**Cost Management Plan –** Integrated NPI Build Optimization Framework for Hardware Development

By

Aastha Lalit Motwani

**Name of Project:**

Integrated NPI Build Optimization Framework for Hardware Development

**Purpose**

The purpose of this **Cost Management Plan** is to establish the procedures for planning, estimating, budgeting, managing, and controlling project costs to ensure project completion within the approved budget.

**Cost Management Approach**

* **Project Manager** is responsible for overall cost management.
* Budget estimates will be reviewed and approved by the **Finance Team** and **Project Sponsor**.
* Cost performance will be monitored through regular reporting and Earned Value Management (EVM).
* All budget changes will be handled through a formal **Change Control Process**.

**Roles and Responsibilities**

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| --- | --- |
| **Role** | **Responsibility** |
| **Project Sponsor** | Approves budget and funding for the project. |
| **Project Manager** | Prepares budget estimates, manages costs, and reports variances. |
| **Finance Team** | Reviews and approves financial reports, manages disbursements. |
| **Procurement Team** | Manages purchase orders and vendor payments. |
| **Risk Manager** | Identifies cost-related risks and mitigation strategies. |
| **Team Members** | Ensure spending aligns with budget allocations. |

**Cost Estimation**

Cost estimation will be conducted using a combination of:

* **Analogous Estimating:** Based on similar past projects.
* **Bottom-Up Estimating:** Summing individual task costs from the Work Breakdown Structure (WBS).
* **Expert Judgment:** Consulting with finance and project leads for realistic forecasting.

**Budget Breakdown**

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| **Cost Category** | **Estimated Cost ($)** | **Owner** |
| **Personnel Costs** | $200,000 | Project Manager |
| - Project Manager | $70,000 |  |
| - Data Analyst | $40,000 |  |
| - Dashboard Developer | $40,000 |  |
| - Risk Manager | $30,000 |  |
| - QA Team | $20,000 |  |
| **Software and Tools** | $50,000 | IT/Procurement Team |
| - Microsoft Project | $10,000 |  |
| - Power BI Pro Licenses | $15,000 |  |
| - Risk Management Tools | $10,000 |  |
| - Cloud Storage (SharePoint) | $15,000 |  |
| **Training and Development** | $20,000 | Project Manager |
| **Contingency Reserve (10%)** | $27,000 | Finance Team |
| **Total Estimated Project Cost** | **$297,000** | Project Manager |

**Cost Control Process**

**Cost control** will be managed through:

* **Budget Baseline:** Approved budget will serve as the baseline for tracking.
* **Variance Analysis:** Actual costs will be compared to the budget monthly.
* **Cost Change Requests:** All changes require formal approval from the **Project Sponsor**.
* **Cost Forecasting:** Monthly reviews to predict potential overruns or savings.

**Earned Value Management (EVM)**

The following metrics will be used to track cost performance:

* **Planned Value (PV):** Budgeted cost for work scheduled.
* **Earned Value (EV):** Budgeted cost for work completed.
* **Actual Cost (AC):** Actual cost incurred.
* **Cost Variance (CV):** EV - AC (*Negative CV = Over Budget*)
* **Cost Performance Index (CPI):** EV ÷ AC (*<1 = Over Budget*)

**Cost Reporting**

* **Frequency:** Monthly cost reports.
* **Audience:** Project Sponsor, Finance Team, Key Stakeholders.
* **Format:** Budget status, variances, and corrective actions.

**Change Control for Budget Adjustments**

* **Change Request Submission:** Team member submits a change request for budget modifications.
* **Impact Analysis:** Project Manager assesses the financial impact.
* **Approval Process:** Changes over 10% of the budget require **Project Sponsor** approval.
* **Update Baseline:** Approved changes are incorporated into the revised budget.

**Risk and Contingency Management**

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| --- | --- | --- |
| **Risk** | **Impact** | **Mitigation Strategy** |
| Software Cost Overruns | Increased expenses | Lock in licenses early; negotiate pricing. |
| Unexpected Resource Costs | Budget overruns | Allocate contingency reserves. |
| Scope Creep Leading to Extra Costs | Increased workload and spending | Strict scope control; formal change requests. |

**Approvals**

|  |  |  |
| --- | --- | --- |
| **Role** | **Signature** | **Date** |
| Project Sponsor | [Signature] | [Date] |
| Project Manager | [Signature] | [Date] |
| Finance Manager | [Signature] | [Date] |

**Conclusion**

This **Cost Management Plan** ensures project costs are carefully estimated, approved, monitored, and controlled. It outlines procedures to maintain budget adherence and address variances efficiently.