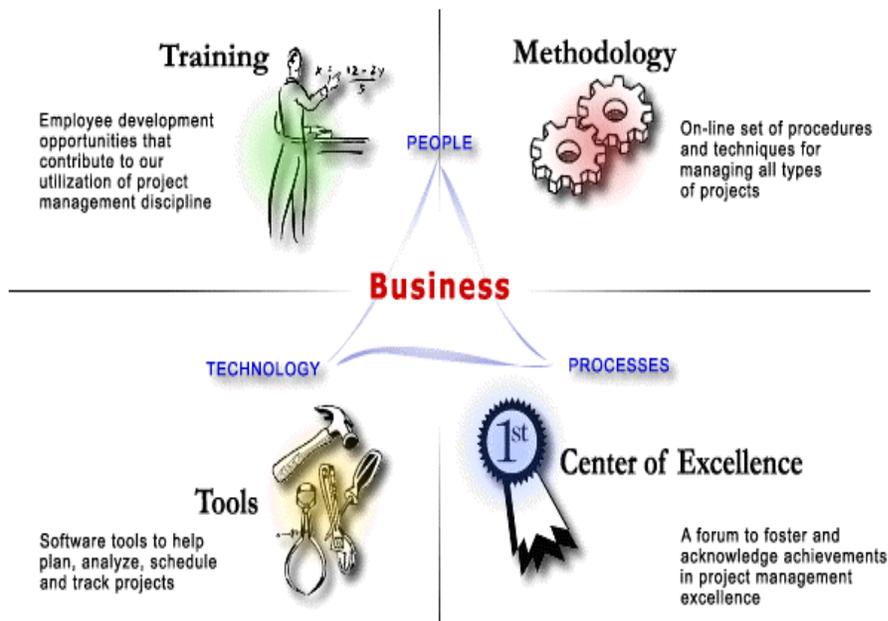




State of Michigan

PMM Express

The Application of the State's Project Management Methodology to Non-Complex Projects



September 2005

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Points of Contact

Please forward any comments or questions to the Project Management Resource Center within the Department of Information Technology. The Project Management Resource Center can be reached at suite@michigan.gov, or visit their web site at <http://www.michigan.gov/projectmanagement>.

Introduction

Overview

Project Management Methodology (PMM) *Express* was developed as a guide to assist in the management of smaller, less complex projects within the State of Michigan. *PMM Express* is a customized version of the State of Michigan Project Management Methodology (PMM) and also contains a generic scheduling template in MS Project format. For more information on the State's PM Methodology, visit the Project Management Resource Center website at www.michigan.gov/projectmanagement.

The intent of *PMM Express* is to guide the project manager or team leader through a series of streamlined steps and templates (used to document process results and decisions), in an effort to cut down the overhead burden in managing smaller, less complex projects.

The full State of Michigan Project Management Methodology is designed to be a reference manual. As an example of this concept, if you needed to understand the step-by-step process of developing a work breakdown structure, the full PMM would be the place to find, understand, and learn this process. Another example would be that if you are using *PMM Express* for your project, yet you need to do a higher level of risk management, you would refer to the Risk Planning Section of the PMM, and perhaps use the PMM Risk Management Plan template to assist in the management of risk on your project.

Contents of PMM Express

This guide is grouped into several sections, as follows:

- Overview of *PMM Express*
- Project Management Basics
- *PMM Express* Process Flow Diagram
- Project Initiation Processes
- Project Planning Processes
- Project Execution Processes
- Project Control Processes
- Project Closeout Processes
- Project Lessons Learned, and
- Scheduling Guidelines

Suggestions for Improvement

If you have questions, comments, or suggestions for improving this document, please send an email to DIT-ProjectManagement@Michigan.gov.

Additional Information

For soft copies of *PMM Express* including document and scheduling templates, point your web browser to www.michigan.gov/projectmanagement, click on "Project Management Methodology", then click on *PMM Express* or send an email request to DIT-ProjectManagement@michigan.gov.

Project Management Basics

What is a Project?

A project is a “temporary endeavor undertaken to create a unique product, service, or result.” This definition is taken from the Project Management Institute’s Project Management Body of Knowledge (PMBOK®). In other words and as shown in Figure 1, a project is a set of tasks or activities, completed sequentially or concurrently, that:

- Have a specific deliverable with certain specifications (scope),
- Include a start date and an end date (time), and
- Consume time, resources, capital, and/or equipment (cost).

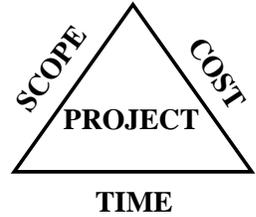


Figure 1: A Project

What is Project Management?

Project Management is an art, it’s a science and it’s a process.

A Science and An Art

Project Management is the science and art of balancing time, cost and scope. It includes resource management, risk management, quality management, communications management, procurement management in addition to scope management, cost management, and time management as shown in Figure 2. It’s planning, scheduling and controlling of project activities to meet the project objectives. Effective project management is accomplished within the organization's structure and culture. It balances the needs and expectations of the project stakeholders, both internal and external.

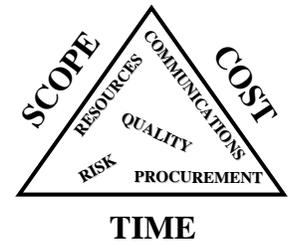


Figure 2: Project Management

The science of project management is the tools that are used to manage the project: a Project Management Methodology, work breakdown structure, project standards and procedures, critical path, Gantt charts, project forms and templates, and MS Project (or other automated scheduling tool).

The art of project management includes the soft skill requirements: communications, trust, teamwork, integrity, honesty, leadership, values, and flexibility.

A Process

Project management is also an iterative process as defined in its various phases: Initiation, Planning, Execution, Control, and Closeout as shown in Figure 3.

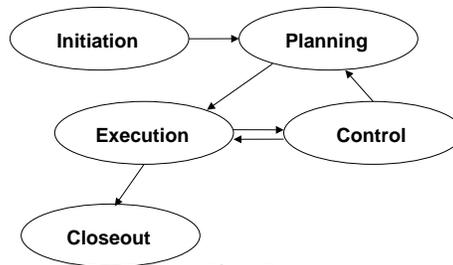


Figure 3:
Project Management Life Cycle

These described phases are:

Initiation – specifies what the project should accomplish; gets a project started.

Planning – most important phase in project management; establishes business requirements, precise cost and schedule, work organization, and management approval.

Execution – project resources ready to perform project tasks; doing the work

Control – comparing actual performance with planned performance and taking corrective action to yield the desired outcome when significant differences exist.

Closeout – performed once all defined project objectives have been met and the client has accepted the project's product; lessons learned; project record archiving.

PMM Express and Templates

PMM Express Templates

PMM Express is streamlined to handle smaller, less complex projects. The applicable PMM templates include:

- **Project Charter**
- **Project Plan**
- **Project Status Report**
- **Project Issue Document**
- **Project Change Control Request**
- **Post Implementation Evaluation Report (PIER), and**
- **Lessons Learned**

A standardized project schedule template is incorporated into *PMM Express* in MS Project format. The project schedule template contains the following major phases:

- **Initiation** (charter development)
- **Planning** (project plan development)
- **Execution** (executing the project plan, maintaining the project schedule, managing project scope changes, and managing project issues)
- **Control** (weekly status report preparation and status meetings)
- **Closeout** (validating customer expectations, documenting best practices and lessons learned, and official project sign-off)

The applicable *PMM Express* templates, their purpose and customization from the PMM are detailed below:

Project Charter Template

- **Purpose:** The Project Charter is the formal document authorizing resources to be expended for a project. It also details the budget, scope, defines major roles and responsibilities, and high-level schedule of the project.
- **Customization of PMM:** Combining important elements from the Project Concept and Project Charter templates

Project Plan Template

- **Purpose:** The Project Plan dictates how the project will be managed, including the project approach, and how risk, communications, budgeting, quality and resources will be managed on the project.
- **Customization of PMM:** Transforming the set of ten project planning templates into a single all-encompassing template

Project Status Report Template

- **Purpose:** The Project Status Report is the mechanism for the project manager to communicate progress, risks and issues to project stakeholders. The Project Status Report is generally the main document used at project status meetings.
- **Customization of PMM:** Incorporated an Issues Log into the template.

Project Issue Document Template

- **Purpose:** Used to formally document major project related issues that

need to be escalated. Smaller project related issues are documented on the Project Status Report only.

- **Customization of PMM:** None

Change Control Request Template

- **Purpose:** Used to formally request approval for significant changes to the project scope. Scope changes that impact the project budget, schedule, or quality must have an approved Change Control Request prior to expending resources on tasks outside the approved project scope.
- **Customization of PMM:** None

Post Implementation Evaluation Report Template

- **Purpose:** Used to receive formal project sign-off and to document project execution, best practices and/or lessons learned.
- **Customization of PMM:** Summarized to include Staffing and Skills issues, Customer Expectations Management, Lessons Learned, and Project Sign-off.

Lessons Learned Document

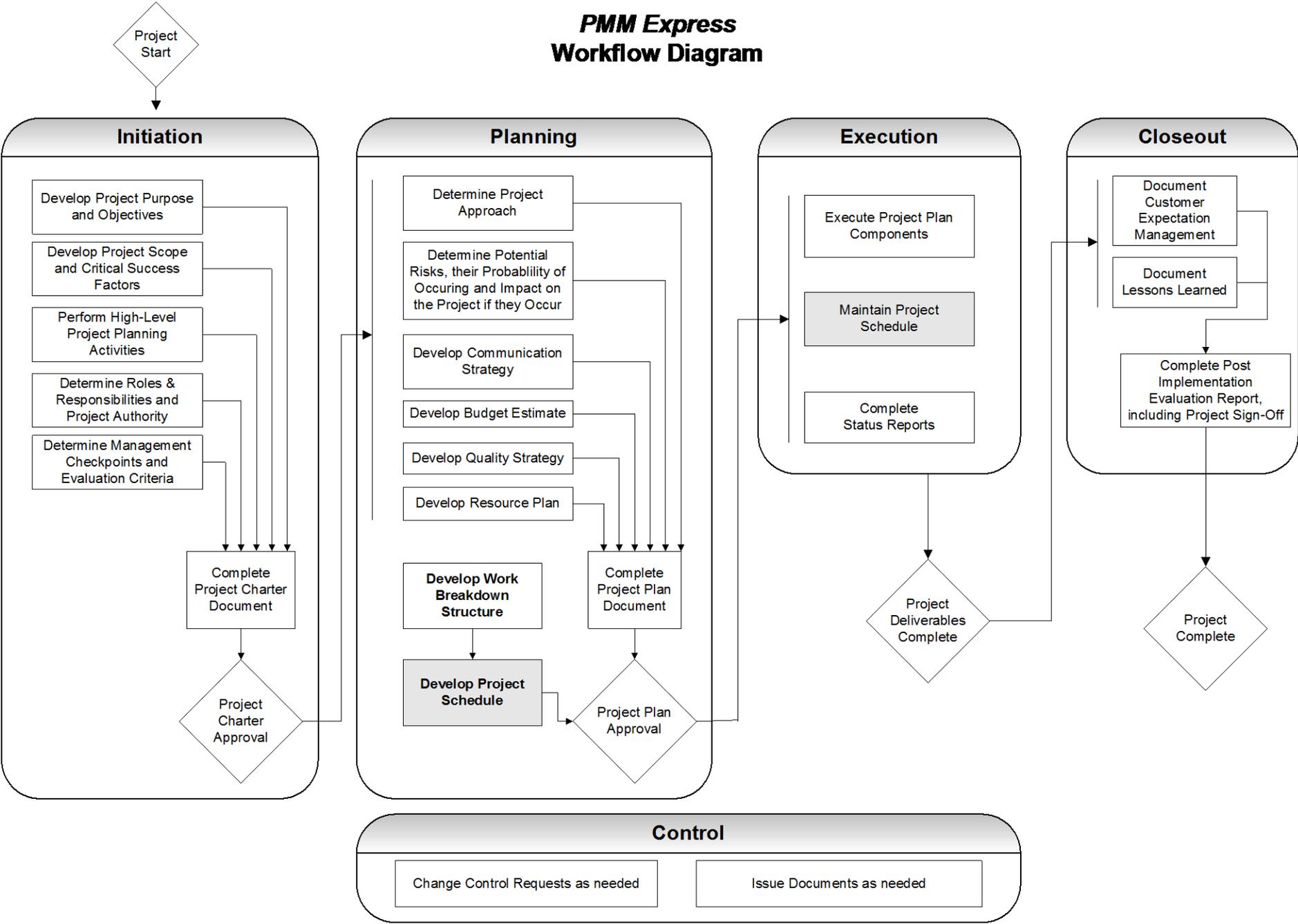
- **Purpose:** Used to document best practices and/or lessons learned at any time during the project – usually at major milestones.
- **Customization of PMM:** None.

PMM Express Process Flow

The project management processes required for a smaller, less complex project can be depicted graphically. Keep in mind, however, that project managers are often required to jump from the Execution phase back to the Planning phase as a result of a change on the project. This “jump” is commonly referred to as “replanning” and can happen several times throughout the project’s lifecycle.

The Workflow Diagram on the following page graphically depicts a flow process used with the *PMM Express*.

PMM Express Workflow Diagram



Project Initiation Phase Processes

Project Initiation Overview

Project initiation is the conceptual element of project management. This section describes the basic processes that must be performed to get a project started. Accordingly, the purpose of the Project Initiation Phase is to specify what the project should accomplish. The caution in specifying this purpose is that if the customer's needs are inadequately articulated, then poorly formulated goals and objectives will stand out as a significant source of concern. A high-level discussion on phase deliverables should be contained during this phase as well. In addition, the high-level barriers, potential problems, and roles and responsibilities of project initiation are summarized.

The Initiation Phase

Although at times there is no uniform agreement on the specific stages of a project and the associated management processes that follow, there is agreement that for a project to exist, it must begin.

The starting point is critical because it is essential for those who will deliver the product/process, those who will use that product/process, and those who have a stake in the project to reach agreement on its initiation.

Project Charter Template

The Project Charter is created to formally communicate the existence of a project. The Project Charter is issued at the end of the Initiation Phase and is a beginning to the Planning Phase of a project. The Project Charter is used as the basis to create the Project Plan.

The Project Charter template in *PMM Express* differs from the PMM version of the Project Charter in that it includes both a section for Project Critical Success Factors (Section E), and a section for Initial High-Level Project Planning estimates (Section F). These two sections are included in the PMM Concept Document, which is not a part of *PMM Express*, yet are important items to document, regardless of project size and complexity.

For detailed information on the completion of the Project Charter, refer to the full version of the State of Michigan Project Management Methodology.

Management of the Project Charter

Because the Project Charter is an announcement, and because its purpose is to formally announce the project, it is not meant to manage changes that occur. The charter is intended as a one-time document; therefore, if a change occurs that is significant enough to outdate the Project Charter's original purpose and scope then a new Project Charter should be issued.

State of Michigan
(Insert Project Name Here)
Project Charter

A. General Information

Information to be provided in this section gives a specific name to the project as well as pertinent information about the personnel involved.

Project Id: _____ **Date:** _____
Controlling Agency: _____ **Modification Date:** _____
Prepared by: _____ **Authorized by:** _____

B. Project Purpose

This section communicates the purpose of the project, and the business problem to be solved.

C. Project Objective

This section defines the objectives of the project as they relate to the goals and objectives of the organization. Note: Projects are full of uncertainty. As such, it is advisable, as part of this charter, to develop an initial risk assessment to identify, quantify, and establish mitigation responses to high level risk events that could adversely affect the outcome of the project.

The Project will support the following organization strategic goals. For each goal, project objectives are identified. The project plan developed as a result of this project charter will:

- *Develop a project performance measurement plan to measure performance against these objectives.*
- *Provide a project performance report to document the results.*

The external oversight committee must approve the project performance measurement plan.

Agency Goals	Project Objectives

D. Project Scope

The level of detail in this section must be sufficient to allow for detailed scope development in the Project Plan. A more detailed description of the project scope will be developed in the Planning Phase. The reader is cautioned that scope creep (adding work without corresponding updates to cost, schedule, and quality) may render original plans unachievable. Therefore, initial clarification of scope, and adherence to the plan throughout the project, are of the utmost importance. Describe any applicable assumptions and/or constraints that may affect the project.

Project Results. *State what will be created in terms of deliverables to satisfy the purpose of the project, as described in Section B.*

Content of the Project. *Define what work is to be done.*

Exclusions. *Define what work is not to be done, that otherwise might be assumed to be part of this project.*

Key Stakeholders. *List the organizations/persons directly affected by the project and the resulting project deliverables.*

Assumptions. *List major assumptions pertaining to this project that may impact scope.*

Constraints. *List all known constraints pertaining to this project that may impact scope.*

E. Project Critical Success Factors

Describe what will be the determining factors that are needed to ensure project success.

F. Initial High-Level Project Planning

Document project high-level anticipated estimates, specifying a confidence percentage.

Estimated Resource Requirements: **Staff, consultant, equipment, and other resource categories needed for project completion.**

Estimated Project Cost: **Staff costs, consultant costs, equipment costs, and other cost categories needed for project completion.**

Estimated Benefits: **Outline the anticipated benefits as a result of performing this project.**

Estimated Scheduling Dates:

Anticipated Start Date:

Target Completion Date:

G. Project Authority

This section describes the authority of the individual or organization initiating the project, limitations or initial checkpoint of the authorization, management oversight over the project, and the authority of the Project Manager. This project charter defines two management structures—internal and external—to ensure change and issues affecting project completion are properly controlled.

- **Authorization**

This section ensures that the project initiator has the authority to commit the appropriate resources within the organization.

This Project Charter has been initiated by Initiating Organization and authorizes the expenditure of Organization resources to complete a first checkpoint for the Project.

- **Project Manager**

This section explicitly names the project manager and may define his or her role and responsibility over the project. This section also lists the project manager's skill sets and justifies his or her selection for this project. Depending on the [Project] complexities, this section may describe how the project manager will control matrix organizations and employees.

Identify the Project Manager, their expressed authority, their skill set, and justification for why they were selected to lead the project.

J. Signatures

The signatures of the people below relay an understanding in the purpose and content of this document by those signing it. By signing this document you agree to this as the formal Charter statement to begin work on the project described within, and commitment of the necessary resources.

Name/Title	Signature	Date

Project Planning Phase Processes

The Planning Phase

The Project Planning Phase follows the Project Initiation Phase and is considered to be the most important phase in project management. Time spent up front identifying the proper needs and structure for organizing and managing the project saves countless hours of confusion and rework in the Execution and Control Phases of the project.

The purpose of this phase in the project management process is to establish business requirements, establish precise cost and schedule of the project (including a list of deliverables and delivery dates), establish the work organization, and to obtain management approval.

The Intent of Project Planning

Without planning, a project's success will be difficult, if not impossible, to achieve. Team members will have limited understanding of expectations, activities may not be properly defined, and resource requirements may not be completely understood. Even if the project is finished, the conditions for success may not have been defined.

Project planning identifies several specialized areas of concentration for determining the needs for a project. Planning will involve identifying and documenting scope, tasks, schedules, risk, quality, and staffing needs. The identification process should continue until as many of the areas as possible of the chartered project have been addressed.

The Importance of Project Planning

Inadequate and incomplete project planning is the downfall of many high-profile, important projects. An adequate planning process and project plan will ensure that resources and team members will be identified so that the project will be successful.

Project Planning Roles and Responsibilities

Everyone on the project team and, in most cases, several stakeholders will play a part in the input to planning a project. The responsibilities for project planning are summarized below:

- Project managers are responsible for developing a Project Plan for a specific project. The project manager is responsible for ensuring that the overall planning requirements are fulfilled. This includes delegation of responsibility for specific plan documentation and sign-off for approval at the end of the Planning Phase.
- State agencies are responsible for developing internal procedures to ensure that the planning process is completed consistently with the agency's business plan. All projects must be well thought out, support key stakeholder goals, and include documented processes that allow the project to be tracked and controlled until closure. When the situation calls for it, agency personnel should be involved in Project Plan approval.
- Functional/organizational management is also responsible for ensuring that there are adequate resources assigned to a project. This includes both managerial and product development assignments. A separate management line item is recommended so that management costs are not rolled into overhead costs. Management is a full-time job for most projects – it is not an activity well suited to being performed in small part by many staff members.
- Key stakeholders play an integral part in the planning of a project. They should have representative input and approval in the Project Plan and associated documents before the Project Execution Phase takes place.

The Project Plan

The Project Plan forms the basis for all management efforts associated with the project. It is a record of plans that is expected to change over time.

The assigned project manager creates the Project Plan. It should be as accurate and complete as possible without being several volumes in length. The Project Plan documents the pertinent information associated with the project; it should not be a verbose document. It is a document that allows the project manager to manage the details, and not be managed by the details. The Project Plan should cover the following topics at a minimum:

- General Project Information (points of contact, phone numbers, etc.)
- Project Executive Summary
- Detailed Project Scope Statement
- Resource Planning
- Project Budget Estimate
- Communications Planning
- Quality Planning
- Risk Planning

Attachments to the Project Plan should include:

- Work Breakdown Structure
- Project Schedule

Additional areas worth considering, as part of the project planning process include:

- Cost-Benefit Analysis
- Procurement Planning
- Change Management Planning

For detailed information on the completion of the Project Plan, refer to the full version of the State of Michigan Project Management Methodology.

Project Plan Review

Once the project manager completes the Project Plan, it should be reviewed and approved by key project stakeholders. The level and extent to which the plan will be reviewed is based on the size of the project as stated in dollars or period of time. Ultimately, the review process allows for executive management buy-in and approval of the plan. Once the Project Plan is approved and signed, the project manager is given the authority to complete the current project efforts and carry on into the Execution Phase.

State of Michigan
(Insert Project Name Here)
Project Plan

A. General Information

Information in the project summary areas that was drafted during the project concept phase and should be included here. Information includes the project name, original estimates, plan revision numbers, points of contact, etc.

Project Id: _____ **Preparation Date:** _____
Controlling Agency: _____ **Modification Date:** _____
Prepared by: _____ **Authorized by:** _____

Agency Points of Contact

This should be the list of individuals that will be involved with the project during the Execution Phase.

Position	Name	Phone	E-mail
Project Manager			
Senior Management Sponsor			
Senior Technical Sponsor			
Procurement Contact			
Customers:			
Other Stakeholders:			

B. Executive Summary

Information in the project summary areas was started during the project concept phase and should be included here. Information includes the project name, original estimates, plan revision numbers, points of contact, etc.

Business Need/Problem

Identify business need/problem that needs to be solved.

Statement of Work

This statement should be short and to the point. It should not contain language or terminology that might not be understood.

Project Objectives

Provide a brief, concise list of what the project is to accomplish.

Project Approach

Describe the strategy to deliver the project. For example, it may describe a phased strategy, contracting approach, reference to implementation, etc. Subsections may be created to present the strategy.

C. Detailed Project Scope Statement

Describe what will be included as part of the overall project.

Project Results/Completion Criteria

--

Approach to be Used

--

Content of the Project

--

Exclusions

--

D. Resource Planning

After establishing the human resources required for the project, develop a staffing plan that shows the personnel (both internal and external) and their estimated effort hours that will be required on the project on a weekly basis. Note: this information can be generated via a PM tool, such as MS Project, as a byproduct of the project schedule.

Staffing Names	Week1	Week2	Week3	Week4	Week5	Week6	Week7	Week8	Week9

E. Budget Planning

List the budget estimate, by task, that it is estimated to complete this project. Include Personnel, contractor, equipment, and other associated costs required to complete all project deliverables. Note: much of this information can be generated via a PM tool, such as MS Project, as a byproduct of the project schedule. (Totals must be calculated manually.)

Project Task	Labor Hour	Labor Cost	Material Cost	Travel Cost	Other Cost	Total per Task

Project Task	Labor Hour	Labor Cost	Material Cost	Travel Cost	Other Cost	Total per Task
Other:						
Sub-Totals:						
Risk (Contingency)						
TOTAL (scheduled)						

F. Communication Planning

List the different project stakeholder categories (Project Sponsor, Information Officer, Customer, Team Member). Describe how they will receive project information (email, project status meetings, sponsor meetings, etc.) and give the frequency in which they will receive this information (daily, weekly, bi-weekly, etc.).

Target Audience		Target Message/ Agenda	Method	Frequency	Duration
Type	Name				

G. Quality Planning

Project / product quality is of paramount importance. This section should detail how quality is being addressed.

Deliverable Acceptance Criteria. Describe Acceptance Criteria for deliverables as they are turned over to the customer.

--

Applicable QA Activities. Define applicable Quality Assurance activities for the project including test and acceptance processes and documentation.

H. Risk Planning

Describe any potential risks that may impact the schedule, cost, or quality of the project or resulting project deliverables. For high impact / high probability risks, detailed mitigation plans should be provided (as an attachment, if necessary).

#	Risk Description	Impact	Prob	Weight	Owner	Mitigation Plans

I. Signatures

The signatures of the people below relay an understanding in the purpose and content of this document by those signing it. By signing this document you agree to this as the formal Project Plan.

Name/Title	Signature	Date

Project Scheduling Guidelines

Overview

This section is designed to help the project manager develop a well thought through and fairly accurate project schedule. The information contained in this section was derived from a combination of the State of Michigan Project Management Methodology; WBS and Scheduling Guidelines from Gantthead.com; and other related sources.

Key Components

A normal functioning Project Schedule contains several key components. These components include **tasks** (derived from the work breakdown structure or WBS), **dependency relationships** between tasks, **task duration** and/or **task effort** (normally represented in person hours), and **assigned resources** (normally personnel) at the task level.

A good project schedule has detail sufficient for control by the project manager. It should not require excessive effort to maintain, especially on small, short time frame projects. A good schedule:

- Is a combination of actual progress and what is estimated to remain;
- Provides comparison with original commitments;
- Has task and resource detail sufficient for schedule management;
- Retains data for project evaluation;
- Is updated with status (progress) on a regular, scheduled basis; and
- Is changed to reflect changed project objectives, after stakeholder concurrence.

Viewing a project as one single piece of activity is like looking at the process of getting ready for work each morning in one step. Just like getting ready for work, we complete a project in smaller chunks of activities – and that’s where the Work Breakdown Structure (WBS) comes in. A WBS provides a consistent and visible framework to complete any project in an organized manner. Questions to be asked include: “How many tasks should a project have?” and “How much detail should be covered by the WBS?” The following guidelines will help with this activity.

The objective of developing a WBS is to organize and comprehend a project by breaking it into progressively smaller pieces until it is a collection of meaningful and manageable tasks (or work packages).

Break the project into major components

Structure the project and determine activity categories:

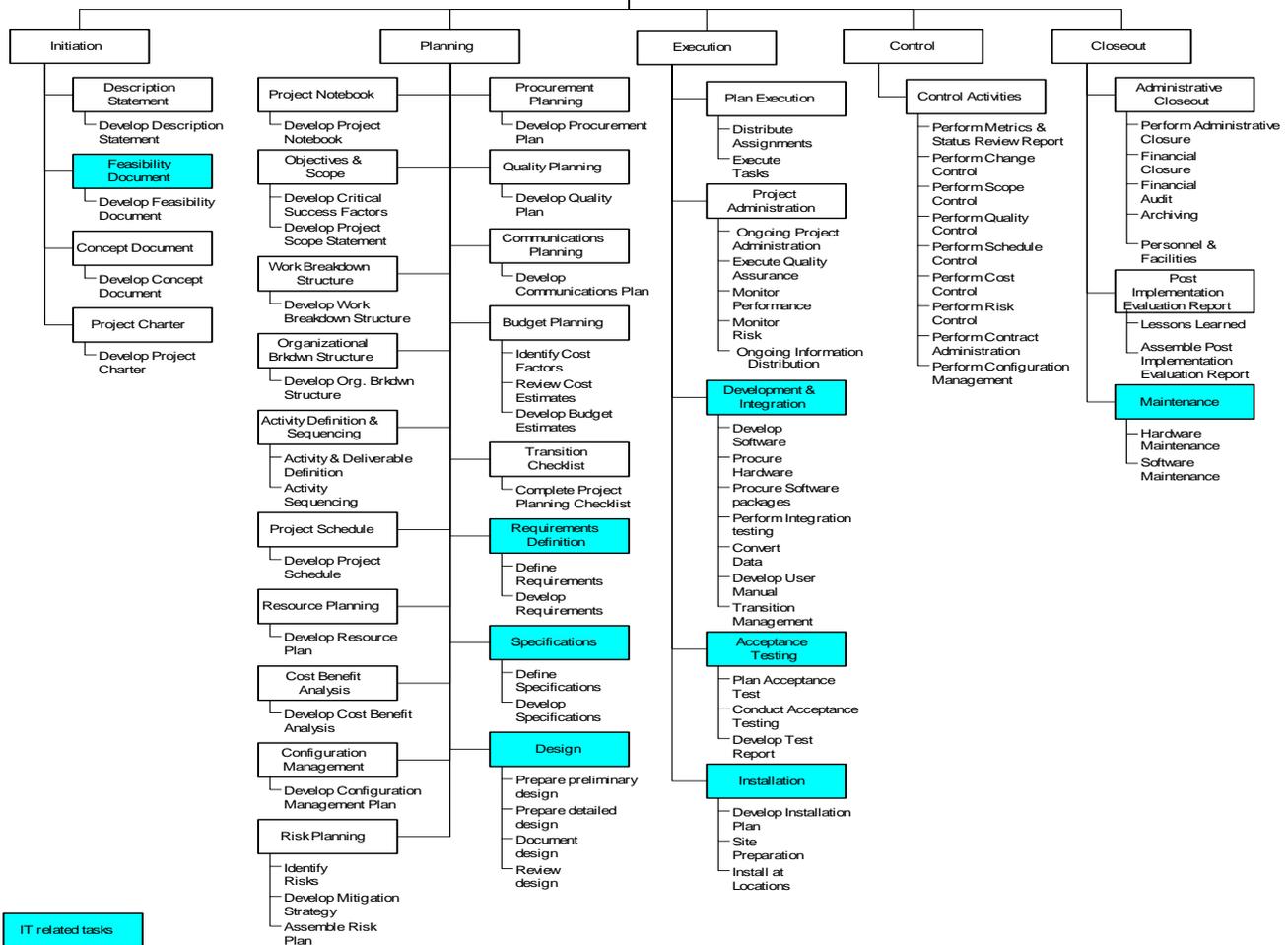
- Look at whatever information you have about the project that you are planning.
- Gather information from prior projects and from other project managers.
- Identify or define the project goals, objectives and scope.

WBS standards and approach:

- Use a standard WBS format or group of formats across all projects (using the included MS Project template) and communicate task meanings/definitions. This saves re-learning project lessons and can lay the groundwork for successful data gathering to aid future time/cost estimates.

A sample WBS format is given below:

Work Breakdown Structure (WBS)



A WBS for a project will have multiple levels of detail:

- Break down major activities into tasks and sub-tasks required to accomplish the activity.
- Depending on the complexity of the task, these steps or subtasks can be further broken down.
- The number of levels depends upon the size and complexity of the project.
- The process of defining steps should continue until you are certain nothing major has been forgotten and accurate cost/hour estimates can be applied to the lowest level or activity.
- The lowest WBS element or task should be linked to a well defined deliverable.

Major components can be grouped by:

- Product or service deliverables
- Project/system phases
- Organizational responsibilities
- Time phases

The number of levels of detail depends on:

- Size of project – smaller projects generally have fewer levels
- Risk/complexity – more risk would have more levels
- Similarity with past projects – more similarity means fewer levels

Each lowest level element of the WBS (task) should be:

- Manageable
 - Specific authority and responsibility assigned to each element
 - Only one owner should be assigned to each task
- Independent
 - Minimum interfacing with and dependence on other tasks
 - Clearly defined deliverables are evident
 - Quality can be assured through performance criteria associated with each deliverable
- Measurable
 - Results measured in terms of progress by completion of tasks
 - The work can be readily tracked and monitored
 - Each task is small enough so that estimates are credible

Specify deliverables for each task

Identify deliverables and milestones for each major task

- Tasks need to have clearly and concisely defined deliverables

Establish performance standards upon which the deliverable will be measured is desirable

- Deliverables must be clearly measurable

After developing the work breakdown structure and identifying the lowest level tasks, the next step is to do the scheduling for the project. The activities involved are estimating the duration of all tasks identified in the WBS and determining the logical dependencies amongst the tasks and creating a time line for the tasks.

Estimate the duration and effort for each lowest level task

Collect historical data from other projects. Consider following (for a software development project):

- Project Metric Databases
- Measurement of software size – lines of codes, functions points
- Complexity of code
- Post-Mortems, project reviews
- Analyze people experience--task owners' project managers

Estimating Tools & Techniques

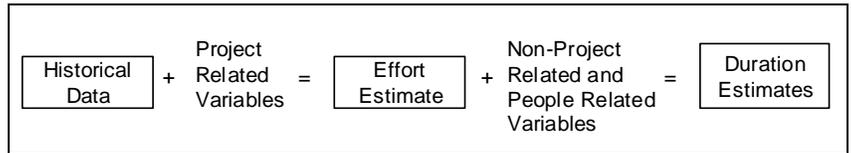
- Use standard tools where applicable
- Standard procedures
- Collect and maintain historical data; do trend analysis for estimation and effort utilization

Deal with uncertainties

- Reduce unknowns by:
 - Thoroughly defining the project and tasks
 - Breaking the work down to the lowest level of detail
 - Identifying and understanding dependencies--both amongst tasks and external dependencies
- Lack of detail in requirements may indicate requirements are not firm, which would increase uncertainties
- Add contingency factor to estimates proportional to the level of uncertainty

Consider Project Related Variables

- Time and resource requirements increase in a non-linear fashion with the increasing project complexity
- Levels of reliability and performance levels affect the time/testing needed--greater reliability and higher the performance levels sought increase the time needed
- Standards procedures and tools for project tasks help improve productivity
- The project environment also significantly affects productivity



Determine logical dependencies for each lowest level task

- Each task must precede another task(s) unless it is completing the project
- Consider all predecessor tasks (those tasks occurring before and tied to the referenced task) and successor tasks (tasks occurring after and tied to the referenced task) and the flow of variables and information between them
- To determine logical dependencies consider:
 - Input and output from both the internal and external sources
 - Files, data storage and data records touched and update by various tasks
 - Processing to massage and update data; consider sequence of tasks working on files/data-records
- Check all dependencies for loops
- Develop all paths
 - Sequential series of tasks linked by logical dependencies
 - Identify milestones for the tasks and paths
 - Identify deliverables associated with milestones

Develop timeline for tasks – critical path method

- Determine critical path using the scheduling software (Niku Workbench or MS Project)
 - Defined as the longest continuous path(s) going from the start to the end of the project
 - The critical path determines the length of the project
- Identify critical tasks
 - Tasks that must be done on schedule otherwise the project would be delayed
 - All tasks of critical path are critical
- Identify non-critical tasks
 - The tasks that have some leeway between their earliest possible start and their latest allowable start
 - Determine the float – the length of time a task (on a non-critical path) could be delayed without affecting project completion date
 - Establish milestones and associate deliverables with them

Scheduling Template in MS Project Format

ID	Task Name	Duration	Start	Finish	Work	Prede	May					June				Jul		
							4/13	4/20	4/27	5/4	5/11	5/18	5/25	6/1	6/8	6/15	6/22	6/29
1	Initiation	0.38 days	Thu 5/1/03	Thu 5/1/03	3 hrs													
2	Project Begins	0 days	Thu 5/1/03	Thu 5/1/03	0 hrs													
3	Develop Project Charter	0.38 days	Thu 5/1/03	Thu 5/1/03	3 hrs	2												
4	Project Charter Approved	0 days	Thu 5/1/03	Thu 5/1/03	0 hrs	3												
5	Planning	0.5 days	Fri 5/2/03	Fri 5/2/03	6 hrs													
6	Develop Project Plan	0.5 days	Fri 5/2/03	Fri 5/2/03	4 hrs	4												
7	Develop Project Schedule	0.25 days	Fri 5/2/03	Fri 5/2/03	2 hrs	4												
8	Project Plan Approved	0 days	Fri 5/2/03	Fri 5/2/03	0 hrs	6,7												
9	Execution	21.5 days	Fri 5/2/03	Mon 6/2/03	198 hrs													
10	Project Plan Execution	21.5 days	Fri 5/2/03	Mon 6/2/03	192 hrs													
11	Execution Begins	0 days	Fri 5/2/03	Fri 5/2/03	0 hrs	8												
12	Perform Execution Task 1	3 days	Wed 5/7/03	Fri 5/9/03	48 hrs	11												
13	Perform Execution Task 2	3 days	Wed 5/14/03	Fri 5/16/03	48 hrs	12												
14	Perform Execution Task 3	3 days	Wed 5/21/03	Fri 5/23/03	48 hrs	13												
15	Perform Execution Task N...	3 days	Thu 5/29/03	Mon 6/2/03	48 hrs	14												
16	Project Schedule Maintenance	20 days	Tue 5/6/03	Mon 6/2/03	6 hrs													
17	Update Project Schedule	20 days	Tue 5/6/03	Mon 6/2/03	6 hrs	11												
18	Project Deliverables Completed	0 days	Mon 6/2/03	Mon 6/2/03	0 hrs	15,17												
19	Control	20 days	Fri 5/2/03	Thu 5/29/03	9 hrs													
20	Complete Project Status Report	20 days	Fri 5/2/03	Thu 5/29/03	3 hrs	2												
21	Prepare and Facilitate Status Meetings	20 days	Fri 5/2/03	Thu 5/29/03	6 hrs	2												
22	Closeout	0.25 days	Tue 6/3/03	Tue 6/3/03	2 hrs													
23	Prepare PER Document	0.25 days	Tue 6/3/03	Tue 6/3/03	2 hrs	18												
24	Project Signoff	0 days	Tue 6/3/03	Tue 6/3/03	0 hrs	23												

Project Execution Phase Processes

What Happens During Project Execution?

Once a project moves into the Execution Phase, the project team and the necessary resources to carry out the project should be in place and ready to perform project activities. The Project Plan should have been completed and baselined by this time as well. The project team, and specifically the project manager's focus, now shifts from planning the project to participating in, observing, and analyzing the work being done.

PM Tasks During Project Execution

A project manager's responsibilities do not stop once the planning of the project is done. Because a project manager is responsible to internal and external stakeholders, the project team, vendors, executive management, and others, the visibility of the position is intensified because many of these people will now expect to see and discuss the resulting deliverables that were so meticulously detailed in the Planning Phase. As a project manager, keeping oneself from getting 'down in the weeds', especially on large projects, will be important during project execution. This will allow the project manager to focus attention on enabling the project plans and processes and managing the expectations of customers and stakeholders.

Particular attention during project execution will need to be paid to keeping interested parties up to date with project status, dealing with procurement and contract administration issues, helping manage quality control, and monitoring project risk. While the processes to control many of these elements are discussed within the Project Control Phase, it is still important that the project manager be cognizant of the issues as the project is being performed. Daily interaction and feedback from team members will be vital to project success.

Project Team Activities During Project Execution

The project team members are expected to assist in the management of the project as well, albeit at a more functional level. The critical project management elements for the project team to provide assistance with include the following:

Performance Monitoring

Implement an execution plan to measure actual performance as compared to planned performance. For example, actual project schedules will need to be reviewed periodically and compared to baseline schedules in order to discern whether the project is performing according to plan. If the project is not performing according to the baseline (see variance in the Project Control Phase section), steps will be taken to get the project back on track. The same monitoring and analyzing will take place on budgets, quality, risk, scope, etc.

Provide Project Status

While the project manager is responsible for relaying project status to parties outside the project team, the project team is, in turn, expected to report status to the project manager. This includes communicating information on both a formal and informal basis. Formal mechanisms such as status report meetings and action item reviews can be very specific. Informal processes, such as hallway conversations, can be very helpful as well.

Project Execution Process Defined

The project plan execution process ensures that planned project activities are carried out in an effective and efficient way while ensuring that measurements against project plans, specifications, and the original project feasibility concept continue to be collected, analyzed, and acted upon throughout the project life cycle. Without a defined project execution process, each project team would execute projects using its own best practices, experience, methods, certain

control, tracking, and corrective action activities would be missed.

It is important to note that project execution relies heavily on the plans developed in the Planning Phase. There is already enough work to do within the Execution Phase of the project; therefore, having to reinvent ways of dealing with risk, change requests, training and resource issues, and other such obstacles to progress is impractical and undesirable at this point.

It is also critical during the Execution Phase that the project manager support and monitor the execution of other important project plans such as the Communications Plan, Risk Management Plan, and Procurement Plan via periodic interaction with the project team and stakeholders.

Information Distribution

Using Status Reviews for Information Distribution

The project Communications Plan is an important factor in the Execution Phase. A large part of a project manager's responsibility during execution is keeping the stakeholders informed of project status. Joint project reviews are a good way to bring visibility to all areas of the project. They provide an opportunity to discuss important issues and make management decisions on the project with input from several sources. Joint project reviews can involve the project manager, project team members, project stakeholders, and agency management, depending on the issues being discussed. The frequency and topics covered at these meetings should be outlined in the Communications Plan.

Benefits of Status Reviews

Examples of benefits of joint status review meetings include the following:

- "What isn't seen to be done isn't done"—Visibility of accomplishments is vital, and joint reviews allow all interested parties to acknowledge and approve milestones/accomplishments. Joint reviews also make team members feel more responsible for getting the work done.
- Parties must agree on the outcome (e.g., approval, disapproval, contingent approval) of the review and any action items as a result of the review. The best way to reach agreement is to get both parties together in a formalized, planned manner.

Project Administration

Project administration is initially considered during the Project Planning Phase when the Project Plan is created. During the Execution Phase, the Project Plan is implemented and modified as necessary.

Project Plan modifications may result from such things as the following:

- New estimates of work still to be done (generated as more detailed information is known about outstanding work)
- Changes in scope/functionality of end product(s)
- Resource changes
- Unforeseen circumstances

In addition to keeping the Project Plan current, project administration involves monitoring the various Execution Phase activities (and aiding them as appropriate), monitoring risks, reporting status, and reviewing/authorizing project changes as needed.

The following is a list of documents and procedures that might be helpful in identifying the cause of project problems and taking action to eliminate/prevent them:

- Corrective and preventive action procedures

- Tracking time spent on project activities by team members
- Timesheet recording procedure
- Timesheet forms
- Status reporting by team members
- Project status reporting to management

Scope Verification

Scope Verification Defined

Scope verification is the project management responsibility that focuses on ensuring that the products created during the Project Execution Phase are correct and meet agreed upon requirements. This may sound similar to quality control, but according to the Project Management Body of Knowledge, “Scope verification differs from quality control in that it is primarily concerned with the acceptance of the work results while quality control is primarily concerned with the correctness of the work.”

How Is Scope Verified?

The baseline for the creation of any deliverable is the baseline scope plus or minus any agreed upon changes. Falling short of or going beyond the agreed upon scope will jeopardize the acceptability of the deliverable. Scope verification is achieved through inspection or formal reviews of the deliverables. Once a project deliverable is accepted by the customer, a formal acceptance document is suggested to be drafted and signed stating such.

Schedule Data Collection and Validation

The procedures defining the process to update schedules to depict current work efforts are key to ensuring that accurate schedules are maintained.

Without these procedures, invalid data may cause inaccurate schedule performance reporting. Data collection and validation involves the following steps:

- Collecting and validating schedule status; for example, data that reflects start, finish, and estimates to complete work.
- Validating data attributes and associations used to report schedule information; for example, task relation to the work breakdown structure, project phase, functional organization, or integrated master schedule.
- Validating work effort to ensure that the schedules accurately depict the way work is being accomplished and reported.

The validation technique will improve management control by improving the information reported. The implementation of specific techniques should provide this benefit without burdening those responsible for project delivery.

Other Aspects of Project Plan Execution

Following are some other issues that project managers will want to pay attention to when executing the Project Plan and the other associated project management documents.

Document the Work Results

Results are the outcomes of the activities performed to accomplish the project. Information on work results provides input on which deliverables have been completed and which have not; to what extent quality standards are being met; and what costs have been incurred or committed. These valuable data need to be collected and fed into an agency performance reporting process.

Apply and Document Organizational Policies

All agencies that develop and execute projects have formal and informal policies that may affect Project Plan execution. Project execution may also lead to the realization of the need for new policies or alteration of existing policies. Any consideration for new agency policies and procedures should be documented during the Execution Phase and reviewed for implementation.

Work Authorization

A work authorization system is a formal procedure for sanctioning project work to ensure that work is done at the right time and in the proper sequence. The primary mechanism is typically a written authorization to begin work on a specific activity or work package. The design of a work authorization system should balance the value of the control provided with the cost of that control. Work authorization systems can be unique to a particular agency or functional area within an agency. Therefore, project managers must be aware of how the work will be initiated when working on interdepartmental or interagency projects.

The Status Reporting Process

A standard requirement of all projects is to provide reports to both executive management and the project team. Although the frequency of the reports may sometimes vary, they should correspond with the executive meetings or when the project manager deems necessary. For executive management reports, this typically is on a monthly or quarterly basis or at a major project phase or milestone completion. The project team should receive Project Status Reports on a weekly, or biweekly, basis by key project team members. The responsibilities in the areas of Project Execution should be clear to all team members.

Another key in status reporting is to keep the report due date consistent (i.e. every Monday at 1pm). This makes it easier for the team members to complete their reporting.

Project status reporting is an integral part of the project management process. It is the means by which the project team, the contractors, and executive management stay informed about the progress and key activities required to successfully complete the project. The purpose of the Project Status Report, such as status meetings, is to develop a standard format for the formal exchange of information on the progress of the project.

The information shared in the Project Status Report should be in a consistent format throughout the project. The types of reports that a particular agency uses may vary.

The project team should prepare Project Status Reports detailing activities, accomplishments, milestones, identified issues, and problems. Some level of recovery plans should be prepared for activities that are not on schedule, and abatement plans should be prepared for anticipated problems.

The Project Status Report Template is used to communicate the following key information:

- Current activity status
- Significant accomplishments for the current period
- Planned activities for the next period
- Financial status
- Technical status/issues
- Previous action items
- Last risk update/status

Along with the Project Status Report, the following may be attached:

- Updated Gantt charts
- Recovery plans for activities not on schedule—defined by the project team as being late (e.g., slippage in the critical path activities)
- Corrective action plans for expected problems
- Resolution to assigned action items (including the issues and action process)

State of Michigan
(Insert Project Name Here)
Project Status Report

A. General Information

Information to be provided in this section gives a specific name to the project as well as pertinent information about the personnel involved.

Project Id: _____ **Preparation Date:** _____
Controlling Agency: _____ **Modification Date:** _____
Prepared by: _____ **Authorized by:** _____

Project is: **On Plan** **Ahead of Plan** **Behind Plan**

Reporting Period: **From:** _____ **To:** _____

B. Current Activity Status

Attach any relevant Change Control Requests.

The description of activity should not span more than 2 to 3 lines. Activities should be linked to the project tasks list or Work Breakdown Structure.

C. Significant Accomplishments for Current Period

A summary of the significant accomplishments and project deliverables during the reporting period.

D. Planned Activities for Next Period

The description of activity should not span more than 2 to 3 lines. Activities should be linked to the project tasks list or Work Breakdown Structure.

E. Financial Status

Covers planned versus actual costs and budgets.

	Planned (to date)	Actual (to date)
Costs		
Schedule		
Staffing		
Estimate to Complete (ETC) Review		
Estimate at Completion (EAC Projection)		

Project Control Phase Processes

Project Control

"Project control" is a formal process in project management. Therefore, in most respects there is not a lot of room for creative license.

How Project Control Works

Project control involves the regular review of metrics and report status in order to identify variances from the planned project baseline. The variances are determined by comparing the actual performance metrics from the Execution Phase against the baseline metrics assigned during the Planning Phase. These variances are fed into agency control processes to evaluate their meaning. If significant variances are observed (i.e., variances that jeopardize the completion of the project objectives), adjustments to the plan are made by repeating and adjusting the appropriate project planning processes. A significant variance from the plan does not explicitly require a change, but should be reviewed to see if preventive action is warranted. For example, a missed activity finish date may require adjustments to the current staffing plan, reliance on overtime, or trade-off between budget and schedule objectives. Controlling also includes taking preventative action in anticipation of possible problems.

While the Project Control Phase's relationship to other project phases is relatively concise and clear, control is often difficult to implement as a formalized project control system in an agency. Project control is still important, however, because a project is unlikely to be considered successful by stakeholders if it is not controlled effectively. Success in this context translates to raw metrics (project cost, completion date, etc.) and customers' expectations (features, functionality, performance, etc.).

Impact on Project Control

Only by controlling a project can project progress and stakeholder's expectations be satisfied in unison. Projects rarely fail because of one issue. Rather, failure is usually a collection of minor items that individually have negative impact in a specific project area. However, when looked at over the life span of a project, these minor items can cause significant impacts to cost, schedule, risk, and functionality and can manifest themselves as deviations from the original Project Plan.

The Issues Management Process

The purpose of the issues management process is to provide a mechanism for organizing, maintaining, and tracking the resolution of issues that cannot be resolved at the individual level. The approach consists of issue control mechanisms and a well-defined process that enables the project team to identify, address, and prioritize problems and issues.

The Issue Resolution Template gives everyone involved with, or affected by, the project a way to report issues or problems. It provides a template for documenting the problem, assessing the impact of the problem, making recommendations, and determining the cost (people and assets) and time required for resolving the problem.

For detailed information on the completion of the Issue Document, refer to the full version of the State of Michigan Project Management Methodology.

State of Michigan
(Insert Project Name Here)
Issue Document

A. General Information

Information to be provided in this section gives a specific name to the project as well as pertinent information about the personnel involved.

Project Id: _____ **Date:** _____
Controlling Agency: _____ **Modification Date:** _____
Prepared by: _____ **Issue Number:** _____
(From Issue Log): _____

B. Issue Background

Issue Type (check one):

- | | |
|--|---|
| <input type="checkbox"/> Request for Information | <input type="checkbox"/> System Problem |
| <input type="checkbox"/> Procedural Problem | <input type="checkbox"/> Other |

(Specify)

Date Resolution Needed: Proposed Assignee: Attachments (if any): Reviewer: Reviewer Completion Date: Reviewer Comments:	<input type="checkbox"/> YES <input type="checkbox"/> NO
--	--

Issue Description:

Initial Recommendation:

Potential Impact (if not resolved):

Cost / Schedule Impact Analysis Required? Yes No

Estimate of Additional Effort:

Resources Required	Work Days/Costs

C. Recommendation

Final Recommendation and Comments:

--

Name/Title	Signature	Date
<i>(Project Manager)</i>		

D. Management Action

Recommendation status (check one):

<input type="checkbox"/> Accept	<input type="checkbox"/> Defer	<input type="checkbox"/> Need Additional Information	<input type="checkbox"/> Reject
Assigned to:	Organization:		
Planned Completion Date:			

E. Signatures

The signatures of the people below relay an understanding in the purpose and content of this document by those signing it.

Name/Title	Signature	Date

Change Control Defined

Before reviewing the specific elements of change control, it is helpful to clearly explain what change control entails. Change control is the following:

- Influencing the activities that create changes to ensure that those changes are beneficial
- Determining that a change has occurred
- Managing the actual changes when they occur

Change control is not the prevention of changes. It is concerned with identification and management of possible changes to the project. Management of the changes includes the administrative management, tracking, review, and assessment of proposed changes; the organized and timely review and decision on change approval; and the administrative process to ensure that the project team is informed of changes when they are approved.

Basic Change Control Concepts

Overall, change control requires the following:

- Maintaining the integrity of the performance measurement baselines. All approved changes should be reflected in the Project Plan, but only project scope changes will affect the performance measurement baselines.
- Ensuring that changes to the product scope are reflected in the project scope.
- Coordinating changes across knowledge areas. For example, a proposed schedule change will often affect cost, risk, quality, and staffing.

At key points in the project timeline, all Project Plan items are baselined. Once they are baselined, changes to the baseline are managed through a formal change process.

Baseline

The baseline process, while key to project control, is often misunderstood. A baseline is defined as *the original plan, for a project, a work package, or an activity, plus or minus approved changes. A modifier (e.g., Project Budget Estimate, schedule baseline, performance measurement baseline) is usually included.*

A Baseline Is a Ruler

A baseline provides the “ruler” by which a project can be evaluated. If the schedule baseline plan indicates that you should be 30 percent finished with an activity at a specific point, and you are 15 percent or 90 percent finished, you have a variance. But only by further investigation can an opinion be formed on the significance or overall importance of the variance.

Baseline Changes

Baseline changes are significant events and should not be made without consideration of their impact. Baseline changes are only made to reflect a change in project scope, not just when the project is behind schedule. A baseline change adjusts the ruler for the project. A variance *does not* justify a baseline change; it only indicates that the initial plan was not accurate. Baseline change should be handled through a normal change control process.

Baseline Control

Each individual agency may have its own change control process. However, if an appropriate system is not available to adapt to the project, the project management

team will need to develop one. The detail and exact procedures of a change control system may be created in many different forms balancing resource availability and risk. Some baseline related concepts to keep in mind include the following:

- A change control system is a collection of formal, documented procedures that defines the steps by which official project documents may be changed. It includes the paperwork, tracking systems, and approval levels necessary for authorizing changes.
- Many change control systems include a Change Control Board (CCB), or other panel, responsible for approving or rejecting change requests. The power and responsibilities of a CCB should be well defined and agreed upon by key stakeholders and the managing agency. On large, complex projects, there may be multiple CCBs with different responsibilities.
- The change control system must also include procedures to handle changes, which may be approved without prior review (e.g., changes that occur as the result of an emergency). These changes must still be documented and captured so that they do not cause problems later in the project.

Change Control Process

To have the process work requires that an individual submit information on the change to be considered. Project team members, customers, stakeholders, or contractors can submit a change request. This is to be done in writing, either on paper or in automated format.

The following Change Control Request template can be used. A project team can also design its own template and add or change the information as requested.

The template shown here is additive. In other words, additional information is completed on the template as it moves through the process. This process is also iterative, in that it will keep occurring until the project is complete.

For detailed information on the completion of the Change Control Request, refer to the full version of the State of Michigan Project Management Methodology.

State of Michigan
(Insert Project Name Here)
Change Control Request

A. General Information

Information to be provided in this section gives a specific name to the project as well as pertinent information about the personnel involved.

Project Id: _____	Preparation Date: _____
Controlling Agency: _____	Modification Date: _____
Prepared by: _____	Control Number: _____ (From Control Log)

B. Requestor Information

Proposed Change Description and References:

The requestor will provide information concerning the requested change along with any supporting documentation.

Justification:

Impact of Not Implementing Proposed Change:

Alternatives:

C. Initial Review Results of the Change Request

Initial Review Date:	Assigned to:
<input type="checkbox"/> Approve for Impact Analysis	
<input type="checkbox"/> Reject	
<input type="checkbox"/> Defer Until:	

Reason:

D. Initial Impact Analysis

Baselines Affected:

Configuration Items Affected:

Cost / Schedule Impact Analysis Required? Yes No

Impact on Cost:

Impact on Schedule:

Impact on Resources:

Final Review Results:

Review Date:

Classification: **HIGH** **MEDIUM** **LOW**

E. Impact Analysis Results

Specific Requirements Definition:

Additional Resource Requirements	Work Days	Cost
TOTAL		

Impact of Not Implementing the Change:

Alternatives to the Proposed Change:

Final Recommendation:

--

F. Signatures

Governance Body:

Name/Title	Signature	Date

Project Closeout Phase Processes

Project Closeout Phase

The last major phase of a project's life cycle is project closeout. Project closeout is performed once all defined project objectives have been met and the customer has accepted the project's product. Closing a project is a fairly routine process.

Project closeout includes the following key elements:

- Redistributing resources – staff, facilities, equipment, and automated systems
- Closing out any financial issues such as labor charge codes and contract closure
- Completing, collecting, and archiving project records
- Documenting the successes and issues of the project
- Conducting a lessons learned session
- Celebrating project success

These activities are particularly important on large projects with extensive records and resources.

Post Implementation Evaluation Report (PIER)

A Post Implementation Evaluation Report (PIER) documents the successes and failures of the project. It provides a historical record of the planned and actual budget and schedule. Other selected metrics on the project can also be collected, based on documented procedures. The report also contains recommendations for future projects of similar size and scope. Information within the PIER should include, but not be limited to, the following:

- Staffing and skills
- Customer expectation management
- Lessons learned
- Project sign-off

An expanded version of the PIER, along with completion instructions, can be found in the full version of the Project Management Methodology.

Staffing and Skills

This section documents how the staffing and skill needs for this project were initially determined and managed throughout the project.

Be sure to document instances of staffing changes and how they affected project quality, project cost, and project schedule. Also, make note of the effect that skill deficiencies affected the project cost, schedule and quality.

Customer Expectations Management

This section documents how customer (or client) expectations were initially determined and how they were managed throughout the project.

Questions to be asked of the project team and the customer include:

- Were customer expectations clear from the beginning?
- How were customer expectations different than expected?
- What steps were taken throughout the project to manage changing customer expectations?
- Were project team expectations in sync with customer expectations?

Lessons Learned

Defining Lessons Learned

In addition to communicating the closure of a project in writing, it is also advisable to have a mechanism for group review. A "lessons learned" session is a valuable closure and release mechanism for team members, regardless of the project's success. Some typical questions to answer in such a session include the

following:

- Did the delivered product meet the specified requirements and goals of the project?
- Was the customer satisfied with the end product?
- Were cost budgets met?
- Was the schedule met?
- Were risks identified and mitigated?
- Did the project management methodology work?
- What could be done to improve the process?

The lessons learned session is typically a large meeting that includes the following:

- Project team
- Stakeholder representation—including external project oversight
- Executive management
- Maintenance and operation staff

Such a session provides official closure to a project. It also provides a forum for public praise and recognition and offers an opportunity to discuss ways to improve future processes and procedures.

Documenting Lessons Learned

One purpose of the PIER is to document lessons learned. This means that problems encountered by the project team are openly presented. Problem identification on completed projects provides a method to discuss project issues encountered in hopes of eliminating their occurrence in future endeavors. It is important, however, that the problem discussions do not merely point a finger at some target other than the project team; responsibility and ownership for problem areas are critical to developing useful recommendations for future processes.

The individual problems that occurred throughout the course of the project should have been presented and documented when they occurred, then addressed and handled. The lessons learned documented in Project Closeout is more for upper management's review and action, as well as future project manager/team review, to prevent the same thing (bad) from happening again, or to make the same thing (good) happen again.

Problems encountered should be prioritized with focus on the top five to ten problems. It is not necessary to document every small event. However, all legitimate problems and issues should be discussed as requested by customers or management.

Because problems or sensitive issues may be discussed in the PIER document, it is helpful to have all organizations identified as contributors included in a review of the material prior to formally submitting the document. It is useful to have the reviews in an interactive forum where all parties can discuss their recommendations for improvement. The PIER can then present a complete view of the system.

Identifying and Addressing Success

Be certain that successes as well as problems on the project are identified in the PIER. It is important to include new ideas that were successful in the project. Make recommendations on how these processes might be adapted for other projects.

Other Important Administrative Documentation

Share project successes with other organizations, both in the agency and with other state agencies. In the same way that problem identification can lead to improvements, successes must be shared so they can be repeated. Where possible, successes should be translated into procedures that can be followed by future projects.

There are other pieces of documentation, and processes that go along with them that need to be brought to closure as the project winds down. The following section describes these documents and processes.

Customer Project Sign-off

As stated earlier, the issue of primary importance with project closure is the acceptance of the product or project deliverable(s) by the customer for which they were created. The best way to resolve this is to convene a final meeting with all necessary stakeholders to review the product delivered against the baseline requirements and specifications. By this time any deviations from the established baseline will have been documented and approved, but it is still good policy to make all aware of the baseline deviations and justifications. Furthermore, any open action items or program level issues can be officially closed. By drawing all of the stakeholders together in a single meeting, the project manager avoids clearing up open issues on an individual basis.

The final deliverable of this meeting should be a statement created by the project manager describing the project's final deliverables in comparison with the authorized project baseline documents. Approval is verified via the signature of a project closure document by all of the stakeholders who signed the original project baseline documentation (e.g., the Project Plan). This document will be customized to the particular project to include pertinent deliverables, key features, and important information about final product delivery.

Product Documentation

All documentation that has anything to do with the product itself (including design documents, schematics, technical manuals) that have not already been turned over to the operations and maintenance organizations must be completed and turned over to the project manager.

State of Michigan
(Insert Project Name Here)
Post Implementation Evaluation Report

A. General Information

Information to be provided in this section is general in nature and provides the necessary information about the organization of the project and project participants.

Project Id: _____ **Preparation Date:** _____
Controlling Agency: _____ **Modification Date:** _____
Prepared by: _____ **Authorized by:** _____

B. Staffing and Skills

Describe how the staffing and skill needs for this project were determined and managed. Describe the changes to these needs during the project.

C. Customer Expectations Management

Describe how customer expectations were managed. Were expectations clear from the beginning? How were expectations different than expected?

D. Lessons Learned

Describe the successes and shortcomings of the project.

E. Project Sign-Off

Delineates that the functional areas of the project team have taken all the steps to provide deliverables and that project activities are closed out.

Name/Title	Signature	Date

Project Lessons Learned

Ongoing Documentation of Lessons Learned

Project team members should utilize the Lessons Learned Document to submit Lessons Learned to the project manager as they occur, rather than waiting until the PIER to bring them all to light, if they can be remembered at all. By conducting short, periodic end-of-phase Lessons Learned sessions, the Project Manager takes advantage of the opportunity to solicit and accumulate unsubmitted Lessons Learned closer to the timeframe in which they occur. These small meetings provide the project team with a structured way to review feedback from project staff on key project execution areas within a project phase, and the ability to apply any appropriate Lessons Learned to future project phases. The agenda for these sessions should include the following items:

- Summary of the project phase, project state and/or key milestones related to the phase
- Identification and discussion of problem-related lessons learned during the phase
- Identification and discussion of success-related lessons learned during the phase
- Identification and discussion of any lessons learned from previous phases that have only recently come to light or lessons learned that were submitted confidentially
- Summary of any action items resulting from the discussion

The project manager should also encourage Lessons Learned documents to be submitted outside of a periodic review. This allows Lessons Learned to also be submitted confidentially.

Using the Lessons Learned Template

The Lessons Learned template is used to submit Lessons Learned to the project manager in an ongoing manner. The template captures the project phase, process/deliverable, description, analysis and recommendation for action pertaining to Lessons Learned.

The **Category** will be used for indexing a planned online database of Lessons Learned. Select a Category that best fits your Lesson Learned. Examples for “Other” might be mentoring or interns.

The **Project Phase** should be the Project Management Methodology (PMM) phase or the Systems Development Life Cycle (SDLC) methodology phase that the success or problem occurred in.

The **Process/Deliverable** should be the methodology process that was followed or deliverable that was being developed during the identified project phase.

In the **Description** section, the submitter provides details of the problem or success sufficient to illustrate the incident or activity.

The **Analysis** section provides for a review of the incident or activity to determine the root cause, to identify contributing factors, and to prevent further concerns. It is also in the analysis section that good work practices can be identified. A good work practice is a positive lesson or action that has the potential to be the basis of significant improvements, cost savings, or to promote repeat application.

The **Recommendation** section (if applicable) allows for the submitter to provide their input on any specific activities taken as a result of a lesson learned. Actions may include:

- Corrective Actions (actions taken as a result of the analysis of an actual experience)
- Preventive Actions (actions taken to prevent a negative situation from occurring)
- Improvement Actions (actions taken to improve the efficiency or safety based on good work practices or an innovative approach).

State of Michigan
(Insert Project Name Here)
Project Lessons Learned

A. General Information

Information to be provided in this section is general in nature and provides the necessary information about the organization of the proposed project and project participants.

Project Id: _____ **Date:** _____
Controlling Agency: _____ **Project Manager:** _____
Prepared By: _____

B. Instructions

For each comment block completed, please provide the following information. Refer to the Phases and Deliverables listing for guidance in providing the phase and process/deliverable information.

- For purposes of future online database indexing, please select a **Category** that best fits your Lesson Learned. Examples for "Other" might be training, mentoring, interns, etc.
- **Project Phase** – Project Management or Systems Development Life Cycle phase that the problem or success occurred in.
- **Process/Deliverable** – PM methodology process that was followed or deliverable that was being developed during the phase.
- **Description** of the problem or success
- **Analysis** of the root causes of the problem or success and the key factors that influenced the results
- **Recommendation** for Action (if applicable)
 - Corrective Actions (actions taken as a result of the analysis of an actual experience)
 - Preventative Actions (actions taken to prevent a negative situation from happening)
 - Improvement Actions (actions taken to improve efficiency or safety based on good work practice innovation)

CATEGORY	<input type="checkbox"/> Budget	<input type="checkbox"/> Client	<input type="checkbox"/> Communications	<input type="checkbox"/> IT Components
	<input type="checkbox"/> Procurement	<input type="checkbox"/> Project Plan	<input type="checkbox"/> Project Schedule	<input type="checkbox"/> Quality
	<input type="checkbox"/> Resources	<input type="checkbox"/> Risk	<input type="checkbox"/> Scope	<input type="checkbox"/> Change Management
	<input type="checkbox"/> Training	<input type="checkbox"/> Other:		
PROJECT PHASE:		PROCESS / DELIVERABLE:		
<input type="checkbox"/> Success		<input type="checkbox"/> Problem / Improvement Opportunity	<input type="checkbox"/> Other Please Explain:	
Description:				
Analysis:				
Recommendation:				

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