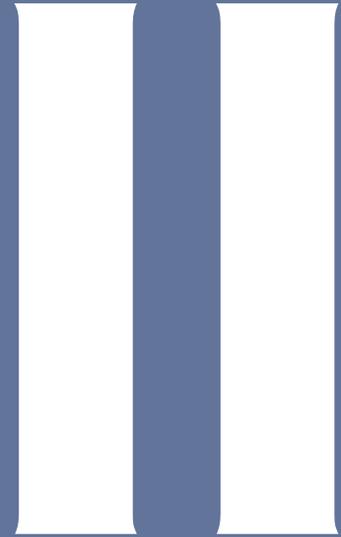


S E C T I O N T W O



Project Management Topics



SECTION II: PROJECT MANAGEMENT TOPICS

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Section II Introduction

This section provides in-depth advice and direction on selected topics of importance to New York State Project Managers. It is anticipated that this section of the **Guidebook** will grow as the state's Project Managers identify and contribute advice on additional topics of common interest. The intent of this section is to provide a repository to share the lessons learned from the experience and expertise of the state's Project Managers.

Chapter 1 covers **Project Triage**, designed to assist Project Managers who have a project that is “going south.” It outlines a specific process that can be employed to quickly identify project problems and define corrective action plans.

Chapter 2 discusses **Leadership**, one of the most important qualities for a Project Manager to have and to continuously develop and improve. The challenges and the many facets of leadership are explored and specific suggestions are offered.

Chapter 3 contains specific information regarding **New York State Procurement and Contractor Management**. Projects undertaken in New York State are increasingly complex, frequently involving multiple agencies and contractors supplying myriad products and services. This chapter provides references to available New York State Procurement Guidelines and existing state contracts, as well as guidance on when to use specific contracts and whom to contact for procurement advice and direction, and advice on managing contractor performance.

Chapter 4 identifies **Performance Measures** terms and concepts to orient Project Managers to this important aspect of organizational performance.

Chapter 5 describes **IT Project Capability** and provides an objective way to establish and predict performance of an agency's IT effort. It is designed to assist organizations improve the effectiveness of their software and business processes.

Chapter 6 provides a brief description of how **IT Project Tools** support the system development lifecycle. The discussion is focused on the value of tools and how a Project Manager may utilize them during a SDLC project.

1 PROJECT TRIAGE

Purpose

Project Triage is a process used to perform a quick evaluation of a project and to prioritize actions or corrective recommendations based on current project status. Triage is performed when a Project Manager is given a project in progress or when a project is determined to be “in trouble.” Recognition that a project is in trouble may come from a number of different sources, including the Project Manager, the Project Sponsor, a Project Team member, an auditor, a fiscal analyst or others within the Performing Organization. The Project Manager must play a role in the triage, with support for the triage effort from the Project Sponsor.

While the emphasis of the triage effort is on a quick evaluation, speed is relative to the project size/scope. A three-year project may require a triage review lasting several weeks, while a project of several months duration may only require a triage review of several hours. It is important to spend adequate time to gather the information needed to analyze the problems and define the actions necessary to get the project back on track. The triage effort may be completed by an individual, or by a team, depending upon the size of the project and the time available.

An experienced Project Manager should perform a Project Triage. In some cases it may be more effective to secure a Project Manager from outside the Performing Organization, who is less likely to be influenced by organizational politics, history, or other factors. Inside knowledge can sometimes limit the effectiveness of a triage by prejudicially eliminating ideas without proper consideration. While having the triage performed by another Project Manager within the organization who has not previously been involved in the project may be more objective, it still may be difficult for anyone from within the organization to evaluate the work of a peer. In general, the less background related to the project and the Performing Organization the Project Manager has before taking on the project triage, the more likely it is that the effort will produce objective and effective results. However, the reality is that a Project Manager often triages his or her own project.

List of Processes

Project Triage consists of the following processes:

- ◆ Gather the Data
- ◆ Review and Analyze the Data
- ◆ Prepare Findings and Develop Corrective Action Plan
- ◆ Present Report
- ◆ Revise Project Plan

List of Roles

The following roles are involved in carrying out the processes of this phase. The detailed descriptions of these roles can be found in the Section I Introduction.

- ◆ Project Manager
- ◆ Project Sponsor
- ◆ Project Team Member
- ◆ Customer Decision Makers

List of Deliverables

Figure 6-1 lists all Project Triage processes and their deliverables.

Figure 1-1

Processes	Process Deliverables
Gather the Data	Collection of existing information (project repository)
Review and Analyze the Data	Assessment of current project status (Preliminary Problem Identification List)
Prepare Findings and Develop Corrective Action Plan	Findings and Corrective Action Plan
Present Report	Management presentation
Revise the Project Plan	Revised Project Plan, including remediation activities as required

1.1 GATHER THE DATA

The first step in Project Triage is for the Project Manager to gather all available information from the project repository. For example, start with the Project Plan or any existing pieces of the plan, and gather:

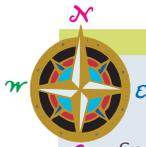
- a Project Schedule
- the work breakdown structure
- a task list
- a list of team members and role descriptions
- Project Status Reports
- a product description

If any of these items is not available, its creation should become a task in the corrective action plan. The End-of-Phase Checklists can be used for a more comprehensive list of project requirements for the phase the project is in and all preceding phases.

In addition to the documentation specific to this project, all existing standards, including templates and forms the organization has in place, must be collected. All written documentation should be reviewed – diagrams, electronic documents, blueprints, and other media.

For a troubled project, information will also need to be gathered through interviews with team members and stakeholders. The Project Manager must try to get a feel for the attitude and atmosphere surrounding the project by talking to a few key players.

The best place to start is with the Project Sponsor.



There isn't a Project Sponsor? Why is this project being done? To whom in the Performing Organization is it important? There may be more than one Project Sponsor, but if there are more than two, this is also a caution point. Too many sponsors may lead to conflicting directions.

Next, it is important for the Project Manager to talk to the technical or subject matter experts on the Project Team. If the project is a software development effort, this will probably be an experienced computer programmer or similarly skilled individ-

ual. If the project is a new building, this may be an architect or a construction engineer.

The Project Manager should next meet with some or all of the Project Team members. These interviews can be conducted in a group setting, or individually, if that might be more productive. The Project Manager should try to sense the mood of the Project Team to determine the proper interview settings. A team meeting, if practical, may allow more information to be gathered faster. Individual interviews can be conducted subsequently if participants were reluctant to contribute in a group setting. (“Starter” questions are provided in a sample interview agenda, see Figure 6-2. Any that are relevant to the project being assessed can be used, although additional questions may be needed to elicit the information required.)

If the Project Team interviews or the team meeting did not involve Customers or Consumers of the project’s product, follow-up with those individuals is also required.



Don’t forget that Customers or Consumers should be actively represented on the Project Team.

Sample Triage Interview Agenda

Figure 1-2

Interviewee: _____	Project Team: _____
Role: _____	Date & Time: _____
1. What do you view as the problems with this project? Response:	
2. What would you do differently? Response:	
3. What was/is your role is on this project? Response:	
4. What is your current task? When did it begin? When will it be completed? Do you expect to meet that due date? Response:	
5. Do you have a copy of the Project Scope statement? Response:	
6. Do you have a copy of the Project Schedule? Do you know specifically which tasks you are assigned? Do you understand how they fit into the total project? Response:	
7. Do you provide a Progress Report to your Team Leader or the Project Manager? Do you participate in a status meeting? Do you receive a Project Status Report? Response:	
8. Do you have the resources required to complete your tasks? Are you assigned to this project exclusively? Do you have other assignments that are inhibiting your ability to complete the assigned tasks on this project? Has the relative priority of your assignments been clarified to you by your supervisor? Response:	

1.2 **REVIEW AND ANALYZE THE DATA**

The Project Manager should quickly determine where the project is within the phase (Project Planning, Project Execution and Control, etc.) and process level. Major problems must be identified (e.g., behind schedule by 60%, over budget by 30%, lost resources, unstable bleeding edge technology). The End-of-Phase Checklists in this **Guidebook** can be used for each project phase (Initiation, Planning, Execution and Control, and Closeout) to evaluate whether each project phase is complete and to identify missing elements. The lists of Pitfalls and Measurements of Success for each phase will also assist in evaluating the current state of the project.

Analysis of issues begins during information gathering, when new questions may be raised. It is not necessary to wait until all information has been gathered to begin the analysis. Any assumptions developed as part of the triage effort must be documented in a Preliminary Problem Identification List and verified. Answers to the following questions will assist in determining the project's overall health:

- Is the available documentation an accurate reflection of what has happened?
- Does documentation exist or are the Cost, Scope, Schedule, and Quality moving or unidentified targets?
- Which deliverables have been completed? Reviewed? Approved?
- Which deliverables have been completed on time?
- Which milestones have been met?
- Where are the actuals in relation to the baseline? Is there a baseline?
- What percentage of the total project resources has been expended?
- What percentage of the total estimated work has been completed?
- What are the outstanding issues? Is there an issues log?
- What are the communications vehicles? (status reports, memos, etc.) What evidence exists of their use?

The Project Manager must identify causes of problems, not just symptoms. Reacting to symptoms without addressing problems often gets a project into trouble. For example, if there are excessive requests for scope changes and there is a lack of

understanding of the Project Scope by the Project Team, the cause may be that the Project Scope was not well defined or that no change control process exists.

It is important to recognize and acknowledge that some of the issues that could cause a project to run into trouble are external to the control of the organization. Examples of such situations include natural disasters, newly enacted legislation, acts of terrorism or war, etc. Risk plans cannot cover every possible contingency.

Also, major successes should be identified (user requirements are clear, planning was complete, status reporting has been accurate, team members are all getting along, etc.). This will help to eliminate causes of problems as well as provide a foundation for the remediation portion of the mission.

If at any point the Project Manager identifies an action that should be taken immediately in order to prevent further problems or to correct a problem, it should be documented and presented to the Project Sponsor for immediate implementation.

1.3 PREPARE FINDINGS AND DEVELOP CORRECTIVE ACTION PLAN

The output of a triage is a description of the findings of the triage effort, including the problems identified (symptoms/indicators), the root causes of the problems, and the specific prioritized recommended corrective actions. A prioritized list of action items must be created to get the project back on track as quickly and efficiently as possible. Some actions may need to stop to allow other processes to be completed. Most importantly, the Project Manager must not allow tasks to move ahead which are pulling the project further in the wrong direction.

Examples of Problem Indicators, Causes, and Actions Recommended follow.

Figure 1-3

Indicator	Potential Causes	Actions Recommended
1. Behind schedule	a. Scope creep.	i. Ensure/create baseline scope statement. ii. Implement a change control system.
	b. Staff assigned does not have the same level of expertise anticipated when estimates were made.	i. Assign appropriately experienced staff (contract or in-house). ii. Adjust schedule to allow for training. iii. Additional staff assigned.
	c. Using not-ready-for-primetime software.	i. Replace with a proven product. ii. Adjust schedule to accommodate software maturity.
	d. Estimates made during Project Initiation have not been revised throughout Project Planning.	i. Revise initial high-level estimates in light of additional information gained through the planning process.
2. Over budget	a. Poor initial estimates.	i. Re-estimate, re-baseline, and gain approval for new plan.
	b. Technology cost increases.	i. Consider alternative implementations. ii. Justify budget increase and re-baseline.
	c. Project Budget charged with unrelated expenses.	i. Document and report to management. Update and maintain budget documentation.

Indicator	Potential Causes	Actions Recommended
3. Poor staff performance	a. Poorly defined Project Schedule.	i. Re-plan task breakdown, resource estimates, and assignments with team involvement.
	b. Poor communications.	i. Evaluate and revise Communications Plan. ii. Implement regularly-scheduled team meetings.
	c. Poor project management.	i. Assess project management competencies and identify weaknesses. Provide training and mentoring to strengthen Project Manager. ii. Assign new Project Manager. iii. Hire an experienced Project Manager.
	d. Lack of user involvement.	i. Cultivate mutually beneficial relationship
	e. Roles and responsibilities not defined or communicated.	i. Define and document roles and responsibilities. Review with team.
	f. Conflicting priorities.	i. Reschedule project consistent with actual priority.
	g. Lack of executive support.	i. Seek support through Project Sponsor. ii. Seek support through Performing Organization management, if appropriate.
	h. Changed priorities – project no longer needed.	i. Cancel project.
4. Poor project progress	a. Lots of activities, no definable deliverables and/or project milestones.	i. Organize activities into tasks with defined responsibilities and dependencies. Define relationship of activities to deliverables, and to key project milestones.
	b. Unrealistic expectations.	i. Manage user expectations.
5. Unexpected obstacles	a. Unforeseen issues possibly including external factors that are out of the organization's control.	i. Re-evaluate cost/benefit and determine if project should proceed.
	b. No risk plan.	i. Define a risk plan.

When prioritizing the recommendations, include any additional resources that will be needed, including who should be responsible for each item, by role if not by name. Provide alternatives along with the pros and cons of each, if possible. For example, hiring additional staff will add to the cost of the project but preserve the schedule as opposed to maintaining the budget by delaying the completion.

Examples of Prioritized Recommendations and Resource Needs follow.

Figure 1-4

Priority	Action	Resources	Owner
1.	Stop development until scope is defined.	None	Project Sponsor
2.	Document scope.	Customer Representative, Project Sponsor, Subject Matter Expert	Subject Matter Expert
3.	Define change control process.	Subject Matter Experts to develop a small system	Project Manager
4.	Clarify priorities.	Performing Organization managers	Project Sponsor
5.	Formalize schedule.	Need to purchase scheduling software	Project Manager
6.

A narrative report should be developed to explain the process undertaken to identify the problems and causes, identify the reasons for the prioritization, and to define the actions recommended. This will facilitate execution of the corrective action plan.

1.4 PRESENT REPORT

The report should provide an honest, accurate assessment of the current state of the project, what went wrong, and how to fix it. Whenever possible, the Project Manager should prepare a presentation of the report, which includes the corrective action recommendations. There may be multiple presentations – one at the management level and one for the Project Team members. The tone of the presentation should be positive, focusing on how the Project Plan can be revised. The Project Manager must ensure that management understands the exact current project status. The need for additional resources and changes to the Project Schedule should be made clear. The Project Manager must also maintain a constructive and positive tone with team members, since they are the ones who determine the success or failure of the remediation effort. Participants should be given an opportunity to respond and ask questions so that everyone understands the situation and the corrective action plan. Leadership skills play a vital role at this time.

Occasionally, the corrective action recommendation will be to scrap the work that has been done and start over. This may include complete re-planning and securing a new project approval. This should be a rare occurrence, but when it happens, starting over must be justified by a savings of time or money, improvement in quality, or preservation of scope.

1.5 **REVISE PROJECT PLAN**

The final part of the triage and remediation effort is to revise the Project Plan to include the activities resulting from the recommendations in the report. Optimally, the Project Team will implement the corrective action plan, with additional resources as required. The corrective action plan must be integrated into the Project Plan and managed as part of the ongoing project. The corrective action plan is designed specifically to get the project back on track quickly, not to address long-term organizational needs such as training, cultural changes, or methodology development.

Sometimes, project problems may be corrected with no-cost activities such as team building and re-alignment of priorities. More often, the remediation effort will require additional resources, either in time or money, or a decreased product, either in scope or quality. If the decision is made to create a new baseline Project Schedule, the original schedule must be kept for historical purposes.

Completing the triage and remediation effort requires ongoing diligence, continuing communications, tracking, reporting and commitment from all Project Team members. It remains the Project Manager's responsibility to coordinate all of these efforts. Often, reporting requirements are increased following triage because some managers want to be informed of more detail than would otherwise be required.

Measurements of Success

Figure 1-5

Process	Measurements of Success	Yes	No
Gather the Data	Did team members share information freely? Do you have enough information to do an assessment?		
Review and Analyze the Data	Does the data support the obvious problems with the project? If not, you may need to look further.		
Prepare Findings and Develop Corrective Action Plan	Do stakeholders agree with, or at least understand your findings? Are the action items reasonable and do-able?		
Present Report	Does management understand both the problems and the solutions?		
Revise the Project Plan	Have the resources required been allocated? Does the Project Team support the effort?		

1. Triage Questionnaire – Gather the Facts

Figure 1-6

Question		Response
Does the project have:	Consumer involvement?	Are the Consumers involved the correct ones and have you established and maintained a good working relationship?
		Are you facilitating their involvement and are they actively contributing?
		Who should be promoting the project and its priority?
		Do you know who will use the product you are creating and what its impact will be?
	Executive Management support?	Is there a Project Sponsor?
		Is the Project Sponsor involved and supportive?
		Does the Project Sponsor have a stake in the outcome of this project?
		Does the Project Sponsor have the authority needed to address conflicts between projects and commit resources?
	a clear statement of requirements?	Does the project support the Performing Organization’s strategic plan?
		Is there a vision?
		Has the Business Case been defined?
		Are the expectations realistic?
		Are functional requirements defined?
Have the requirements been:	Has a risk assessment been done?	
	Are there measurements by which to determine the success or completion of the project?	
	<ul style="list-style-type: none"> - Documented? - Agreed to with signatures from all appropriate parties? - Communicated to the Project Team and all other stakeholders? 	

Figure 1-6 (Continued)

Question		Response
Is the Project Manager assigned to this project?	Does the Project Manager have a clear understanding of the priority of this project? Is this consistent with the Project Sponsor's understanding and the priority stated by management?	
	Does the Project Manager have the experience and training necessary to be successful on his or her assigned tasks?	
Are team members assigned to this project full time?	Do team members have a clear understanding of the priority of this project?	
	Does this agree with the Project Manager's understanding and the priority stated by management?	
	Do team members have the experience and training necessary to be successful on their assigned tasks?	
Is project communication adequate?	Is everyone aware that the project exists?	
	Is project status clearly, frequently, and widely communicated to all concerned?	
	Do all team members clearly understand what is expected of them?	
Has planning thus far been adequate?	Review the lists of what should be included in the Project Plan at each phase. For example, Develop Initial Project Plan, Section I:2.4, includes a list of what pieces of information should be in the Project Plan by the end of Project Initiation: <ul style="list-style-type: none"> a. Project Charter b. CSSQ c. List of risks d. Description of stakeholder involvement e. Communications Plan 	

Figure 1-6 (Continued)

Question	Response
Where do you need to be and what is driving the Project Plan?	Time: Do we need to complete the project by a certain time? If so, are additional resources (time, money, technology) available to the project?
	Cost: Do we need to complete the project under a specified cost? If so, can the dates be moved to allow the project to be completed by less-expensive resources (provide time for a learning curve, use in-house staff rather than consultants, etc.)?
	Scope: Do we need to deliver every feature defined even if means more time or more cost?
	Quality: Can a "beta" version of the product be released and then anomalies fixed and features added later on? (sometimes possible for internal users, where there are no health or safety issues, or loss of assets, etc. involved)