

# *How Do You Bring Process Discipline to a Team?*

Anita Carleton  
Tim Chick

TSP Symposium  
Interactive Session

September 2008



# How Do You Bring Process Discipline to a Team?

---

...by establishing and executing team roles for sharing responsibilities for managing the project.

When team members execute their role responsibilities, follow defined processes, and meet their goals and commitments, the team performs efficiently and effectively.



# It's *Interactive...*

---

The goal of this session is to learn from each other:

- Strategize on how teams can make the most out of the role management functions.
- Share what's worked and what hasn't worked.
- Understand “why” things have or haven't worked.
- Improve the usage of TSP roles on teams.



# Introduction

---

New teams, coaches, and even existing teams often struggle with defining and executing roles:

- **the true value added is not well understood**
- **sometimes the team leader doesn't give up control of the team so the team can function as a self-directed team**
- **there isn't anything specific or tangible that tells someone exactly what there are supposed to do week to week**
- ...



# To Get The Discussion Started...

---

- When a role manager function is working well or not working well, why or why not?
- Do the role managers execute their roles as defined in the TSP Role Manager scripts or has your team added or deleted functions for one or more of the roles?
- Has your team added any customized role manager functions?
- Did the team generate a TSP role script for the new manager position?
- What are your teams doing differently with TSP roles today than when you first started using TSP?

...Or Ask Your Questions???



# Agenda

---

 Explore TSP role management on your teams—60 minutes

Getting roles to work—30 minutes



# Role Management – 1

---

Have you had teams be successful with one or more roles working effectively?

What led to their success?

Have you had teams fail due to ineffective role managers?

What is different when the roles are working? For you? For the team?



# Role Management – 2

---

Are roles important? Why?

Which roles have you seen working very effectively?

What roles have not worked at all for you? Why?





# Role Management – 3

---

What customizations have you done? Why?

- **Does each defined role manager do in practice the things as written on the TSP Role Manager scripts, or has your team added or deleted functions for one or more roles?**
- **Has your team added any customized role manager functions? Did the team generate a TSP role script for the new manager position?**
- **What are your teams doing differently with TSP roles today than when you first started using TSP?**



# Role Management – 4

---


What is needed to improve the usage of TSP roles on teams that would be beneficial to team performance?



# AGENDA

---

Explore TSP role management (60 minutes)

 Getting roles to work—hints and tips (30 minutes)



# The Launch and the Role Managers

---

Use the TSP launch (or relaunch) as a model for how the work will be done after the launch.

The team leader should be counting on the roles to lead their respective launch meeting steps.

The coach should be working with each role manager before their respective launch meeting steps so they are ready.



# The Team Leader is Key

---

In launch preparation, prepare the team leader to lead the role section of meeting 2.

- Does the team leader have a clear vision for each role?
- Does the team leader understand the pragmatic action steps each role needs to start with?
- Does the team leader understand what questions need to be asked and when?
- Will the team leader count on the team members to do the role work?



# Coaching the Roles

---

After the TSP launch, the role managers will need coaching and direction from the team leader and the TSP coach.

The team leader will need to

- ask the appropriate questions of the role managers
- expect quality, complete work
- ask if role managers need help

The TSP coach will need to

- coach the team leader on the appropriate questions to ask
- help the role managers provide quality, complete work



# Multiple Teams

---

In a multi-team (TSPm) environment, TSP role managers have the additional responsibility of the role manager teams.

The TSP role manager teams are to enable cross-team

- technical coordination
- issue identification and resolution
- sharing of lessons learned

To establish competent TSP role manager teams

- first focus on the success of individual teams and role managers
- then ensure all the elements for success are in place the TSP role manager teams



# Experienced Teams

---

Determine the problem areas and the root causes.

- Evaluate the effectiveness of each role.
- Where the role is not effective, what elements are missing?
- What other factors may be causing the problems?
- Which are the most important causes?

Create a coaching plan.

- Involve the team leader in a review of the problems and in determining an action plan.
- Consider where your time is best spent
- Determine how you will demonstrate the value of roles.

A TSP launch (or relaunch) is the best time to work on major shifts in how the role work is being accomplished.





# Set Expectations Before the Launch

---

Consider a launch preparation meeting with the team.

- The team leader reviews his/her expectations for each role with the team.
- The coach reviews a coaching plan with the team, highlighting the skill building the coach will help with.



# Skills

---

The role managers cannot perform to the vision unless they have had the training and experience in getting the job done.

The role manager should

- have reading materials about their role
- initially have the TSP coach show them how to accomplish specific tasks
- have a mentor the first time they “fly solo”
- be encouraged to keep developing the skills by the team leader and the TSP coach



# Incentives

---

The best incentive for a behavior is to have it highly valued.

Is the role work being asked for by the team leader?\*

When the role work is being done, is it being appreciated by the team or does the role manager encounter resistance?

What happens if

- the team leader is never asking
- the role manager consistently encounters resistance



# Resources

---

Does the role manager have the time and the tools to get the job done?

The role manager must have sufficient time allocated in their personal plan to accomplish their role.

If that time is not sufficient, the role manager and the team should either readjust who is doing the role or the personal plan.

The role manager should have adequate tools to accomplish their role. If they do not have this, they should be writing PIPs to improve the situation.



# Action Plan

---

Teams do not start day one at the ultimate vision.

“But what do I do Monday?” is a frequently asked question!

Pragmatic action steps are required to get started.

The steps are more likely to get done if they are included in the earned value plan.

Often, the first step is to ensure that the team gathers data properly.



# Summary

---

There is great benefit in making the role managers work well for a TSP team.

When team members execute their role responsibilities, follow defined processes, and meet their goals and commitments, the team performs efficiently and effectively.



# Contact Information

---

Anita Carleton

TSP Project

(412) 268-7718

adc@sei.cmu.edu

Software Engineering Institute

Carnegie Mellon University

Pittsburgh, PA 15213-3890

Tim Chick

TSP Project

(412) 268-1473

tchick@sei.cmu.edu

Software Engineering Institute

Carnegie Mellon University

Pittsburgh, PA 15213-3890



# Take away - What questions to ask?

---

In order to get roles to work Coaches, Team Leaders, and Role Managers have to be asking the right questions and providing the right answers.

TSP Coaches: “What question’s should I be asking and providing answers to, as I help role managers perform their roles efficiently and effectively?”

Team Leader: “What question’s should I be asking?”

Role Manager: “What question’s should I know the answers to?”

The following slides provides some sample questions that should be asked by leaders and coaches and answered by role managers, with help from coaches, as needed.





# Team Member

---

Does my individual task plan reflect the work I am currently doing and plan to do next?

Do tasks need to be added, deleted, renamed, reassigned, re-estimated, broken down into sub-tasks, or combined?

Does my current task plan meet commitments made to the team?

Are all completed tasks marked accordingly?

Do I need help from the team?

Am I producing quality products that will meet the team's goals and expectations? If not, what remedial actions do I need to take?

Am I following the process? If not, what remedial actions do I need to take?

Am I recording all my time and defect data? If not, what remedial actions do I need to take?

Have I updated my personal review checklists based on defects found?

Have I conducted a performance analysis of my data? Have I set improvement goals based on past performance? Have I made changes to my personal process or submitted PIPs against the team or organization processes in order to accomplish set goals?



# Customer Interface - 1

---

Are we being responsive to customer requests?

Are we properly handling customer requests?

Is every requested change being evaluated, planned, and approved before being implemented?

Has a criteria for evaluating and accepting good requirements been defined? Is it followed?

Is the interface between the developers and the requirements and/or systems people working properly? If not, what should the team do to improve this interface?

Is development being delayed by the requirements work?

Is the quality of the requirements documentation sufficiently good to guide the development work?

Have specifications for the creation of the SRS, ERS, interface requirements, market studies, and impact analysis reports been defined? Are they followed? Are they based on customer needs? If not, what remedial actions do you recommend?

Is bi-directional traceability being maintained? If not, what remedial actions do you recommend?



# Customer Interface - 2

---

Are the SRS, ERS, interface requirements, market studies, impact analysis reports and all supporting documentation being appropriately managed and controlled? If not, what remedial actions do you recommend?

Are the right people reviewing and approving the requirements?

Do all team members understand the environment in which the system will be used?

Are customer needs, expectations, constraints, and interfaces well documented and understood by the team? If not, what remedial actions do you recommend?

Has packaging of completed products for delivery to appropriate customers been defined, negotiated and agreed to by all relevant stakeholders? If not, what remedial actions do you recommend?

Have the procedures and criteria for verification and validation been agreed to by the customer? If not, what remedial actions do you recommend?

Are there any other customer-related issues that the team should be aware of?

Are there any outstanding requirements issues? What are they and what is the plan for resolving them?

Is the requirements work on schedule?



# Design Manager - 1

---

Are the team's design methods and notations capable of producing a quality design?

Are operational, functional, state and logic specification templates being used to capture the design?

Do all team members understand how to use these design methods?

If some team members are not fluent with the design methods, what remedial action do you recommend?

Is the team's design work of high quality?

Are adequate design verification techniques being used to find design defects early in the process? If not, what remedial actions do you recommend?

Has a sound system architecture been produced and documented?

Is the architecture properly controlled and maintained?

Does the architecture consider future product evolution?

Does the design conform to the architecture?

Is the design properly documented and maintained?



# Design Manager - 2

---

Are the interfaces and other design dependencies with other related teams properly identified and managed?

Are Software Design Specifications (SDS) and all relevant technical data being managed and controlled? If not, what remedial actions do you recommend?

Are operational concepts and associated scenarios included in the SDS? If not, were are they captured and how are they managed?

Have alternative design solutions been developed and evaluated in order to ensure the best design has been selected?

Are there any open design issues? What are they and what is the plan for resolving them?

Are there any other design issues that the team should be aware of?

Is the design work on schedule?



# Implementation Manager

---

Are all of the team members fluent in the languages to be used?

If any team members are not fluent with these languages, what remedial actions do you recommend?

Have the proper implementation standards been developed and adopted?

Are the implementation standards being consistently used?

Are the team members taking advantage of shared and / or reused code where they can? If not, what improvement actions do you recommend?

What are the implementation issues? What are they and what are the plans for resolving them?

Does the team need any help in resolving the implementation issues?

Are there any other implementation issues that the team should be aware of?

Is the implementation work on schedule?



# Planning Manager - 1

---

Is each developer's plan sufficiently detailed?

Do these plans accurately represent the work that the developers are currently doing?

If any of the developers' plans do not represent their current work, what actions do you recommend?

Is the team's workload reasonably well-balanced? If not, what actions do you recommend?

Is the workload with any cooperating group or team reasonably well balanced? If not, what actions do you recommend?

Are dependencies within the team and with other related groups known, properly planned for, and tracked?

How does the management of project data compare against the project plan?

Is the project notebook being maintained, including WEEK (risks, action items, individual and team status, attendees, etc.) artifacts? If not, what remedial actions do you recommend?

Are risks being managed and controlled? If not, what remedial actions do you recommend?

Are meeting minutes being managed and controlled? If not, what remedial actions do you recommend?



# Planning Manager - 2

---

Are STATUS reports being managed and controlled? If not, what remedial actions do you recommend?

Are PM reports being managed and controlled? If not, what remedial actions do you recommend?

Is each team member's plan accurately projecting when the team member will finish? Is the TSP tool correctly populated and maintained in order to correctly predict their finish dates?

Are there any other planning issues that the team should be aware of?





# Process Manager

---

Do the teams have defined processes for their principal activities? If not, what processes do you recommend be defined and by whom?

Do these processes reasonable represent the way that the work is currently being done? If not, are PIPs being submitted to correct the processes?

When team members raise process-related issues, do you encourage them to submit PIPs and how many have they submitted?

Are the developers following the processes that they have?

Is management providing the support needed to get the defined processes followed? If not, what remedial actions do you recommend?

Are all process assets being consistently stored for future reference? If not, what remedial actions do you recommend?

Are the organization's process needs and objectives understood by the team? If not, what remedial actions do you recommend?

Do you have a defined process for handling PIPs? If not, what is your plan?

Are team members accurately recording their time, size and defect data?



# Quality Manager - 1

---

Is the project notebook being managed and controlled? Does it contain all work products, measures, and measurement results derived from performing the planned processes? If not, what remedial actions do you recommend?

Are the developers properly recording their defect data?

Do they record the defect data as they do the work or after the fact?

Are the defect data complete and of sufficient quality to permit analysis? If not, what remedial actions do you recommend?

Are the developers using their defect data to assess the quality of their work?

Do the developers use their defect data to regularly update their review checklists?

Do the developers' defect data indicate that the work is of high quality? If not, what remedial actions do you recommend?

Are the developers holding team inspections of the requirements, design, and implementation products and are these inspections being done properly?

Are the developers conducting personal design and code reviews and are these reviews being done properly?



# Quality Manager - 2

---

Is component and / or module quality being reviewed before integration and system test?

Do the quality of all the components and modules meet the team's quality guidelines before integration and system test? If not, what is being done to fix the quality problems?

Do you need further support from management or the team leader in assuring quality work?

Are there any other quality issues that the team should be aware of?



# Support Manager

---

Are physical environment standards adequate? If not, what remedial actions do you recommend?

Does the team have suitable tools to support its work? If not, what additional tools do you recommend?

Does the current environment support the selected validation and verification methods? If not, what remedial actions do you recommend?

Are all team members fluent with the available development tools?

If any team members are not fluent with these tools, what remedial actions do you recommend?

Does the team have adequate tool support for the configuration management process? If not, what actions do you recommend?

Is the change control board working effectively?

Are all changes to baselined products being managed through the configuration control system?

Have all products that should be baselined been baselined?

Are there any other support issues that the team should be aware of?



# Test Manager - 1

---

Are test plans being produced when the process requires them?

Are these test plans complete and thorough?

Do the developers understand how to produce suitable test plans? If not, what remedial actions do you recommend?

Are the system test plans being reviewed when the requirements are reviewed, the integration plans when the design is reviewed, and the unit test plans when the implementation is reviewed?

Are sufficient test facilities planned for integration and system testing?

Are the needed test tools available?

Do the developers know how to use the test tools? If not, what remedial actions do you recommend?

Are the procedures and criteria for integration of product components sufficient for ensuring a quality product in put into test? If not, what remedial actions do you recommend?

Is the integration of product components sufficient for testing? If not, what remedial actions do you recommend?



# Test Manager - 2

---

Are all test plans, data, and results being appropriately managed and controlled in the project notebook?

Do the test plans, procedures, environment, and results analysis demonstrate that verification and validation criteria have been met? If not, what remedial actions do you recommend?

Is the product quality (defect level) high enough to do system or user acceptance testing?

Is sufficient time/resources available for testing?

Are there any other test issues that the team should be aware of?

Is testing on schedule?

