Appendix C

Information Technology Project Planning Policies

Project Planning Policy

Policy Statement:

Each project manager must develop, maintain, and follow a written plan that defines project goals, processes, and resource estimates (in terms of schedule, cost, and development). The project plan must be updated throughout the life of the project to accurately reflect the current plan.

Purpose:

To ensure proper planning is performed for successful project completion.

Overview:

Project planning includes developing estimates for the work to be performed, establishing the necessary commitments, and defining the plan to perform the work. The development plan addresses the commitments in terms of resources, constraints, and capabilities of the project. Finally, the plan provides the basis for guiding the management and the performance of the project and evaluating the work progress.

Objectives:

1. Develop a plan for each project that appropriately and realistically covers the activities and commitments (based on documented requirements) and breaks down the development effort into manageable components.
2. Ensure that all affected groups and individuals (e.g., developers, external users, internal customers, stakeholders, etc.) understand the planning estimates and assignments and commit to support them.
    1. Document all approved estimates and plans for tracking activities and commitments. Project estimates are refined throughout project phases. As issues are better understood, estimates for later project phases are updated based on project specific data rather that formula-based assumptions.
    2. Perform project planning in accordance with organizational procedures and in a manner consistent with the complexity and risk of the project.

Appendix C

Information Technology Project Planning Policies

Responsibilities:

The project manager has primary responsibility for implementing this policy.

Evidence of Compliance:

Some {low risk} projects will prepare a project plan that includes, at a minimum, a project statement, a project schedule with milestones, and a project budget. Other {medium risk} projects will also provide project resource estimates, a deliverable list, a project risk assessment, and a configuration management process. Still other {high risk} projects will additionally be required to provide a detailed work breakdown structure, a quality plan, a project requirements list, and an issues list.

Appendix C

Project Planning Guidelines and Best Practices

Project Planning Guidelines and Best Practices

Summary of Project Planning Policy

The project planning policy requires that each project manager must develop, maintain, and follow a written plan that defines project's goals, processes, and resource estimates (in terms of schedule, cost, and development). The project plan is updated throughout the life of the project to accurately reflect the current plan.

Implementation Guidelines for Project Planning

Project planning defines the work and describes how the tasks will be executed. Planning begins with a definition of the specific work to be performed and other constraints and goals that define and bind the project. The planning process includes steps to estimate:

The size of a project
The technical scope of the effort, and
The resources required to complete the project

The planning process results in the production of a schedule, identification and assessment of risks, and negotiation of commitments. Repetition of these steps is necessary to establish the project plan and to ensure "buy-in" by those responsible for the project. Typically, several iterations of the planning process are performed before a plan is actually completed.

Project Planning Requirements

The project plan forms the basis for management efforts associated with the project. It represents the basic tool for successfully executing a project. The plan includes the following types of elements, with the degree of definition varying between projects of different scope:

Sequence of tasks to be performed
Deliverables associated with the project
Dependency relations between tasks
Resources required to perform each task
Schedule of all tasks to be performed

Budget for performing the tasks
Organization used to execute the project
Risks associated with executing the project
Process for ensuring quality
Process for configuration management

The project manager has primary responsibility for implementing the project plan and maintaining it over the course of the project. Project planning requirements will vary by project and are typically determined by the size, cost, complexity, and impact on the business.

The State of Missouri has adopted the Project Management Institute (PMI) and the Project Management Professional (PMP) Certification as the standard for good project management methods. Each agency must ensure appropriate management processes are applied for IT projects. Agencies are encouraged to use and tailor the PMI standards based upon the size, complexity, cost, and impact of the project.

Appendix C

Requirements Management Policy

Requirements Management Policy

Policy Statement:

All projects must include a well-defined problem statement with well-defined business and technical requirements that assure the IT solution satisfies the business need. Requirements must be thoroughly documented and understood by the project team. Changes to requirements must be managed throughout the life of the project.

Purpose:

To ensure that project requirements form the basis for all planning and development efforts and that changes to requirements are managed throughout the life of the project.

Overview:

Requirements establish and maintain an understanding and agreement of the capabilities of the project. Requirement statements, which will evolve over the life of the project, form the basis for estimating, planning, performing, and tracking the project's activities and are critical to obtaining acceptance of the product at the end of the project. Control of the requirements is directly related to control of the project.

Objectives:

1. Ensure that system requirements provide a clearly stated, verifiable, and testable foundation for development and management of the project, based on business and technical requirements.
2. Ensure that the scope of a development effort is defined by the system requirements and that these requirements form the basis for all plans, products, and activities.
3. Ensure that project team members thoroughly understand requirements prior to developing a product or procuring commercial products for the project.
4. Record initial project requirements and review and assess impact of all changes to the initial requirements throughout the life of the project.
5. Track and document all changes to requirements and update all necessary technical and management project documentation affected by the change.
6. Define, collect, and store metrics (measurements) associated with the requirements phase.

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Requirements Management Policy

Responsibilities:

The project manager has primary responsibility for implementing this policy.

Evidence of Compliance:

To demonstrate compliance with this policy, the following must be available, at a minimum:

Project Statement and objective (all projects)
Project Requirements Document (all projects)
Requirements Control Methodology (medium to high risk projects)

Appendix C

Requirements Management Guidelines and Best Practices

Requirements Management Guidelines and Best Practices

Summary of Requirements Management Policy

The requirements management policy requires that all information technology projects must include a well-defined problem statement with well-defined business and technical requirements that assure the IT solution satisfies a business need. Requirements must be thoroughly documented and understood by the project team. Changes to requirements must be managed throughout the life of the project.

Implementation Guidelines for Requirements Management

Requirements definition is one of the most crucial steps in the process of creating a project. Without well-defined requirements, managers cannot plan a project, developers and integrators do not know what to build, customers do not know what to expect, and there is no way to validate (i.e., test) that the system satisfies the needs of the organization.

The project manager is responsible for ensuring that technical requirements are defined and the program, or business, manager is responsible for ensuring that business/operational requirements are met.

Requirements Specification Requirements

At each stage of the project, additional information is derived and documented. Requirements specification will vary from project to project, based on the size, complexity, and business impact of the project.

State organizations ensure that requirements are documented and understood for IT projects, but the degree of specification and the formality of the specifications vary. At a minimum, each project must have a business needs statement. The remaining specifications and requirements traceability tools and techniques are applied as necessary, based on organization-specific management and development procedures.

Appendix C

Project Tracking Policy

Project Tracking Policy

Policy Statement:

Project managers must continuously track the progress of all projects against the project plan.

Purpose:

Project managers will ensure that the project is continuously tracked and that appropriate actions are taken.

Overview:

Project tacking involves monitoring and reviewing the project accomplishments and results against documented estimates contained in the development plan, and adjusting these estimates based on the actual accomplishments and results. A documented and up-to-date plan for the effort is used as the basis for tracking activities, communicating status, and revising plans. Changes in project scope and status have a cascading effect on testing, documentation, and rollout planning. Regular technical and management reviews are conducted to ensure that the management and staff are aware of the project status and plans, and that issues receive appropriate attention.

Objectives:

1. Ensure that actual results and performance of the project are regularly tracked against documented and approved plans.
2. Ensure that risk assessment is performed during key points in the project.
    1. Ensure that corrective actions are taken when the actual results and performance of the project deviate from the plans.
    2. Ensure that changes to commitments (e.g., assignments, budget, schedule) are understood and agreed to by all affected groups and individuals.

Appendix C

Project Tracking Policy

Responsibilities:

The project manager has primary responsibility for implementing this policy.

Evidence of Compliance:

To demonstrate compliance with this policy, the following documentation must be available, at a minimum:

Actual vs. Budgeted Cost Reports
Planned vs. Actual Schedule
Updated Risk Management Plans
Deliverable Status List
Corrective Action Plan (may be included in RMP)

Appendix C

Project Tracking Guidelines and Best Practices

Project Tracking Guidelines and Best Practices

Summary of Project Tracking Policy

The project tracking policy requires that project managers must continuously track and monitor the progress of IT project against the project plan.

Once a project has advanced to the execution phase of performance, a project team and the necessary resources should be in place ready to perform, and the project plan should have been developed and baselined. The project manager is responsible for implementing the project tracking policy.

Implementation Guidelines for Project Tracking

During the implementation phase, the focus shifts from discovery to participating, observing, and ensuring that the plan is being successfully executed. The project plan serves as the basis for the project's monitoring, controlling, and reporting activities. By following the plan and gathering relevant data for status meetings and reports, information will be available to accurately identify issues and problems early, minimize project risks, and monitor, control, and report progress.

Project Tracking Requirements

Projects often fail due to inattention to basic control principles. Too many times a project team is so busy getting on with completing the project that not enough time is spent tracking status and anticipating potential problems that may arise. Then, once a problem is suspected, the team may act too slowly to resolve the problem. Project tracking can help avoid this scenario by defining processes to:

> Track and monitor project activities to measure actual performance planned performance.
>
> Review and communicate status and future actions on both a formal and informal basis.
>
> Monitor and mitigate potential problems, thus reducing their likelihood of occurrence.

Appendix C

Project Tracking Guidelines and Best Practices

Establish a change management process to control changes to the project's objectives, specifications, and overall definition.

Establish an issue tracking process to ensure that there is a central repository for project issues that are addressed in a timely fashion.

Establish a corrective action process to document and track plans to correct an issue that impacts the stated plan and to establish guidelines for re-planning.

Project tracking requirements will vary by project, based on the size, cost, complexity, and impact on the business. The management of a project includes processes for tracking and communicating project status and performing risk assessments. The formality of this tracking process may change based on the specific project. The project manager has responsibility for tailoring all elements to meet the specific needs of the project.

Appendix C

Change Management Policy

Change Management Policy

Policy Statement:

Change Management (CM) must be performed on all projects in accordance with established organizational CM procedures. These processes must ensure that controlled and stable baselines are established for planning, managing, and building the system; the integrity of the system's configuration is controlled over time; and the status and content of the baselines are known.

Purpose:

To ensure that the project baselines are managed and changes to the baseline are controlled.

Overview:

CM involves identifying project baseline items, controlling these items and changes to them, and recording and reporting status and change activity for these items. Changes to the baseline items are controlled systematically using a defined change control process. The configuration of a system or any controlled intermediate or support product can be distinctly identified at any point in time.

Objectives:

1. Explicitly assign responsibility for CM for each project.
2. Ensure that each project has a CM plan.
3. Ensure CM work is performed according to the project plan.
4. Ensure that CM is implemented on products throughout the project's life cycle.
5. Ensure that CM is implemented for externally delivered products and for appropriate products inside the organization.
6. Ensure that all projects have a repository for storing configuration items and associated CM records.
7. Ensure that quality assurance audits of the baselines and CM activities are performed on a regular basis.

Appendix C

Change Management Policy

Responsibilities:

The project manager has primary responsibility for implementing this policy.

Evidence of Compliance:

To demonstrate compliance with this policy, the following documentation must be available, at a minimum:

> Organizational change management plan or project configuration management plan.

Appendix C

Change Management Guidelines and Best Practices

Change Management Guidelines and Best Practices

Summary of Change Management Policy

The change management policy requires that change management (CM) must be performed on IT projects in accordance with organizationally established CM procedures to ensure that controlled and stable baselines are established for planning, managing, and building IT systems. As part of this process, the integrity of the system's configuration is controlled over time, and the status and content of the baselines are known.

Implementation Guidelines for Change Management

Change management is a formal discipline that provides developers and users with the methods and tools to identify the product developed, establish baselines, control changes to these baselines, record and track status, and audit the product.

During the planning process, the procedures and required resources for CM are defined and the control items that will be tracked are identified. The goals for change management planning are to:

Explicitly assign authority and responsibility for CM for the project.

Ensure the CM is implemented throughout the project's life cycle by setting standards, procedures, and guidelines that are produced and distributed to the full project team.

Ensure that project management has a repository for storing configuration items and associated CM records.

Ensure that reviews of baselines and CM activities occur on a regular basis.

Ensure that changes are controlled and that the impact of changes on the hardware and software configuration is understood prior to approving the changes.

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Change Management Guidelines and Best Practices

Change Management Requirements

A CM plan is included as part of the project plan, or it can appear as a separate document or as sections within an overall quality plan. The degree of specification of the CM plan is dependent on the size, cost, complexity, and impact on the business.

Each agency must ensure appropriate change management processes are applied to IT projects. Agencies are encouraged to use and tailor PMI standards based upon the size, cost, complexity, and impact on the business.

Appendix C

Risk Management Policy

Risk Management Policy

Policy Statement:

Risks associated with each Information Technology project must be identified, analyzed, and prioritized. Identified risks must be controlled through the processes of project planning and monitoring. Risk identification and management must be integrated components of project management and risks must be continuously assessed and analyzed during the life of the project.

Purpose:

To ensure that risks associated with a project are well understood so they can be managed, planned for, and mitigated during the execution of the project.

Overview:

Assessing a project's risk will help project managers make more informed decisions and ensure more successful outcomes. Risk assessment is not problem management, but is a process that reduces the likelihood of problems occurring. The risk management process must be integrated with the other elements of project management to ensure consistency in the process. Project risks involve exposure to events such as:

failure of the project to obtain anticipated benefits;
costs that exceed planned levels;
extended project schedules;
poor performance of a system.

Objectives:

1. Risk identification will be led by the project manager, with the assistance of team members with various perspectives, including user, management, and technical perspectives. Risks are listed, analyzed for probability of occurrence and potential impact on the project. Then the risks are prioritized. Risk identification occurs at the beginning of a project and continues throughout the project. Management must ensure that the project team openly and routinely discusses and analyzes risks throughout the life of a project.

2. Risk management planning produces plans for addressing each major risk item and coordinates individual risk plans to the overall project plan. Risk planning ensures that project schedules and cost estimates are adjusted to ensure that adequate time is allocated to properly develop and execute risk mitigation measures when required.

3. Risk management monitoring and control involves tracking the progress toward resolving high risk items and taking corrective action when necessary. The appropriate risk items are highlighted as part of the project reviews and status reports.

Responsibilities:

The project manager has primary responsibility for implementing the policy.

Evidence of Compliance:

To demonstrate compliance with this policy, the following must be available, at a minimum:

Risk Management Plan
Form 5

Appendix C

Risk Management Guidelines and Best Practices

Summary of Risk Management Policy

The risk management policy requires that risks associated with Information Technology projects must be identified, analyzed, and prioritized. Identified risks must be controlled through the processes of project planning and project tracking and oversight. Risk identification and management are integrated components of project management and must be continuously assessed and analyzed during the life of a project. When significant risks are identified for a project, a risk analyst should be assigned to assist the project manager in risk mitigation and management.

Implementation Guidelines for Risk Management

A risk is any factor that has the possibility of causing harm and/or loss to the project. A risk is also any factor that might keep the project from obtaining its objective(s). The existence of risk is not a bad thing; in fact, there probably is no project that is “risk free”. However, the absence of risk analysis and mitigation strategies, including plans of action where appropriate, is not a good thing. The challenge is to fully identify as many risks as possible, and invest in managing their impact rather than ignoring them.

Part of controlling a project during the performance life cycle phases is to have an established risk management process that is unique to the project. Risk management involves the following risk phases:

- Determine the project objectives and each major stakeholder
- Identify as many risks as possible
- Analyze the risks
  - Probability of occurrence
  - Consequence of occurrence
  - Total Risk Exposure
- Review of the risk analysis
  - Including stakeholders
- Evaluate mitigation strategies
  - Risk Reduction
  - Risk Protection
  - Risk Transfer
  - Risk Contingency
  - Risk Acceptance

Develop risk mitigation plan of action
Mitigate risk
    Monitor Risk
    Implement plan of action when appropriate

The risk management plan documents the procedures that will be used to manage risk throughout the project. In addition to documenting the results of the risk identification, it covers who is responsible for managing various areas of risk, how risks will be tracked throughout the project, and how plans of action will be implemented.

Risk identification, risk assessment, risk mitigation and risk tracking are procedures which help prevent and mitigate problems which might arise in any project. The risks should be documented and reported in a Risk Management Plan (RMP). The format and content of the RMP is documented in the Missouri Project Management Best Practices Reference Manual. The RMP should be prepared as part of the Project Management Plan and as a regular part of the Project Status Reports.

Risk Management Requirements

The procedure that the project team will use to manage project risks is defined in the planning stage, documented in the project plan, and executed throughout the life of the project. The scope of the risk management plan is dependent on the size, cost, complexity, and impact on the business of the agency. State agencies will practice good risk management procedures for information technology projects and should apply risk management processes that are appropriate to the specific project.

All projects that require Decision Item funding must have available a Risk Management Plan, in addition to completing the Form 5.

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