Fundamentals of Effective Program Management

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PROGRAM MANAGEMENT GLOSSARY

A

♦ **Acquire program team.** A process used to obtain the program team members needed to perform the program work.

♦ **Actual cost (AC).** The total cost actually incurred until a specific point on the timescale in performing the work for a program, a program component, or a component activity.

♦ **Analogous estimation.** A technique that is used to estimate the duration or cost of a program component based on the duration or cost of a similar component in a previous program or in the same program.

♦ **Arrow diagramming method (ADM).** A method used to draw a schedule network diagram such as a program schedule network diagram in which an arrow represents a component and also points to the successor component through a junction represented by a node (circle).

♦ **Assumption.** A factor that you consider to be true without any proof or verification.

♦ **Assumptions analysis.** A technique used to analyze the assumptions of a program and its constituent projects to identify risks, as risks stem from uncertainties.

♦ **Asynchronous communication.** A communication in which the two communicating entities do not have to be present on both ends of the communication line at the same time. Email is an example of asynchronous communication because when the sender of the email pushes the send button, the intended recipient of the email message does not have to be logged on to the email server.

♦ **Authority.** A right assigned to a role that enables the person playing the role to apply program resources, make certain decisions, or sign approvals.

♦ **Authorize projects.** A program initiating process used to authorize projects in the program that includes obtaining project funding approval, issuing a program charter, and assigning a project manager.

B

♦ **Baseline.** A reference plan for components, such as schedule, scope, and cost, against which performance deviations are measured. The reference plan can be the original or the modified plan.

♦ **Benchmarking.** A technique that involves comparing practices, products, or services of a program (or program component) with those of some reference programs or program components) for the purposes of learning, improving, and creating the basis for measuring quality and performance.

♦ **Benefit.** A positive contribution or improvement to the running of an organization such as increased revenues, reduced costs, and improved employee morale.

♦ **Benefits management.** Part of management that includes activities and techniques for defining, creating, maximizing, and sustaining benefits from a program.

♦ **Benefit-to-cost ratio (BCR).** The value obtained by dividing the benefit by the cost.

- ♦ **Bottom-up estimation.** A technique that estimates the requirements for pieces and then aggregates them to estimate the requirements for the whole component of work. It can be used to perform estimates such as a cost estimate and a component duration estimate.

- ♦ **Brainstorming.** A creative technique generally used in a group environment to gather ideas as candidates for a solution to a problem or an issue without any immediate evaluation of these ideas. The evaluation and analysis of these ideas occur later.

- ♦ **Budget.** An approved aggregated cost with a timeline.

- ♦ **Budget at completion (BAC).** The total budget authorized for performing the work under consideration. This is the planned budget for the program or for one of its components, the cost that you originally estimated.

- ♦ **Buyer.** The party purchasing (procuring) the product, service, or result of the PWBS component.

C

- ♦ **Cash flow (CF).** Refers to both the money coming in and the money going out of an organization. Positive CF means more money coming in than going out.

- ♦ **Cause and effect diagram.** A diagram used to explore all potential causes of a problem, not just the obvious ones.

- ♦ **Change control system.** A collection of formal documented procedures that specifies how the program deliverables and documents will be changed, controlled, and approved.

- ♦ **Change request.** A request for a change in some component of a program such as adding a new feature to the program product or changing the scope of the program.

- ♦ **Close program.** A process of the closing process group used to close a program.

- ♦ **Closing process group.** A process group used to properly close a project that has either been completed or terminated without completion.

- ♦ **Co-location.** A technique used to keep all (or most) of the program team members in the same physical location to improve communication and to create a sense of community among the team members.

- ♦ **Communication.** An exchange of information among persons and groups by using an effectively common system of signs, symbols, and behavior.

- ♦ **Communication control.** A process used to manage communications to keep the stakeholders informed about the program progress and status.

- ♦ **Communication management plan.** The document that describes the communication expectations, needs, and plans for the program.

- ♦ **Communication planning.** This is the process of determining the communication needs of the program stakeholders and planning to satisfy those needs. It includes determining what information is needed to be communicated and when, who will communicate it and to whom, and how it will be communicated.

- ♦ **Competency.** The ability of a team member to play a certain role, that is, to perform the responsibilities assigned to the role.

- ♦ **Component closure.** A process used to close a component or oversee the closure of a component of the program.

- ♦ **Constraint.** A restriction (or a limitation) that can affect the performance of the project.

- ♦ **Contingency.** A future event or condition that is possible but cannot be predicted with certainty.

♦ **Contingency reserve.** The amount of funds or time (in the schedule) in addition to the planned budget reserved to keep the impact of risks to an acceptable level when the program is executing.

♦ **Continuous process improvement.** An iterative method for improving the quality of all processes.

♦ **Contract.** A mutually binding agreement between a buyer and seller obligating the seller to provide the specified product, service, or result and obligating the buyer to make payment for it.

♦ **Contract closure.** A process used to close the program contracts according to the contract terms and conditions.

♦ **Contract management plan.** A document that specifies how a specific contract will be administered. It may include items such as delivery of certain documents and performance requirements.

♦ **Contract statement of work (SOW).** A document that describes the procurement item in sufficient detail. This describes the scope of what will be delivered by the seller and becomes part of the contract.

♦ **Control.** A set of techniques used to monitor and control projects and programs by activities such as analyzing variances, assessing trends to improve processes, evaluating alternatives, comparing actual performance with planned performance, and recommending appropriate corrective and preventive actions and changes in order for the program or the project to succeed.

♦ **Control chart.** A diagram used to monitor if the variance of a specified variable is within acceptable limits dictated by quality control.

♦ **Corrective actions.** Directions for executing the program work to bring expected program performance in conformance with the program management plan.

♦ **Cost.** The value of the inputs that have been used up to perform a task or to produce an item: product, service, or result.

♦ **Cost control.** A process used to control changes to the program budget and generate the information on the variance from the planned budget.

♦ **Cost estimating and budgeting.** A process used to aggregate all costs at the program level and put a timeline on it. The process is used to generate the program budget and cost management plan.

♦ **Cost management plan.** A plan used to manage and control the program cost.

♦ **Cost performance index (CPI).** A measure of cost efficiency of a program calculated by dividing EV by AC.

♦ **Cost variance (CV).** A measure of cost performance obtained by subtracting actual cost (AC) from EV. A positive result indicates good performance, whereas a negative result indicates bad performance.

♦ **Crashing.** A program schedule compression technique used to decrease the duration of the program or one of its components with minimum additional cost. A number of alternatives are analyzed, including the assignment of additional resources.

♦ **Critical path.** The longest path (sequence of components such as activities) in a program schedule network diagram. Because it is the longest path, it determines the duration of the program.

D

♦ **Decision tree analysis.** A technique that uses a decision tree diagram to choose from different options available; each option is represented by a branch of the tree. EMV analysis is done along each branch, which helps to make a decision about which option to choose.

- **Decomposition.** A planning technique to subdivide the program scope, including deliverables, into smaller, manageable tasks called *program packages*. This technique is also used to further decompose some program packages related to projects into work packages.

- **Defect.** An imperfection or deficiency that keeps a component from meeting its requirements or specifications. A defect is caused by an error (problem), and can be repaired by fixing the error.

- **Delphi technique.** An information gathering technique used for experts to reach a consensus while sharing their ideas and preferences anonymously.

- **Develop program team.** A process used to improve individual and group competencies to enhance the program performance.

- **Direct and manage program execution.** A process used to manage various interfaces in the project to execute the program work smoothly with the goal of delivering the planned benefits.

E

- **Earned value (EV) or budgeted cost of work performed (BCWP).** The value of the actual performed work expressed in terms of the approved budget for a program, program component, or a component activity for a given time period.

- **Estimate at completion (EAC).** The estimate at the current point in time of the cost to complete the work under consideration (program, program component, or a component activity). The value of EAC is obtained by adding the value of ETC to AC.

- **Estimate to complete (ETC).** The expected cost, estimated from the CPI, to complete the remaining work of the program, program component, or a component activity.

- **Executing process group.** A process group used to execute the project according to the project management plan.

- **Executive sponsor.** An executive who is the key decision maker on the program board and is responsible for creating an environment that will ensure program success.

- **Expected monetary value (EMV) analysis.** A statistical technique used to calculate the expected outcome when there are multiple possible outcome values with probabilities assigned to them.

F

- **Fast tracking.** A program schedule compression technique used to decrease the duration of a program (or one of its components) by performing program phases or some program components simultaneously, when they would normally be performed in sequence.

- **Flowchart.** A diagram used to anticipate what and where the quality problems might occur.

- **Formalization.** Making something official and putting it in the framework of proper rules and procedures.

G

- **Gate review.** A program review, also called *phase-gate review* that checks against the exit criteria of the phase that has just been completed, and determines the readiness of the program for entering the next phase.

H

♦ **Histogram.** A diagram used to display the relative importance of different variables.

♦ **Human resource planning.** A process used to perform roles and responsibilities assignments and to generate the staffing management plan.

I

♦ **Identification of alternatives.** A technique used to apply nonstandard approaches to perform program work such as defining the program scope. Some examples of nonstandard approaches are brainstorming and lateral thinking.

♦ **Information distribution.** This is the process of providing needed accurate information to the program stakeholders in a timely fashion.

♦ **Initiate program.** A process used to begin the program initiation by generating important documents such as a program charter and preliminary program scope statement and by identifying a program manager.

♦ **Initiate team.** A program process used to put together a core program team.

♦ **Initiating process group.** A process group used to authorize a project.

♦ **Inspection.** A technique to examine whether an activity, component, product, service, or result conforms to specific requirements.

♦ **Intangible benefit.** A benefit that may not be easy to quantify such as improved employee morale or increased customer satisfaction.

♦ **Integrated change control.** A process used to coordinate changes in the areas including cost, schedule, scope, and quality across the entire program.

♦ **Interface management plan.** A document that is generated by the interface planning process and describes how to manage the interfaces of the program with other programs and with factors external to the program.

♦ **Issue management and control.** A process used to identify, track, and close the stakeholders' issues to ensure that their expectations are aligned with the program deliverables and activities.

K

♦ **Knowledge area.** A knowledge area in project management is defined by its knowledge requirements related to managing a specific aspect of a project, such as cost, by using a set of processes. PMI recognizes a total of nine knowledge areas, such as cost management and human resource management.

L

♦ **Lateral thinking.** Thinking outside the box, which is, thinking beyond the realm of your experience to search for new solutions and methods, not just better uses of current ones.

M

♦ **Metrics.** A system used to evaluate an entity such as process or performance quantitatively. It specifies a set of parameters that will be measured, a procedure to measure them, and a way to interpret the measurements.

♦ **Milestone.** A significant event happening at a specific point in the life cycle of a program. Some examples of program milestones are initiation of a project in the program, closure of a project in the program, and completion of a key deliverable.

♦ **Mitigation.** The process of taking actions to reduce or prevent the impact of a risk that is expected to occur.

♦ **Monitor and control program work.** A process used to generate, gather, and consolidate performance information, and to measure performance and trends to make improvements.

♦ **Monitoring and controlling process group.** A process group used to monitor the project progress and performance to identify variance from the plan, and recommend preventive and corrective actions to bring the project in line with the planned expectations.

N

♦ **Network diagram.** A schematic display of logical relationships among the program (or project) activities. The time flow in these diagrams is from left to right. A network diagram is Aaso called a *schedule network diagram*.

O

♦ **Operational definition.** A description of an entity or a property of an entity in terms of measurable specifics that can be verified.

♦ **Opportunity cost (OC).** Refers to selecting a project over another due to the scarcity of resources. The OC is the benefit missed by not selecting a project.

♦ **Organization.** A group of individuals organized to work for some purpose or mission.

P

♦ **Parametric estimation.** A technique that estimates the requirements by using parameters and relationships among them. It can be used to perform estimates such as a cost estimate and a component duration estimate.

♦ **Pareto diagram.** A diagram used to rank the importance of each error (problem) based on the frequency of its occurrence over time in the form of defects.

♦ **Perform quality assurance.** A process used for applying the planned systematic quality activities to ensure that the program employs all the planned processes needed to meet all the program requirements.

♦ **Perform quality control.** A process used to monitor specific program deliverables (benefits, products, services, and results) to determine if they meet the quality requirements.

♦ **Performance reporting.** A process used to consolidate performance data on how program resources are being used to deliver program benefits. This information is provided to the stakeholders by using the information distribution process.

♦ **Performing organization.** The organization that is performing the project.

♦ **Plan program contracting.** A process used to identify the type and determine the detail of documentation required to go into contract with the vendors who will supply the PWBS components that need to be acquired (procured). This process generates procurement documents and the contract management plan.

♦ **Plan program purchases and acquisitions.** A process used to determine what will be procured, when it will be procured, and how. This process generates the procurement management plan and contract SOW.

♦ **Planned value (PV) or budgeted cost of work scheduled (BCWS).** The authorized cost for the scheduled work of the program, program component, or a component activity up to a given point on the timescale.

♦ **Planning process group.** A process group used to develop the project management plan.

♦ **Portfolio.** A portfolio is a set of projects, programs, or both that is managed in a coordinated fashion to obtain control and benefits not available from managing them individually.

♦ **Portfolio management.** The centralized management of one or more portfolios that includes identifying, prioritizing, authorizing, managing, and controlling projects, programs, and other related work in order to obtain specific strategic business objectives.

♦ **Precedence diagramming method (PDM).** A method used to construct a schedule network diagram such as a program schedule network diagram in which a node (a box) represents a component and an arrow represents the dependency relationship.

♦ **Preliminary program scope statement.** A document generated by the initiate program process that includes the objectives and high level deliverables of the program. It draws program boundaries by stating what is included in the program and what is not.

♦ **Preventive actions.** Directions to perform activities that will reduce the probability of negative consequences associated with risks.

♦ **Probability and impact matrix.** A table that displays a risk in two dimensions: the probability of its occurrence and the impact of its occurrence.

♦ **Process.** A set of interrelated activities performed to obtain a specified set of products, results, or services.

♦ **Procurement.** Refers to acquiring products, services, or results from outside the program team (and the constituent project teams) to complete the program.

♦ **Procurement documents.** The documents used to seek bids or proposals from potential sellers.

♦ **Procurement management.** An execution of a set of processes used to obtain the products, services, or results from outside the program team to complete the program.

♦ **Procurement management plan.** A document that specifies how the procurement processes will be performed and managed from preparing the procurement documents through closing contracts.

♦ **Program.** A group of related projects managed in a coordinated way to achieve benefits and control not available by managing them individually.

♦ **Program artifacts.** The program management documents such as plans, procedures, and standards.

♦ **Program board.** An executive level forum to manage the issues of a program.

♦ **Program charter.** A document generated by the initiate program process that states the key objectives, expected benefits, and assumptions and constraints of the program.

♦ **Program contract administration.** A process used to manage the relationship with sellers and buyers at the program level for the procurement that is not being managed at the project level.

♦ **Program cost of quality.** The total cost incurred in implementing conformance to the requirements and quality standards set for the program, the rework due to the defects resulting from failure to meet the requirements, and updating the product or service to meet the requirements.

♦ **Program governance.** A practice of developing, communicating, implementing, and monitoring policies, procedures, organization structure, and acts associated with the program.

♦ **Program management.** The centralized coordinated management of a specific program to achieve its strategic goals, objectives, and benefits.

♦ **Program management control.** An activity, policy, or procedure that is used to govern the execution of a process to ensure that the process works in a consistent and predictable fashion.

♦ **Program management office.** An entity within an organization that provides centralized coordinated management of programs including the projects that are part of the programs and holds the responsibility for defining and managing program-related governance procedures, processes, and templates for all the programs in the organization.

♦ **Program management plan.** The grand program plan, generated by using the develop program management plan process, that describes how to manage and execute the program to achieve its objectives. It consists of several subsidiary plans such as a cost management plan, schedule management plan, and scope management plan.

♦ **Program office.** An entity within an organization designed to handle the program administration functions of a program centrally by providing support to the program management team and program manager.

♦ **Program package.** A component at the lowest level of a branch of the PWBS.

♦ **Program schedule.** The planned dates for completing PWBS components and program milestones.

♦ **Program schedule model.** A set of assumptions along with the data that used to develop the program schedule is called a *program schedule*.

♦ **Program schedule network diagram.** A schematic display of logical relationships among the program schedule components. The time flow in these diagrams is from left to right.

♦ **Program scope statement.** A document that is generated by the scope definition process and describes how to manage the scope of the program, which includes how to create the PWBS and how to control the scope.

♦ **Program stakeholders.** Individuals, organizations, or both whose interests may be affected--positively or negatively--by the outcomes of program execution and completion.

♦ **Program stakeholder management.** Understanding and managing the influence and expectations of the program stakeholders.

♦ **Program work breakdown structure (PWBS).** A document that is generated by the create PWBS process and presents the scope of the program in the form of a deliverable-oriented hierarchical structure.

♦ **Progressive elaboration.** A technique to developing something such as a project plan in incremental steps.

♦ **Project.** A work effort made over a finite period of time, with a start and a finish, to create a unique product, service, or result. A process consists of three elements: (1) input, (2) tools and techniques, and (3) output.

♦ **Project management.** Application of knowledge, skills, and tools and techniques to project activities in order to meet project objectives. It is done by performing some processes at various stages of the project.

♦ **Project management office.** Project management office refers to an entity in an organization that is responsible for providing centralized coordinated management and support for projects in the organization.

♦ **Project stakeholder.** An individual or an organization that is positively or negatively affected by the project.

- **PWBS dictionary.** A document that is generated by the create PWBS process and contains information about the PWBS components.

Q

- **Qualitative risk analysis.** An analysis used to prioritize risks by estimating the probability of their occurrence and their impact on the program or its components.

- **Quality.** The degree to which a set of characteristics of program deliverables and program objectives fulfill the requirements.

- **Quality assurance.** The application of the planned systematic quality activities.

- **Quality audit.** A structured and independent review to determine whether program execution activities comply with the policies, processes, and procedures determined in the program management plan. It verifies the implementation of approved change requests, corrective actions, defect repairs, and preventive actions.

- **Quality control.** A process to monitor a specific set of program deliverables and results to ensure they meet the agreed upon quality standards.

- **Quality metrics.** An operational criterion that defines in specific terms what something (such as a characteristic or a feature) is and how the quality control process measures it.

- **Quality planning.** A process used to identify which quality standards are relevant to the project at hand, and determine how to meet them.

- **Quantitative risk analysis.** A process used to perform the numerical analysis to estimate the effect of each identified risk on the overall program objectives and deliverables.

R

- **Request seller responses.** A process used to obtain responses in terms of quotations, bids, offers, and proposals from sellers outside the program team for their product or services needed for the program.

- **Resource control.** A process used to manage all program resources and the associated cost according to the program management plan.

- **Resource management plan.** A document that is generated by the resource planning process and describes at program level how to manage the program resources that include determining the resource requirements and allocating the resources.

- **Return on investment (ROI).** The percentage of profit from the investment on the project or program.

- **Risk**. An uncertain event or condition that, if occurs, has a positive or negative effect on meeting the objectives of a program or its constituent projects.

- **Risk management planning and analysis**. Used to determine the *how* of the risk management: how to plan and execute risk management activities for the given program. It includes identifying risks, analyzing risks, and planning responses for the risks.

- **Risk mitigation.** A technique for reducing the probability of risk occurring, reducing the impact of the risk if it does occur, or both. Risk mitigation activities that impact the direction and delivery of multiple projects can play an important role in determining which project should go into a program.

- **Risk monitoring and control.** Used for tracking identified program risks, identifying new risks to the program, executing risk response plans, and evaluating the effectiveness of executing response plans throughout the life cycle of the program.

♦ **Risk register**. A document that contains the list of risks, the risk priorities, and possibly the risk response plans.

♦ **Risk response plan**. A document, an output of the risk management planning process, that consists of the appropriate risk responses planned and agreed upon by the risk management team.

♦ **Role.** A set of responsibilities such as the program manager, a researcher, or an accountant.

♦ **Root cause analysis**. An analytical technique used to determine the basic cause (or causes) of a problem such as a defect, variance of results from the plan, and risks.

♦ **Run chart.** A diagram used to perform trend analysis: predict future results based on past performance.

S

♦ **Scatter diagram.** A diagram used to find the relationship between two variables such as cause and effect, or two causes.

♦ **Schedule control.** A process used to ensure that the program is completed within time according to the approved schedule.

♦ **Schedule development.** A process used to generate the program schedule and the schedule management plan.

♦ **Schedule management plan.** A plan used to manage and control the program schedule.

♦ **Schedule performance index (SPI).** A measure of the schedule efficiency of a program calculated by dividing EV by PV.

♦ **Schedule variance (SV).** The deviation of the performed schedule from the planned schedule in terms of cost.

♦ **Scope control.** A process used to control changes to the program scope.

♦ **Scope creep.** The uncontrolled implementation of changes to the program or one of its components.

♦ **Select sellers.** A process used to select sellers based on their responses and negotiate written contracts with the selected sellers.

♦ **Seller.** The party delivering the product, service, or result to the buyer.

♦ **Sensitivity analysis.** A technique used to determine which risk has the greatest impact on the program.

♦ **Staffing management plan.** A document that describes when and how human resource requirements for a program will be met.

♦ **Strengths, weaknesses, opportunities, and threats (SWOT) analysis.** A technique used to gather information for risk identification by examining a given project from the perspectives of its strengths, weaknesses, opportunities, and threats.

♦ **Synchronous communication.** A communication in which the two communicating entities have to be present on both ends of the communication line at the same time. An example is a phone conversation.

T

♦ **Tangible benefit.** A quantifiable benefit that may be directly related to the financial objectives such as a 10 percent increase in revenue.

♦ **Transition plan.** A document that is generated by the transition planning process and describes how the program output, after program completion, will be transferred to another organization or to a functional group within the performing organization.

V

♦ **Virtual team.** A team of members working on the same project from different geographical locations with few or no face-to-face meetings. Various technologies, such as email, videoconferencing, and the World Wide Web are used to facilitate communication among team members.

W

♦ **Work breakdown structure (WBS)**. A hierarchical structure used to display the project deliverables broken into manageable, smaller work components.