the entire Program team. A catalog of these workspaces includes:

- Administration (individual expenses, time-tracking, repository, supplies, status preparation, and reporting)
- Finance (program expenses, budget administration, and financial reporting)
- Methods (development, delivery; administration of program policies, practices, and procedures)
- Facilities (providing workspace, furniture, printers, conference, or training sites)
- Planning (support for program and projects planning, and plans maintenance)
- Resources Administration (acquisition and ongoing management of all program resources)
- Contracts Administration (negotiation and administration of terms for contracts for consulting or contract staff)
- Communications (developing and managing all communications and information originating from the Program)

In addition, the PMO fills a "staff" function for the Program Director/Manager, providing various support services to assist and to enable his / her management and oversight function.

5. Program and Project Management — Differences

A review of the literature, and discussion with active Project and Program Managers, will sometimes elicit discussion (and some confusion) around the similarities and the differences between the disciplines of "project" management, and of "program" management. There are some who do not even see these as separate disciplines.

An approach of comparison and contrast may help to promote an understanding of some of the differences, and also provide some additional insight into each of these disciplines.

We will consider these two disciplines in five areas:

Governance: defining roles and responsibilities, and providing oversight

Management: planning and administering both projects and the overall program

Financial management: implementation of specific fiscal practices and controls

Infrastructure: the Program Office, technology, and other factors in the work

environment supporting the Program effort

Planning: activities that take place at multiple levels, with different goals. The Program plan is not a traditional plan.

Program Governance

Program governance is the aspect of the discipline that creates both the structure and practices to guide the Program and provide senior-level leadership, oversight, and control. Strategically, it encompasses the relationship between the oversight effort and the enterprise's overall business direction. It also encompasses all the decision-making roles and responsibilities involved in executing the Program effort.

Projects are typically governed by a simple management structure. The Project Manager is responsible for day-to-day direction, a Senior IT Executive integrates technology with business interests, and a business sponsor is accountable for ensuring that the deliverables align with business strategy.

Programs require a more complex governing structure because they usually involve fundamental business change, and expenditures with significant bottom-line impact. In fact, in some instances their outcomes determine whether the enterprise will survive as a viable commercial/governmental entity.

Program Management — As Management

What is program management? Is it really management at all?

To answer these questions, let's begin by looking at an accepted definition of project management:

Project Management is the planning, organizing, directing, and controlling of company resources.... for a relatively short-term objective ³

It is clear from this definition that project management is concerned with the dynamic allocation, utilization, and direction of resources (both human and technical); with time — in relation to both individual efforts and product delivery schedule; and with costs — relating to both the acquisition and consumption of funding.

Within a *program*, these same responsibilities (i.e., allocation, utilization, and direction) are assigned to people at three levels in the management hierarchy; the higher the level, the more general the responsibilities.

For example, at the bottom of the management hierarchy, Project Managers are assigned to the various projects within the overall program. Each manager carries out the management responsibilities described above.

At the middle of the hierarchy is the Program Manager/Director, whose major responsibility is to ensure that the work effort achieves the outcome specified in the business and IT strategies. This person spends more time and effort on integration activities, negotiating changes in plans, and communicating, than on the other project management activities previously described (allocating resources, ensuring adherence to schedule, budget, etc.).

At the top of the program management hierarchy are the program sponsor(s) and the program steering committee. The major responsibility for these individuals is to own and oversee the implementation of the Program's underlying business and IT strategies, and to define the Program's connection to the enterprise's overall business plan(s) and direction.

So, let's return to the questions posed at the start of this section: What is program management? Is it really management at all?

If you think of management activities strictly as those defined for project management, then the answer to the second question is "no," or possibly "partly".

At the project level, managers do still perform these activities, but the Program Manager/Director addresses a different set of program goals or needs, which requires a different "bag of tricks", as well as a different view of what is happening and what needs to get done. And, at the top of the hierarchy, the executive leaders who set goals and oversee the Program certainly do not perform the same detailed activities as Project Managers.

Program Financial Management

The financial aspect of a program includes the need to conform to internal (and sometimes external) policies and/or regulations for significant expenditures. It also includes development and use of program-specific procedures for making and reporting expenditures. Overall costs for programs are typically significantly greater than those for projects.

For example, projects that consume one to five man-years of effort might have an internal cost range of (all figures are in U.S. dollars) \$250 thousand to \$1 million, assuming the resources are employees (not contractors) with an hourly charge-back rate of \$100 to \$150 per hour.

A program to upgrade and rewrite the core software applications of a large financial services company might require between 750,000 and 1,000,000 work hours, a staff of 175 consultants and 225 employees, and expenses ranging between \$160 million and \$200 million.

The costs are greater not only because the Program is larger, but also because it entails more types of expenditures. In a project of the size just described, most — if not all — of the expenditures are for labor, from an accountancy perspective.

The Program costs would include labor (both internal chargeback and consulting fees, and travel and living expenses — including short-term apartment leases), hardware, packaged software applications (which may be capitalized and depreciated), workspace (perhaps construction, too), and furnishings/equipment such as: computers, servers, printers, desks, chairs, cubicles, and so on.

The Program Office will typically include a role for a budget administrator who assists the Program Manager/Director in ensuring conformance to financial policies and guidelines. A best practice is to fill this role with a full-time or part-time Financial Analyst supplied by the CFO.

In any case, the skills required to create and ensure program-wide application of sound financial practices are typically not required for a project effort. To succeed, program financial management demands early and active engagement on the part of the CFO and his or her staff.

Program Infrastructure

Infrastructure is a useful term to describe collections of roles, tools, and practices that organizations assemble and integrate in order to provide services and support for some groups of work activities, such as software development.

To understand the infrastructure required for a successful program, let's begin by exploring the management and administrative roles, tools, and practices that constitute the Program Management Office, or PMO. Then, we will look at requirements for the technical environment and tools.

Administrative Infrastructure – The Program Management Office (PMO)

Our discussion focuses primarily upon PMOs that support a single program — one that will be disbanded at the close of the Program effort. However, we should keep in mind that in some IT organizations, an Enterprise PMO is a permanent fixture, providing services to multiple (and changing) programs.

The PMO provides administrative and management support to the Program Manager/Director and all other program participants. It also provides specialized staff expertise for specific work areas.

The PMO involves many roles covering numerous areas and activities. In addition to serving the Program Manager/Director, the staff members — a group of senior specialists — fill essential program roles.

For large, complex programs, the PMO helps establish and maintain appropriate work processes, controls, and reporting functions to keep management apprised of the program's progress. It also defines, plans, and completes various work efforts.

In truth, an entire whitepaper could be devoted to the work performed by the PMO. For now, let us just say that the infrastructure the PMO provides enables all the project teams involved in the Program to be productive.

Technical Infrastructure and Tools

A program infrastructure also includes both hardware — for desktop and network devices for storage and communication — and software, including desktop software and shared platforms with development tools, modeling software, planning tools, communication tools (email, Internet browser, virtual meeting/collaboration programs, telecommunications programs), and software for document retention and reproduction.

An individual project, especially a pioneering effort, may introduce new tools or hardware partly in order to understand their capabilities and limitations. The Project Manager may become involved in technical support or infrastructure functions, in order to acquire, install, and/or to"tune" the hardware and software. Typically, this will involve a small number of installations for a small number of IT staff. Periodic changes and/or additions to the development environment will affect larger numbers of IT staff, but these are typically defined and managed as separate projects.

Program technical activities, by contrast, usually include large numbers of staff from a variety of sources (internal and external) and various technology backgrounds. As managers identify and staff component projects in the Program, they must also specify, acquire, and install technology environments and tools for each project. These collectively form the Program's technical infrastructure. This effort might encompass creating a new, remote development site, or integrating two companies' technologies following a merger, for example.

This infrastructure effort should be treated as an internal program project (as opposed to an external project, which delivers components or results to clients).

Program Plans and Planning

The effort and the results of planning for a program require multiple iterations, and produce multiple work products. This multiplicity is a distinguishing characteristic of a program. The discussion of program plans and planning is taken up in two parts. The first part deals with plans and planning for the individual or constituent projects within the Program. The second part deals with the plans and planning for the overall program.

Constituent Projects Planning

For program planning, most Program Managers/Directors will typically direct the use of a bottom-up approach which identifies and executes planning iterations; first, for the program's individual component projects.

Each Project Manager constructs a plan that estimates and allocates resources required to deliver that project's products or results, using the same techniques and practices they would employ in planning a standalone project.

Then, in the next planning iteration, Project Managers work together to identify connections and dependencies among the program's projects, and to refine and rework their project plans to integrate them with others.

Often this integration effort (and dependency resolution) requires adjustments to the products planned for each project, the numbers and types of resources required, and – naturally – the schedule.

The Project Manager's ability to continuously manage and adjust to interproject dependencies is a significant determinant of program success. This ability is also a major differentiator between the requirements of project planning and program planning.

Program Planning

Once the individual projects plans are integrated, it is time to initiate the Program planning effort. What exactly is a program plan? The American Heritage Dictionary defines a plan as:

"... A scheme, program, or method worked out beforehand for the accomplishment of an objective: a plan of attack."

But when we look at how we develop and use program plans, we discover that they do not fit neatly into this definition.

First of all, in contrast to the planning for the Program's projects, the Program plan typically is not developed through a series of iterations. Instead, the planning effort involves conducting a series of reviews of the individual projects plans, and then creating a digest of their contents. During this process, conflicts between projects may become apparent and require resolution.

A goal of the digest effort is to produce a concise, usable view of all program work, the timeframes, and the required results. A program plan describing 10,000 activities, for example, would not have these qualities.

The Program plan is not used to direct work and allocate resources, at least not directly. That is the purpose of the individual project plans.

It may be helpful to think of the Program plan as a seismograph that seeks to detect and measure the potential impact of any trembling in the ground underneath the Program effort. As component projects proceed and individual projects plans record completion percentages, expenditure of resources, and interim (or final) dates for work activities, the Program plan integrates these measures and shows their collective impact.

This enables executives and managers to assess the Program's progress against the plan and detect potential problems. For example, if a client asks

for additional functionality in a component that one project is building; this request may delay the delivery of that component to other projects and slow them down as well.

In short, the Program plan's integrated representation of significant planned activities and of the results of individual projects provides managers with a window into the cumulative work effort of the Program. Executives and managers use it to verify that the Program is moving in the right direction to meet business goals, to identify where unplanned changes may be occurring and to assess their potential impact, and to model and / or test the impact of possible adjustments and corrections.

Conclusion: Portfolio Management — An IBM "View"

This whitepaper is intended to provide a basic introduction, and an overview to the approaches and characteristics of Program Management. It is aimed at individuals who are new to this workspace; and is intended to provide a starting point to the understanding and application of the IBM Rational Program Management Method.

Some of the ideas and concepts that are a foundation to an "IBM View" of the needed work effort and work products of Program Management are also introduced in this whitepaper.

Let us conclude with a summary of the major points in this IBM view of Program Management:

Program Management is:

A management discipline, process, and role-set which directs, integrates, and focuses the work effort of program constituent projects; and, which contains overall responsibility for the achievement of the strategic outcomes and results defined by executive management for the program.

A Program is:

A related "set" of projects with a common goal or success 'vision', under integrated management, consisting of people, technology, and processes, aimed at implementing significant business/technology change.

In many cases the source or the point of origin of a program effort lies in some goal, or goal component in the Enterprise Business Strategy. The Program is a vehicle or a mechanism used (in whole or in part) to enable the achievement of that goal or goal component.

It is not always simple or evident, when faced with the need to mobilize an initiative, to make an immediate determination of the appropriateness of employing a Program Management approach. Looking at the initiative contents and drivers, it may help to review some of the characteristics of a program, to see if they are a "fit":

- Large to very large size (in multiple dimensions)
- A structure of multiple projects and Project Managers, under the integrated management of a Program Director or Manager
- A complex effort, spread over a lengthy time period, whose results have major or critical impact upon the organization
- · Significant degree of risk, or major associated risk elements

Program Management has its own set of enabling mechanisms (ways of doing things) and of roles.

Among the enabling mechanisms (partial list) are:

- · The Program
- The Program Steering Committee
- The Program Management Office (PMO)



Among the roles (partial list) are:

- Program Director/Manager
- Program Executive Sponsor

There is a question in some minds that Program Management and Project Management are different, have different practices, and require different capabilities. In this whitepaper, a five-point comparison is used (other points exist and may be used) to highlight these differences. They are:

- · Governance: defining roles and responsibilities, and providing oversight
- · Management: planning and administering both projects and the overall program
- Financial management: implementation of specific fiscal practices and controls
- Infrastructure: the Program Office, technology, and other factors in the work environment supporting the Program effort
- Planning: activities that take place at multiple levels, with different goals. The Program plan is not a traditional plan.

Notes:

- Managing Successful Programmes, Office of Government Commerce (OGC) U.K. Crown copyright, 2002
- 2. A Guide to the Project Management Body of Knowledge (PMBOK), The Program Management Standard (draft), Project Management Institute, 3rd edition, 2005
- 3. Dynamic Project Management, Deborah Kezsbom, John Wiley & Sons, 1989

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