

Project Cost Management

Activity-Based Costing is a method of assigning overhead and indirect costs to products and services. In the context of project planning, it involves identifying the activities within the project that consume resources and assigning the costs of resources to those activities. This approach provides a more accurate understanding of project costs by linking them directly to specific tasks rather than spreading them evenly across the project. It is particularly useful for complex projects where overheads are significant and varied. By understanding the cost drivers for each activity, project managers can make more informed decisions about resource allocation and process improvements. Related terms include Cost Driver and Overhead Allocation. This method helps in identifying non-value-added activities that can be eliminated or optimized to reduce overall project costs.

Baseline Budget refers to the approved version of the project budget, which is used as a reference point to measure, monitor, and control overall cost performance. It is established during the planning phase and remains fixed unless a formal change control process is invoked. The baseline budget serves as the benchmark against which actual expenditures are compared to determine variances. If the actual costs exceed the baseline, it indicates a cost overrun, prompting the need for corrective actions. Conversely, if actual costs are lower, it may indicate cost savings or potential scope reduction. Maintaining a stable baseline is crucial for accurate performance reporting and stakeholder communication. Related terms include Performance Measurement Baseline and Change Control.

Budget at Completion is the total planned budget for the project at the end of its lifecycle. It represents the sum of all planned values for the work to be completed. This figure is established during the initial planning stages and is used as a key metric in Earned Value Management to assess overall project performance. It serves as the denominator in several EVM indices, such as the Cost Performance Index and Schedule Performance Index. Understanding the BAC allows project managers to forecast future costs and determine if the project is likely to come in under or over budget. Related terms include Planned Value and Estimate at Completion.

Capital Expenditure refers to funds used by a project or organization to acquire, upgrade, and maintain physical assets such as property, industrial buildings, or equipment. In project cost management, distinguishing between capital and operational expenses is vital for financial reporting and tax purposes. Capital expenditures are typically one-time, large-scale investments that provide long-term benefits, whereas operational expenditures are recurring costs necessary for day-to-day operations. Proper classification ensures accurate budgeting and compliance with financial regulations. Related terms include Operational Expenditure and Depreciation.

Change Control is the process of reviewing, approving, and managing changes to the project scope, schedule, and budget. In cost management, any change that impacts the project cost must go through a formal review process to assess its financial implications. This ensures that unauthorized or unapproved

changes do not lead to budget overruns. The change control process involves documenting the change request, analyzing its impact on cost, obtaining approval from relevant stakeholders, and updating the project baseline if approved. Effective change control is essential for maintaining budget integrity and ensuring that the project remains aligned with its financial objectives. Related terms include Change Request and Configuration Management.

Contingency Reserve is a portion of the project budget set aside to address identified risks that may occur during the project lifecycle. These reserves are included in the cost baseline and are used to cover the costs of risk responses for known-unknowns. The amount of contingency reserve is determined through quantitative risk analysis and is based on the probability and impact of identified risks. Project managers have the authority to use these reserves without needing additional approval, provided the usage is documented and justified. Proper management of contingency reserves ensures that the project can absorb unexpected costs without jeopardizing its financial health. Related terms include Risk Register and Known-Unknowns.

Cost Baseline is the time-phased budget that is used to measure, monitor, and control project performance. It is derived from the project schedule and represents the planned expenditure of resources over time. The cost baseline typically excludes management reserves but includes contingency reserves. It serves as the primary reference for comparing actual costs against planned costs. By analyzing the variance between the cost baseline and actual expenditures, project managers can identify trends and take corrective actions early. The cost baseline is a critical component of the Performance Measurement Baseline. Related terms include Time-Phased Budget and Management Reserve.

Cost Benefit Analysis is a systematic approach to estimating the strengths and weaknesses of alternatives used to determine options that provide the best approach to achieving benefits while preserving savings. In project planning, it is used to evaluate the financial viability of a project by comparing the total expected costs against the total expected benefits. This analysis helps stakeholders decide whether to proceed with a project, select among multiple project options, or terminate a project. It often involves calculating metrics such as Net Present Value and Return on Investment. A positive cost-benefit ratio indicates that the benefits outweigh the costs, suggesting the project is financially sound. Related terms include Net Present Value and Return on Investment.

Cost Control is the process of monitoring the status of the project to update the project budget and managing changes to the cost baseline. It involves tracking actual expenditures, comparing them to the planned budget, and taking corrective actions when variances occur. Effective cost control requires continuous monitoring and reporting to ensure that the project remains within its financial constraints. It also involves forecasting future costs based on current performance trends. By implementing robust cost control measures, project managers can prevent budget overruns and ensure that the project delivers value within the approved financial limits. Related terms include Variance Analysis and Performance Reporting.

Cost Estimating is the process of developing an approximation of the monetary resources needed to complete project activities. This process involves identifying all cost elements, such as labor, materials, equipment, and overheads, and estimating their quantities and rates. Various techniques can be used, including analogous estimating, parametric estimating, and bottom-up estimating. Accurate cost estimating

is crucial for establishing a realistic budget and securing stakeholder approval. It requires input from subject matter experts and historical data from similar projects. The accuracy of estimates improves as the project progresses and more detailed information becomes available. Related terms include Bottom-Up Estimating and Analogous Estimating.

Cost Management Plan is a component of the overall project management plan that describes how the project costs will be planned, structured, and controlled. It defines the procedures for estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget. The plan includes guidelines for measuring performance, reporting variances, and implementing corrective actions. It also specifies the level of precision required for estimates and the units of measure to be used. A well-defined cost management plan ensures consistency in cost-related activities and facilitates effective communication among stakeholders. Related terms include Project Management Plan and Performance Measurement.

Cost Performance Index is a measure of the cost efficiency of budgeted resource consumption, expressed as a ratio. It is calculated by dividing the Earned Value by the Actual Cost. A CPI of 1.0 Indicates that the project is exactly on budget. A CPI greater than 1.0 Indicates that the project is under budget, while a CPI less than 1.0 Indicates that the project is over budget. This index is a key metric in Earned Value Management and provides a quick snapshot of cost performance. It helps project managers identify trends and predict future cost performance. Related terms include Earned Value and Actual Cost.

Cost Plus Fixed Fee is a type of contract where the seller is reimbursed for all allowable costs plus a fixed fee that is agreed upon at the start of the contract. The fixed fee does not change regardless of the actual costs incurred, providing a stable profit margin for the seller. This contract type is suitable when the scope is not well-defined and the buyer wants to share the risk of cost overruns with the seller. However, it provides little incentive for the seller to control costs, as the fee is fixed. The buyer bears the majority of the cost risk. Related terms include Cost Reimbursable Contract and Allowable Costs.

Cost Plus Incentive Fee is a contract type where the seller is reimbursed for allowable costs plus an incentive fee that is based on the seller's performance against specific criteria, such as cost, schedule, or technical performance. The incentive fee is calculated based on a formula that rewards the seller for achieving or exceeding performance targets. This contract type aligns the interests of the buyer and seller by encouraging cost efficiency and high performance. It is suitable when the scope is well-defined and performance metrics can be clearly established. Related terms include Performance Metrics and Shared Savings.

Cost Plus Percentage of Cost is a contract type where the seller is reimbursed for allowable costs plus a percentage of those costs as profit. This percentage is agreed upon at the start of the contract. This contract type is generally discouraged because it provides no incentive for the seller to control costs; in fact, higher costs result in higher profits for the seller. It is rarely used in modern project management due to the high risk of cost overruns for the buyer. Related terms include Reimbursable Contract and Cost Overrun.

Cost of Quality refers to the total cost associated with preventing, detecting, and fixing defects in the project deliverables. It includes the cost of prevention activities, such as training and process design, and

the cost of appraisal activities, such as testing and inspections. It also includes the cost of internal failures, such as rework and scrap, and external failures, such as warranty claims and lost business. Investing in prevention and appraisal activities can reduce the cost of failures, leading to lower overall costs and higher customer satisfaction. Understanding the cost of quality helps project managers make informed decisions about quality assurance and control activities. Related terms include Prevention Costs and Failure Costs.

Curved S-Curve is a graphical representation of the cumulative cost or work completed over time. It typically starts slowly, accelerates in the middle of the project, and slows down towards the end, forming an S-shape. This curve is used to visualize the planned versus actual progress of the project. Deviations from the planned S-curve can indicate schedule or cost variances. It is a useful tool for monitoring project performance and communicating status to stakeholders. The shape of the curve can vary depending on the nature of the project and the distribution of work over time. Related terms include Cumulative Cost and Progress Tracking.

Defect Cost is the cost incurred due to the presence of defects in the project deliverables. It includes the cost of identifying, correcting, and preventing defects. Defect costs can be categorized into internal failure costs, which occur before delivery, and external failure costs, which occur after delivery. High defect costs indicate poor quality management and can lead to project delays, budget overruns, and customer dissatisfaction. Reducing defect costs is a key objective of quality management in projects. Related terms include Internal Failure and External Failure.

Direct Cost refers to costs that can be directly attributed to a specific project activity or deliverable. These costs are easily traceable and include items such as labor, materials, and equipment used specifically for the project. Direct costs are typically included in the project budget and are charged directly to the project account. Accurate tracking of direct costs is essential for determining the true cost of the project and for billing clients in cost-reimbursable contracts. Related terms include Indirect Cost and Chargeback.

Earned Value is the measure of work performed expressed in terms of the budget authorized for that work. It represents the value of the completed work at the current point in time. Earned Value is a key component of Earned Value Management and is used to assess project performance in terms of both cost and schedule. It allows project managers to compare the value of work completed against the actual cost incurred and the planned value. This comparison helps in identifying variances and forecasting future performance. Related terms include Planned Value and Actual Cost.

Earned Value Management is a project management technique for measuring project performance and progress in an objective manner. It integrates scope, schedule, and resource measurements to assess project performance and progress. EVM uses metrics such as Earned Value, Planned Value, and Actual Cost to calculate performance indices and forecasts. It provides a comprehensive view of project health and helps in making informed decisions. EVM is widely used in large, complex projects to ensure that they are delivered on time and within budget. Related terms include Performance Indices and Variance Analysis.

Estimate at Completion is the expected total cost of the project at its completion, based on current performance data. It is a forecast that takes into account the actual costs incurred to date and the estimated costs to complete the remaining work. EAC is calculated using various formulas depending on the nature of

the variance and the expected future performance. It helps project managers determine if the project is likely to come in under or over budget and allows for proactive management of financial risks. Related terms include Estimate to Complete and Forecasting.

Estimate to Complete is the expected cost required to finish all the remaining work for a project or project phase. It is calculated by subtracting the Earned Value from the Estimate at Completion. ETC is a forward-looking metric that helps project managers plan for future resource needs and cash flow requirements. It is crucial for updating the project budget and ensuring that sufficient funds are available to complete the project. Related terms include Remaining Work and Cash Flow.

Fixed Price Contract is a type of contract where the seller agrees to perform the specified work for a fixed price. The seller bears the risk of cost overruns, as the price does not change regardless of the actual costs incurred. This contract type is suitable when the scope is well-defined and the risks are low. It provides cost certainty for the buyer and incentivizes the seller to control costs. However, it may lead to disputes if the scope changes or if unforeseen issues arise. Related terms include Lump Sum Contract and Scope Definition.

Fixed Price Incentive Fee is a contract type where the seller is paid a fixed price plus an incentive fee if specific performance targets are met. The incentive fee is calculated based on a formula that rewards the seller for exceeding performance expectations. This contract type combines the cost certainty of a fixed price contract with the performance incentives of a cost-plus contract. It is suitable when the scope is well-defined but there is a desire to encourage high performance. Related terms include Performance Targets and Incentive Structure.

Fixed Price with Economic Price Adjustment is a contract type where the fixed price is adjusted based on changes in economic conditions, such as inflation or changes in the cost of materials. This adjustment is predefined in the contract and is triggered by specific indices or events. It protects both the buyer and the seller from the risk of significant price fluctuations over the life of the project. This contract type is suitable for long-term projects where economic conditions are volatile. Related terms include Inflation Index and Price Escalation.

Funding Limit Reconciliation is the process of balancing the planned expenditure of resources against the funding limits set by the organization or sponsors. Funding limits are the maximum amount of funds that can be spent in a given period. If the planned expenditure exceeds the funding limit, the project schedule or scope may need to be adjusted to align with the available funds. This process ensures that the project has the necessary financial resources to proceed without causing cash flow problems. Related terms include Cash Flow Management and Resource Leveling.

Indirect Cost refers to costs that cannot be directly attributed to a specific project activity or deliverable but are necessary for the overall operation of the project or organization. These costs include overheads such as administrative salaries, utilities, and office supplies. Indirect costs are typically allocated to projects based on a predetermined rate or formula. Proper allocation of indirect costs is essential for accurate project costing and profitability analysis. Related terms include Overhead and Allocation Rate.

Life Cycle Costing is the process of evaluating the total cost of ownership of a project deliverable over its entire life cycle, from acquisition to disposal. It includes not only the initial acquisition costs but also the operational, maintenance, and disposal costs. Life cycle costing helps stakeholders make informed decisions about design and procurement by considering the long-term financial implications. It encourages the selection of solutions that may have higher initial costs but lower long-term costs. Related terms include Total Cost of Ownership and Operational Costs.

Management Reserve is a portion of the project budget set aside to manage unforeseen work that is within the scope of the project but was not included in the cost baseline. These reserves are used for unknown-unknowns, such as unforeseen risks or changes in scope that are approved through the change control process. Management reserves are not part of the cost baseline and require approval from senior management or sponsors to be used. They provide a buffer for unexpected events that could impact the project's financial performance. Related terms include Unknown-Unknowns and Change Control.

Make or Buy Analysis is a decision-making process used to determine whether a product or service should be produced internally or purchased from an external supplier. It involves comparing the costs of making the item in-house, including labor, materials, and overheads, against the costs of buying it from a vendor. This analysis also considers factors such as expertise, capacity, and strategic alignment. The goal is to select the option that provides the best value for the project. Related terms include Procurement Strategy and Vendor Selection.

Net Present Value is a financial metric used to evaluate the profitability of a project by calculating the present value of future cash flows minus the initial investment. It takes into account the time value of money, discounting future cash flows to their present value using a specified discount rate. A positive NPV indicates that the project is expected to generate a return greater than the discount rate, making it financially attractive. NPV is a key tool in capital budgeting and project selection. Related terms include Discount Rate and Cash Flow.

Payback Period is the length of time required for the cash inflows from a project to equal the initial investment. It is a simple measure of investment risk and liquidity. A shorter payback period is generally preferred as it indicates a quicker return of the invested capital. However, it does not consider the time value of money or cash flows that occur after the payback period. It is often used as a preliminary screening tool for project selection. Related terms include Return on Investment and Liquidity.

Planned Value is the authorized budget assigned to scheduled work to be accomplished for a schedule activity or work breakdown structure component. It represents the planned cost of the work that should have been completed by a specific point in time. Planned Value is used as a baseline for measuring project performance in Earned Value Management. Comparing Planned Value with Earned Value helps in determining the schedule variance. Related terms include Schedule Variance and Baseline.

Procurement Cost of Work refers to the costs associated with acquiring goods and services from external vendors. It includes the cost of the products or services themselves, as well as any additional costs such as shipping, handling, and taxes. Effective management of procurement costs is essential for controlling the overall project budget. It involves negotiating favorable terms with vendors and monitoring procurement

performance. Related terms include Vendor Management and Contract Administration.

Return on Investment is a performance measure used to evaluate the efficiency of an investment or to compare the efficiencies of several different investments. It is calculated by dividing the net benefit of the investment by the cost of the investment. A higher ROI indicates a more profitable investment. ROI is a widely used metric in project selection and portfolio management. It helps stakeholders prioritize projects that offer the best financial returns. Related terms include Profitability and Investment Efficiency.

Schedule Variance is the difference between the Earned Value and the Planned Value. It measures the difference between the work actually performed and the work that was planned to be performed by a specific point in time. A positive SV indicates that the project is ahead of schedule, while a negative SV indicates that the project is behind schedule. SV is a key metric in Earned Value Management and helps in assessing schedule performance. Related terms include Schedule Performance Index and Time Variance.

Sunk Cost refers to costs that have already been incurred and cannot be recovered. In project decision-making, sunk costs should be ignored because they are irrelevant to future decisions. Focusing on sunk costs can lead to the sunk cost fallacy, where projects are continued despite poor prospects because of the money already spent. Rational decision-making requires focusing on future costs and benefits rather than past expenditures. Related terms include Opportunity Cost and Decision Making.

Time and Materials Contract is a hybrid contract type where the buyer pays for the actual time spent and materials used by the seller. It combines elements of cost-reimbursable and fixed-price contracts. The buyer pays a predetermined hourly or daily rate for labor and the actual cost of materials. This contract type is suitable when the scope is not well-defined and the duration is uncertain. However, it carries a higher risk for the buyer as costs can escalate if the work takes longer than expected. Related terms include Hybrid Contract and Scope Uncertainty.

Value Engineering is a systematic method to improve the "value" of goods or products and services by using an examination of function. Value, as defined, is the ratio of function to cost. Value can be increased by either improving the function or reducing the cost. In project management, value engineering is used to identify opportunities to reduce costs without sacrificing quality or performance. It involves a structured workshop or analysis process involving cross-functional teams. Related terms include Function Analysis and Cost Reduction.

Variance Analysis is the process of determining the cause and degree of difference between the planned and actual performance. In cost management, it involves comparing the actual costs incurred against the planned budget to identify variances. Variances can be favorable (under budget) or unfavorable (over budget). Analyzing the root causes of variances helps in taking corrective actions to bring the project back on track. It is a critical component of cost control and performance reporting. Related terms include Cost Variance and Corrective Action.

Work Breakdown Structure is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables. It organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of

the project work. The WBS is the foundation for cost estimating and budgeting, as costs are assigned to the lowest levels of the WBS. It ensures that all work is accounted for and helps in managing scope and cost effectively. Related terms include Scope Decomposition and Cost Account.

Zero-Based Budgeting is a method of budgeting in which all expenses must be justified for each new period. The budget starts from a "zero base," and every function within an organization is analyzed for its needs and costs. Unlike traditional budgeting, which often starts with the previous year's budget and adjusts it, zero-based budgeting requires a fresh justification for all expenditures. This method can help in identifying unnecessary costs and optimizing resource allocation. It is particularly useful in projects where cost efficiency is a primary concern. Related terms include Cost Justification and Resource Optimization.