The Rapid Assessment and Recovery of Troubled Projects

An ESI International White Paper

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Synopsis

This white paper guides the experienced project manager in the application of successful techniques for assessing the status of a project, determining if a recovery is possible, and turning the project around. It is divided into the following sections:

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Introduction

The objectives of this section are to clarify basic terms and set the stage for applying the methodology.

- Rapid means that time is critical. The causes of the project's trouble must be determined as quickly as possible because the customer, the customer relationship, and the customer's business are at risk. In other words, time is of essence.
- Assessment is the structured review of the project and project plans. It is similar to what PMI calls an audit.
- Recovery is an attempt to salvage something useful from the project. The best-case outcome is to recover the entire project, possibly with a later date. But in many cases this is not possible and getting anything out of the project that would result in continued business and financial benefit is an accomplishment. In other words, prevent total failure.
- The meaning of troubled depends on the situation. In some cases, there is no slippage allowable at all in the schedule, so there is little tolerance for variance. In cases of internal projects, more tolerance may be acceptable. It is difficult to pin down a single definition. The situation will immediately rise to a troubled status when either the customer or the supplier can no longer tolerate the situation. In other words, when the variance trends have exceeded acceptable levels of tolerance and the project is heading for failure.

There are specific characteristics of troubled projects to keep in mind. These characteristics contribute to the need for rapid assessment and recovery. For example:

- No one has a firm idea of when the project will be finished and most people have given up trying to guess.
- The product of the project is full with defects.
- Team members working excessive hours – 60 hours per week or more of involuntary overtime.
- Management has lost its ability to control progress or even to ascertain the project's status with an accuracy.
- The customer has lost confidence that the development group will ever deliver the promised goods.
- The team is defensive about its progress.
- Relations between project team members are strained.
- The project is on the verge of cancellation.
- The morale of the project team has hit rock bottom.
- The customer is threatening legal action.

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Frequently, a recovery is not possible or desirable. One of the objectives of the assessment is to determine if a recovery is possible or not. Some reasons why a recovery is not possible or why a troubled project should be cancelled:

- Business benefit cannot be delivered any longer.
- Political environment is not supportive.
- Sponsor has departed and no replacement is apparent.
- Business needs have changed.
- Significant technological changes have occurred.
- Litigation is in process
- Breach of contract.
- Market conditions have changed.

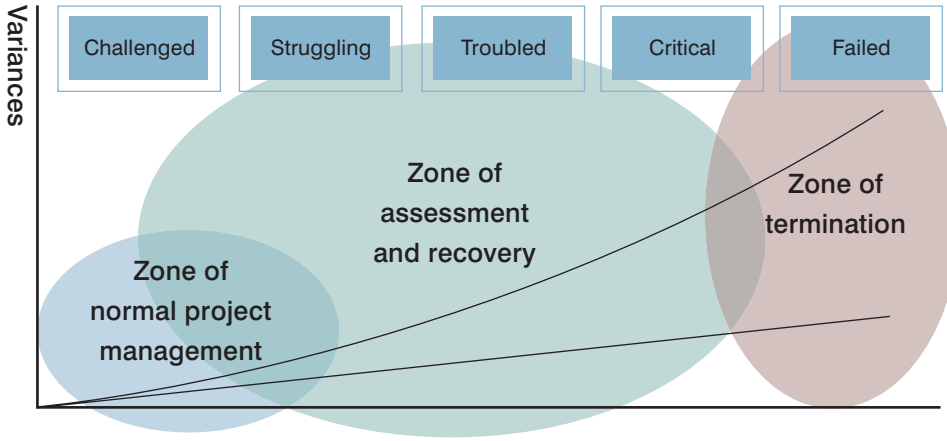

Figure 1: The Troubled Project Continuum

Figure 1 shows the troubled project continuum. The titles for the sections of the graph (challenged, struggling, troubled, critical, and failed) are arbitrary terms used to indicate typical stages of a troubled project. The variances grow worse from left to right. If the project is toward the left side of the graph and variances exist, then normal project management practices would apply. For example, fast tracking, crashing, and working overtime.

On the other hand, if the variances are just too extreme, then the project is a strong candidate for termination, not recovery.

The Rapid Assessment and Recovery Process

Figure 2 presents in a life-cycle format the phases for attempting an assessment and recovery. There are two high level phases: assessment and recovery. There are five life-cycle level phases:

- Define the charter
- Develop assessment plan
- Conduct assessment
- Develop recovery plan
- Conduct recovery

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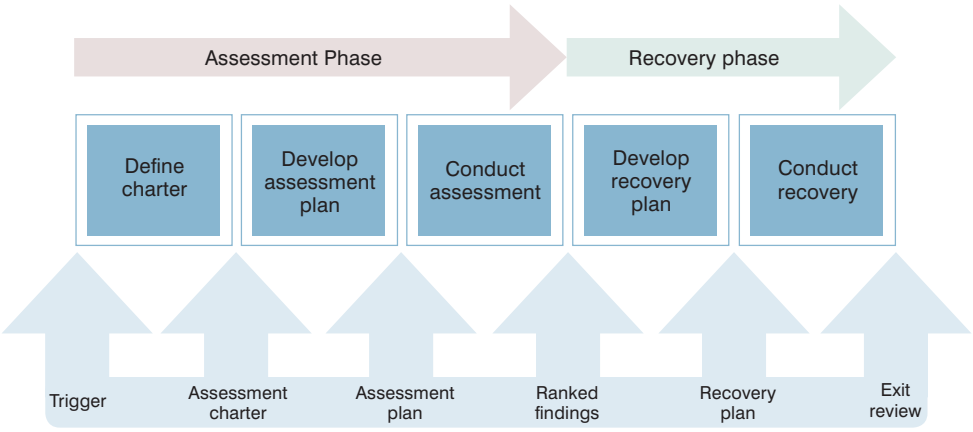

Figure 2: The Rapid Assessment and Recovery Process

Each of these phases has been designed with specific entry and exit criteria as shown in Figure 2.

The focus of the assessment phase is on determining the current "real" status of the project and determining the changes needed in people, product, process, and tools. "Real" status is the keyword. The assessor must understand exactly what is done and what is not done in order to build the recovery plan. In addition, there are frequent problems with the project team's status tracking and reporting, or most probably there is no such reporting system. "Real" status defined the remaining WBS open work items. This must include all open work packages plus defect repair, problem closures, testing, and other outstanding items.

There are seven key variables or areas that must be investigated during an assessment:

- WBS
- Problems
- Risks
- Defects
- Resources
- Schedule
- Management system and control processes

In the assessment phase, the focus is on developing a recovery plan and implementing this plan. Following are some general, practical guidelines for addressing troubled projects:

- The project team must be open-minded and ready to change
- There is no magic or silver bullet. Assessment and recovery is about basic project management skills.
- Each project is different and must be handled as such.
- People frequently cause problems.

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- "Done", means "done". Any work with a status of done must be done. This is a frequent problem with the project team status reporting.
- During the assessment, the assessors must ask themselves if the processes and metrics the project team is using are adequate for this project.
- Recovery must be done in the context of the project's objectives. It is the issue of uniqueness and how every project has different requirements and levels of acceptable variances.
- Accept what can be fixed and what cannot.

In the following sections, each phase of the process will be discussed in detail.

Define Charter

The main objectives of this phase are as follows:

- To formally sanction the existence of the assessment and recovery project
- To provide assessment and recovery lead with the proper authority
- To complete activities necessary to develop an assessment plan

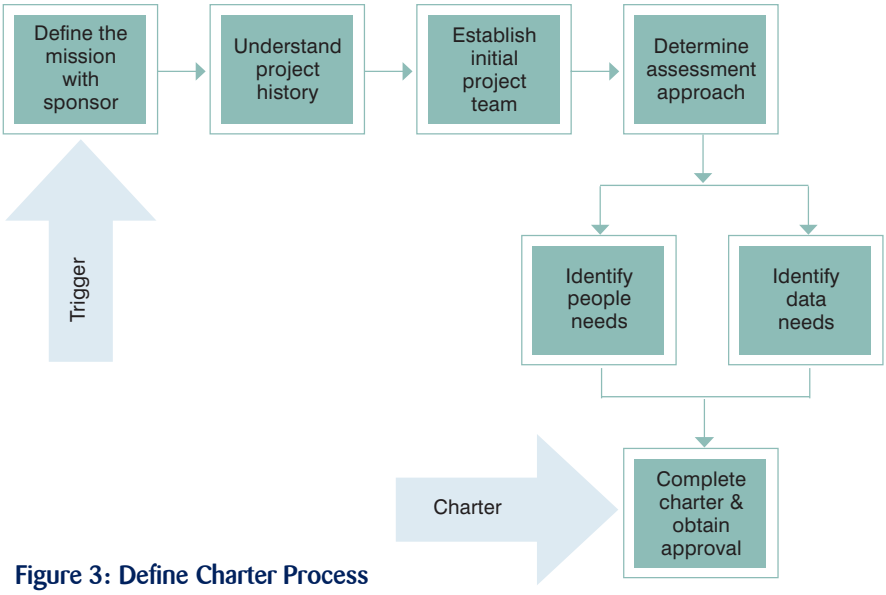

Figure 3: Define Charter Process

The charter is essentially an assessment engagement letter. Figure 3 shows an overview of the define charter process. The basic process flow and steps to performing the process are as follows:

- Trigger event such as a letter from the customer, or sponsor requesting support.
- Define the mission of the project "Assessment and Recovery" with the sponsor. This is from the perspective of the sponsor.
- Understand project history and sensitiveness; uncovering hidden issues, theories in use, theories espoused, and others related to the reasons for the trouble on the project.

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- Establish initial contact with the project team. It is extremely important that everyone involved must agree and be committed to the same objectives.
- Determine the assessment approach answers how to go about putting together a plan to conduct the assessment. This step is meant to answer the question: Given this project, this charter, and the assessment model, how would you go building the assessment plan? It is basically a WBS, a network diagram, resources, and a schedule of what and how long it will take to be ready to do the actual assessment.
- Identify data needs and identify people needs relate solely to what is needed to prepare an assessment plan. It does not mean "who" and "what" are needed to conduct the assessment. Given the domain of the project, certain skills, people, and data are needed solely to build a plan to conduct the assessment. Some understanding of the status of the project, plans, and tasks will be needed just to build the plan.
- The assessment team leader will complete the assessment charter and request and get approval from the assessment sponsor.

Input

- Trigger event
- Contact from requestor or sponsor

Output

- Charter
- Assessment approach
- List of project data needs
- List of people needs

Competencies

- Leadership
- Problem solving
- Influence
- Negotiating

Tools

- Assessment and recovery charter planning form
- Assessment charter form

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The Development of the Assessment Plan

In this phase, a detailed assessment plan should be developed that has the following characteristics:

- It can be executed in order to achieve the objectives of the charter.
- It will allow the assessment team to perform the assessment in as short a period of time as possible.
- It will ensure that accurate findings are produced.
- It will minimise project team distraction

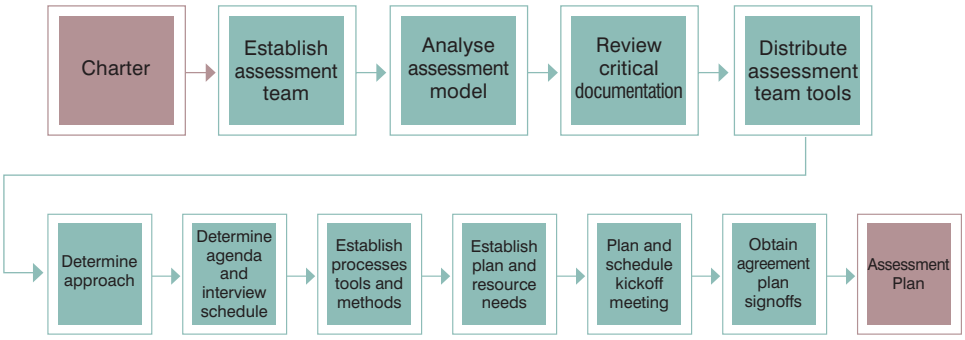

Figure 4: Develop Assessment Plan Process

The emphasis on the assessment plan and the actual assessment will be to produce three categories of findings: threats, opportunities, and problems. Figure 4 shows an overview of the develop assessment plan process. The basic process flow and steps to performing the process are as follows:

- Establish assessment-planning team. In this step, the required staff is obtained and team-building exercises begin such as kick-off meeting. Setting correct tone with the assessment team is critical. The tendency is for the assessment team members to think that the current project team members are incompetent. This is not the case, and the assessment leader cannot allow that tone. The tone must indicate that the assessment team is here to help, that the team understands how these things happen, and that the team is not here to lay blame but to make recommendations on what to fix. In addition, the project team should brief the assessment team on sensitive issues such as litigation, personnel turnover, customer mindset, and confidentiality.
- Review the rapid assessment model. The model must be reviewed with the assessment planning team so that they know the approach and how the assessment will be conducted. Figure 5 shows a high-level WBS for the assessment. The assessment plan is a decomposition of each of these packages to derive the exact details of what and how it will be done, and how many people with what skills will be needed.

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- Review and analyse critical documentation. The main objectives of this step are to build a solid understanding of the project and to begin to formulate hypotheses. Examples of critical documentation that should be reviewed during the assessment are as follows:
- Project charter, if applicable, and objectives
- Estimating and pricing details
- Project plans and status reports
- Project metrics and project processes
- Statements of work or equivalent
- Signed external agreements with internal organisations
- Project organisations charts
- The project control book which usually contains all available documentation
- Develop assessment plan. The assessment plan and needs will certainly be related to project size, complexity, and domain. The plan must include:
- Focused objectives
- Work break down structure (rapid assessment model)
- Resources for assessment
- Risk and problem management
- The schedule in this case is an hour-by-hour agenda of meetings and other events. The staffing and skills to do the assessment as reflected in the assessment plan must be sufficient to complete the entire assessment in a very short period of time, maybe three days at most.
- Tools for each task
- List of deliverables
- War room needs
- An hour-by-hour agenda is the plan
- Kick-off meeting details
- The assessment team leader will complete the assessment plan and request and get approval from the assessment sponsor. The sign-off process must be accomplished before assessment begins.

Input

- Plan-for-assessment plan
- People
- Project documentation
- Assessment and recovery charter planning form
- Assessment charter

Output

- Signed-off assessment plan
- Resource and interview commitments
- Tools to be used
- Kick-off meeting agenda
- War room requirements
- Completed assessment team questionnaires

Competencies

- Leadership
- Achievement
- Problem solving
- Influence
- Negotiating

Tools

- Assessment team questionnaire form
- Threat identification form
- Opportunity identification form
- Problem identification form

Conducting the Assessment

The main objectives of this phase are as follows:

- Determine the current status of the project
- Identify major threats, opportunities, and problems
- Begin to consider recovery overall as the recovery team

Figure 5 shows an overview of this phase. The basic process flow and steps to performing the process are as follows:

- Establish war room. The assessment planning work should have helped with the identification of the documents, files, and items needed in the war room. The war room must be set up before assessment team arrives to start conducting assessment.

- Assemble the assessment team. The assessment team will most likely have expanded in size since doing the assessment planning. The assessment leader must remind the assessment team of the purpose, objectives, and scope of the assessment.
- Hold assessment kick-off meeting. All involved parties should attend the kick-off meeting. This includes the sponsor or whoever called or requested this assessment, the entire assessment team, the project manager, key project team leaders, anyone who is on the interview list, and anyone upon whom the assessment team may depend. This kick-off meeting is part of building an extended team that may in all likelihood carry forward into the recovery. In addition, key project area leads should present project overview data.
- Conduct interviews. The assessors meet with each person to be interviewed as identified in the assessment plan and agenda.
- Analyse project data. Project data that should be thoroughly reviewed during the assessment:
- Project charter and objectives
- Estimating and pricing details
- Project plans
- Project metrics and project processes
- Statements of work or equivalent
- Signed external agreements with client and subcontractors
- Signed internal agreements with internal organisations
- Management approvals where required and appropriate
- Risk management, control plans, and status
- Financial management, control plans, and status
- Schedule management, control plans, and status
- Communication between client and project manager
- Scope management, control plans, and status
- Change management, reports, and tracking data
- Resource labour logs, reports, and tracking data
- External and internal correspondences
- Copies of deliverables and customer acceptances
- Establish preliminary findings. Figure 7 shows an overview of this process.
- Synergise and aggregate findings.
- Validate, update, and finalise with project team and sponsor.

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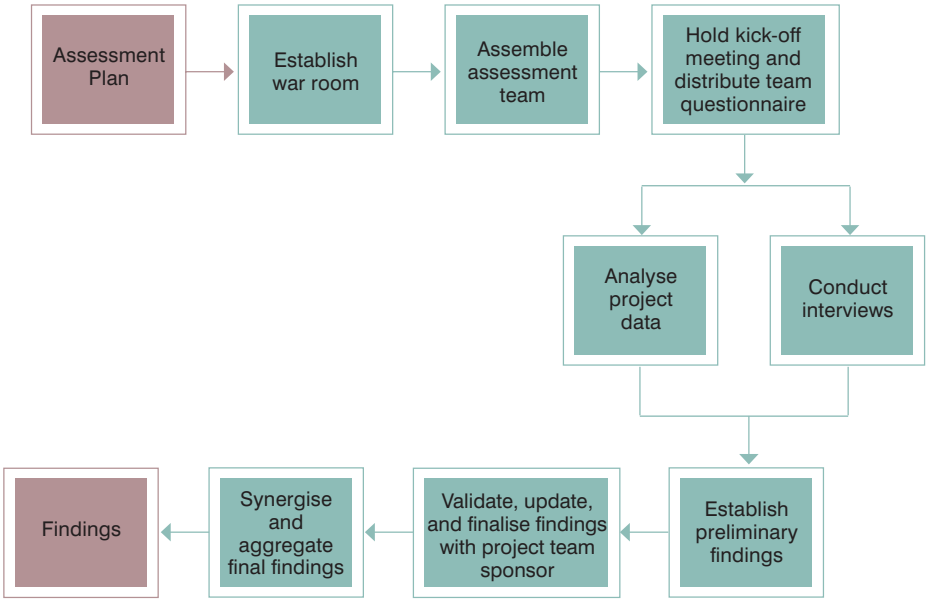

Figure 5: Conducting the Assessment Process

Input

- Charter
- Assessment plan
- Project documentation
- Assessment charter
- Assessment team questionnaire
- Assessment and recovery charter planning form

Output

- Signed-off findings
- Threats
- Opportunities
- Problems
- Ranked findings for each

Competencies

- Project management tools, techniques, and methods
- Leadership
- Problem solving
- Influence
- Negotiating

Tools

- Threat identification form
- Opportunity identification form
- Problem identification form
- Comparative threat ranking form
- Comparative opportunity ranking form
- Comparative problem ranking form

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Example of Assessment Findings Report Outline

- Background
- Sponsor
- Charter
- Trigger event
- Assessment team members
- Date of assessment
- Scope of review
- Key findings
- Recommendations
- Immediate action plans

Analyse Project Plan

- WBS
- Does allow adequate tracking and control of project?
- Does each work package end with a physical deliverable?
- Is the WBS clear and specific?
- Does the work include everything that must be done?

Network diagram

- Does one exist?
- Is it updated and maintained regularly?
- Is it complete?
- What is the quality?
- Is it structured in a way to make schedule forecasts?
- Is there evidence of constant schedule slips?
- Can schedule and resource forecasts be made?

Resources

- Is every work package assigned to a resource?
- Do resource histograms exist for each skill type?
- How is staffing handled for defect remediation and problem resolution?
- Do estimates of resources in the past seem accurate?

Metrics

- Earned value
- Tasks completed
- Requirements change
- Configuration change
- Voluntary staff turnover
- Overtime rate
- Defect data
- Problem data

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Variances

- Cost variance
- Schedule variance
- Resource flow variance

Key project indexes

- Cost performance index (CPI)
- Schedule performance index (SPI)
- To complete performance index (TCPI)

Status tracking and reporting

- Verify that all work reported as “done” is in fact totally “done”
- Validate the current status of all activities, even activities in the recent past
- Investigate weekly and monthly status reports, problem and issues logs, memos

Management system and control processes

- What regularly scheduled management meetings are held? With whom?
- How are tacking of problems and issues managed?
- What reports are used? Who is using these reports? For what purposes?
- Are labour hours tracked?
- What metrics and control structure are used to manage the project?
- What processes are there? Are they documents? How adequate are they, given the project context?

The Development of the Recovery Plan

The main objectives of this phase are as follows:

- Develop a plan that will lead to a useful project
- Establish a road map and processes to achieve this goral
- Continue to build confidence and morale

The focus of the recovery is almost entirely about:

- Producing an achievable schedule
- Re-establishing customer and management confidence
- Rebaseline the project plan
- Sorting project problems
- Rebuilding the team

There are three major categories of recovery:

- People
- Processes and tools
- Product

Each category must then be compared between among the followings:

- Sponsor/executives
- Customer
- Project manager
- Technical personnel
- Test/quality assurance personnel
- Support personnel

People

- Do whatever is needed to restore the group's morale
- Clean up major personnel problems
- Add people carefully, if at all
- Focus people's time
- Ensure that the project team members pace themselves

Process

- Identify and fix classic mistakes
- Fix the parts of your project and development processes that are obviously broken
- Create detailed miniature milestones - inchstones
- Set up a schedule linked to inchstone completion
- Track schedule progress meticulously
- Record the reasons for missed inchstones
- Recalibrate after a short time
- Do not commit to a new baseline until you can create a meaningful one
- Manage risks

Product

- Stabilise the requirements
- Trim the feature set
- Assess your political position
- Take out the garbage
- Reduce the number of defect and keep them reduced
- Get to know good state and then build on that

Recovery Strategy Options

The are four fundamental approaches for recovering a project:

- Cut the size of the scope so that you can finish within time and effort planned
- Increase the process productivity by focusing on short-term improvements

- Face the fact that the project will not be ready on time, slip the schedule, and proceed with damage control, possible including cancelling the project
- Drop a few features, increase productivity as much as you can, and slip the schedule as needed

Input

- Assessment and recovery charter planning form
- Assessment charter form
- Assessment team questionnaire form
- Threat identification form
- Opportunity identification form
- Problem identification form
- Comparative threat ranking form
- Comparative opportunity ranking form
- Comparative problem ranking form

Output

- Inchstone plan
- Project baseline plan
- Preliminary findings

Competencies

- Project management tools, techniques, and methods
- Leadership
- Problem solving
- Influence
- Negotiating

Tools

- Inchstone planning form

Conducting the Recovery

The objectives of this phase are as follows:

- Execute inchstone and baseline plans in order to return project to usefulness
- Validate estimating methods and accuracy
- Produce accurate forecast of project completion

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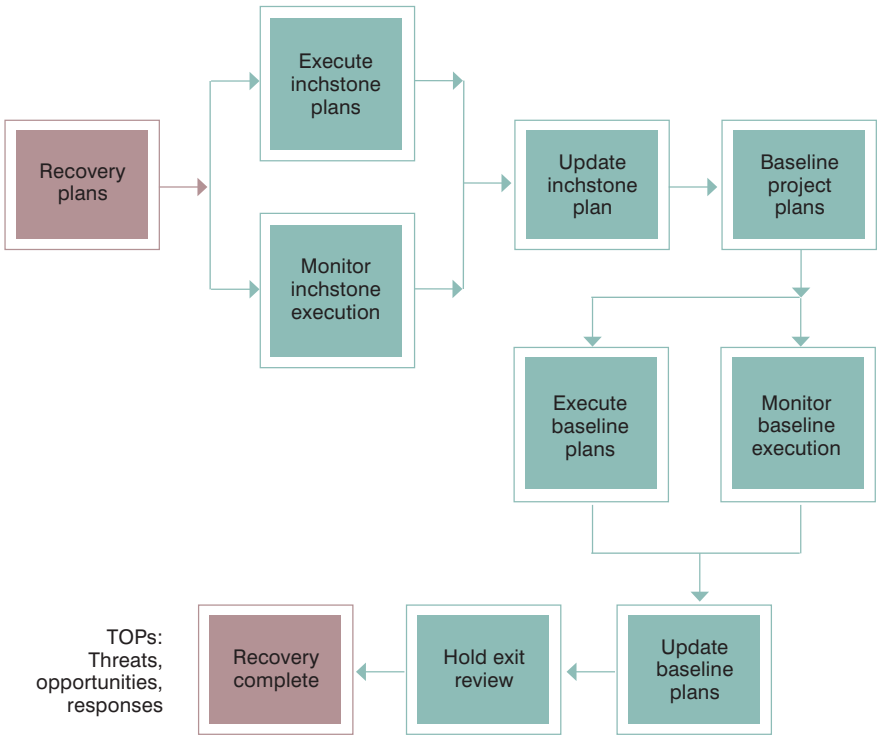

Figure 6: Conducting the Recovery Process

Figure 6 shows an overview of this process.

Input

- Recovery plans
- People
- Inchstone planning form
- Top 10 threats tracking form
- Top 10 opportunities tracking form
- Top 10 problems tracking form

Output

- Final project plan
- Recovery readiness
- Review checklist

Competencies

- Project management tools, techniques, and methods
- Leadership
- Problem solving
- Influence
- Negotiating

Tools

- Recovery exist readiness review checklist form

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References

A comprehensive treatment of this subject is provided by the ESI/George Washington University course “Rapid and Assessment and Recovery of Troubled Projects”. In addition, all of the tools used in this white paper are available with many additional forms in “ESI Project Management Toolkit” CDROM.

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