TSP Scripts

All TSP scripts are listed. After the first three, the scripts are listed in the alphabetical order of their abbreviated names.

Script Abbreviation	Script Name	Page Reference
CYCLE	Cycle	2
DEV	Overall Development and Enhancement Process	4
MAINT	Overall Maintenance and Enhancement Process	5
ANA	Impact Analysis	6
CHECKPOINT	Checkpoint Assessment	8
HLD	High-Level Design	10
IMP	Implementation	11
IMP6	Unit Test and Test Development (step 6 in script IMP)	12
INS	Inspection Process	13
LAU	Team Launch	16
LAU1	Launch Meeting 1 - Launch overview and kick-off	17
LAU2	Launch Meeting 2 - Roles and goals	18
LAU3	Launch Meeting 3 - Strategy, process, support	19
LAU4	Launch Meeting 4 - Overall team plan	21
LAU5	Launch Meeting 5 - Quality plan	23
LAU6	Launch Meeting 6 - Detailed next-phase plans	24
LAU7	Launch Meeting 7 - Risk assessment	26
LAU8	Launch Meeting 8 - Management meeting preparation	27
LAU9	Launch Meeting 9 – Wrap-up management meeting	28
LAUPM	Launch Postmortem Meeting – Postmortem on the launch	29
MTG	General Meeting Process	30
PM	Project Postmortem	31
PMTD	Postmortem Test Defects	32
REL	Team Relaunch	33
REL1	Relaunch Meeting 1 - Status and management update	34
REQ	Requirements	35
STATUS	Management and Customer Status Meeting	36
TEST	Release Test	37
TEST1	Product Build (step 1 in script TEST)	38
TEST2	Integration (step 2 in script TEST)	39
TEST3	System Test (step 3 in script TEST)	40
TESTD	Test Defect Handling	41
WEEK	Weekly Team Meeting	42

TSP Cycle - Script CYCLE

Purpose	- To guide teams through the use of a defined and structured process, with repeatable and measurable steps, which provides a rapid feedback on the quality of the product and progress towards completion - To guide teams in the establishment of a shared understanding of the work and how it is to be done, which includes a common understanding of the team goals, team member roles, product or components to be produced, available resources and existing constraints, and measures of success. - To provide the mechanisms required in order for a team to practice self-management
Entry Criteria	- All team members have been adequately trained in the use of PSP and TSP. - All team members and the team leaders has been identified and allocated to the project. - A qualified TSP coach is available to guide and coach the team through the TSP Cycle.
General	- Depending on the size and needs of the project, a TSP Cycle can range from a period of a few weeks to a few months. - Depending on a project's overall duration and needs, the team may choose to use phases, cycles, or both in determining when it needs to conduct a (re)launch. A phase represents a part of the development lifecycle such as the implementation phase, and a cycle represents the time between planning horizons. A phase can encompass several cycles, just as a cycle can encompass several phases.

Step	Activities	Description
1	Team (Re)Launch (LAU or REL)	- During the launch, the team learns from management what it is supposed to do, makes a plan for doing the desired work, and then reviews the plan with management. The two desired outcomes of the launch are an approved team plan for producing a particular product, both the overall project plan and a detailed next phase plan, and a jelled self-directed team. - During a relaunch (script REL), the team members update their overall plan and develop a new next phase plan based on what they have done since the initial launch or the prior relaunch. The team has already committed to management what it intends to do and, if that commitment is unchanged, the members do not need to repeat the management meetings. However, if the project has changed in any significant way (such as changes to the product requirements, the team membership, project schedule, project scope, etc.), then the relaunch should be regarded as a new project launch and all of the meetings (script LAU) and activities should be held.
2	Plan Execution	- The team executes the cycle plan created during the (re)launch, making updates or changes to the plan as necessary. - The team uses scripts DEV and MAINT to guide the team in developing, maintaining and enhancing software-intensive products. - The team meets weekly (script WEEK) to ensure that all team members understand current project status and know what to do next. - The team leader conducts periodic management and customer status meetings (script STATUS).
	Checkpoint	About a month into the TSP cycle or halfway through the cycle, whichever is shorter, the TSP Coach leads the team through a checkpoint (scripts CHECKPOINT)

(continued on next page)

TSP Cycle - Script CYCLE (continued)

3	Cycle or Project Postmortem	- The cycle postmortem is held before any subsequent launch or relaunch and includes only the data on the work completed during the earlier project phases or cycles. The focus of these postmortems is to evaluate interim project status and calibrate planning parameters to revise goals and improve performance in subsequent cycles (see script PM). - The project postmortem is conducted at the end of the project and includes the full product or project data. Organizational process baseline data may be updated at this time (see script PM).

Exit Criteria	- A completed high-quality product - A project summary report (see specification SUMMARY) - PIPs for all identified process improvements

TSP Overall Development and Enhancement Process - Script DEV

Purpose	- To guide integrated teams in developing and enhancing software-intensive products - Use script MAINT for maintenance and enhancement projects.
Entry Criteria	The work has been planned during a (re)launch.
General	For small development and enhancement projects, the TSP cycle may span several phases or even the entire project. For iterative methods, the steps in this script may take place concurrently. All steps should be planned and executed within one or multiple TSP cycles (script CYCLE).

Step	Activities	Description
1	Requirements (REQ)	- Set requirements goals, roles, processes, and procedures. - Produce the overall project plan and detailed requirements plan. - Assess requirements risks and exposures. - Document, review, and validate the requirements. - Develop and inspect the requirements specifications. - Define system tests and produce the user manual outline.
2	High-Level Design (HLD)	- Set design goals, roles, processes, and procedures. - Produce the overall project plan and detailed HLD plan. - Assess design risks and exposures. - Produce and inspect the high-level design. - Produce the performance and integration test specifications.
3	Implementation (IMP)	- Set implementation goals, roles, processes, and procedures. - Produce the overall project plan and detailed implementation plan. - Assess implementation risks and exposures. - Design, code, inspect, and unit test the product components. - Produce the unit and product test specifications and draft documentation.
4	Release Test (TEST)	- Set integration and test goals, roles, processes, and procedures. - Produce the detailed integration and test plan. - Assess integration and test risks and exposures. - Develop test materials and test data. - Build the integrated product. - Run the integration and system tests. - Return defective components for rework and retest. - Produce and review the final documentation. - Deliver the completed product.

Exit Criteria	- A completed high-quality product - A project summary report (see specification SUMMARY) - PIPs for all identified process improvements

TSP Overall Maintenance and Enhancement Process - Script MAINT

Purpose	- To guide integrated teams in maintaining and enhancing an existing software-intensive product - Use script DEV for development and enhancement projects.
Entry Criteria	The work has been planned during a (re)launch.
General	For small maintenance and enhancement projects, the TSP cycle may span several phases or even the entire project. For iterative methods, the steps in this script may take place concurrently. All steps should be planned and executed within one or multiple TSP cycles (script CYCLE).

Step	Activities	Description
1	Analysis (ANA)	- Set analysis goals, roles, processes, and procedures. - Produce the preliminary fix list, the overall project plan, and the detailed analysis plan. - Assess analysis risks and exposures. - Produce, document, and review the release impact analysis. - Develop and inspect the release specifications. - Define regression and system tests and user manual changes.
2	High-Level Design (HLD)	- Set design goals, roles, processes, and procedures. - Update the fix list, the overall project plan and detailed HLD plan. - Assess design risks and exposures. - Produce and inspect the high-level design. - Produce the performance and integration test specifications.
3	Implementation (IMP)	- Set implementation goals, roles, processes, and procedures. - Update the fix list, the overall project plan and detailed implementation plan. - Assess implementation risks and exposures. - Design, code, inspect, and unit test the enhancements and fixes. - Produce the unit and release test specifications.
4	Release Test (TEST)	- Set release test goals, roles, processes, and procedures. - Update the fix list and the detailed release test plan. - Assess integration and test risks and exposures. - Develop test materials and test data. - Build the integrated product release. - Run the integration, system, and regression tests. - Return defective components or fixes for rework and retest. - Produce and review the final updated documentation. - Deliver the completed product release.

Exit Criteria	- A completed high-quality product release - A project summary report (see specification SUMMARY) - PIPs for all identified process improvements

TSP Impact Analysis - Script ANA

Purpose	To produce a complete, valid, and accurate release specification (SRS) and impact analysis report
Entry Criteria	- Completed analysis-phase launch, a detailed next-phase plan, and a current list of project risks and exposures - Defined impact analysis process - Enhancement requirements statement and preliminary fix list - Forms: INS, ITL, LOGD, LOGT, MTG, PIP, SUMP, SUMQ - Specification: NOTEBOOK
General	

Step	Activities	Description
1	Enhancement Requirements Study	- Study the enhancement and fix requirements to identify errors and omissions and clarify questions. - Produce an elicitation plan and detailed questions. - Double-check correctness of **ALL** requirements assumptions.
2	Market Requirements Elicitation	- Hold customer/marketing elicitation meeting(s) (script MTG). - Document each elicitation meeting and its results (form MTG).
3	Requirements Prototypes	- Prototype and/or simulate all important specification questions and review results with systems, marketing and the customer. - Where needed, use prototypes to obtain data for validating design, planning, resource, or size assumptions.

4	System Requirements Specification	- Produce the System Requirements Specification (SRS).
		  - normal, abnormal, and recovery behavior and performance
		  - operational and user interfaces
		  - documentation, training, distribution, installation, maintenance, and support requirements
		- For each SRS item, reference its source in the enhancement requirements.
		- Identify required user manual changes and produce an outline.
		- Ensure that bi-directional traceability is maintained and that changes to the SRS do not impact other source requirements or lower level requirements. Where needed documented changes to source and lower level specifications.

5	SRS Inspection	- Inspect the SRS, impacted source and lower level specifications, and user manual outline and draft (script INS). - Record size, time, and defect data (form INS). - Include customer/marketing/systems personnel. - Resolve all issues and update and baseline the SRS.
6	Impact Analysis Report	Produce the impact analysis report. - components to be changed for each planned fix - predicted new and changed components for the enhancements - estimated resources for each fix, change, or addition - impact to other product lifecycle activities and their impact on project commitments
7	Impact Analysis Review	Review the impact analysis. - Determine if the estimates are reasonable, and adjust them as needed. - Identify and drop unjustified fixes and enhancements. - Update the impact analysis report.
8	Test Specification	Define tests to verify the system and products to the specifications. - normal and abnormal interfaces, functions, and performance - security, safety, failure, and recovery conditions

(continued on next page)

TSP Impact Analysis - Script ANA (continued)

Exit Criteria	- Inspected and completed SRS and impact analysis documents - Completed INS, LOGD, LOGT, MTG, PIP, SUMP, SUMQ forms - Analysis plan, actual, and earned-value data recorded and entered in the project notebook (specification NOTEBOOK)

TSP Checkpoint Assessment - Script CHECKPOINT

Purpose	To identify the issues and problems limiting a TSP team's performance and recommend actions to address them
Entry Criteria	- The team has successfully completed a TSP launch. - The team has used the TSP process for one or more months. - A qualified coach is available to conduct the checkpoint. - Forms: CHECKTMDR
General	- A checkpoint is conducted as a process assessment, not an audit. - Confidentiality is maintained and no statements by any individual team member are reported to anyone else.

Step	Activities	Description
1	Team Leader Review	The coach meets with the team leader to review the checkpoint objectives and plan and agree on the plan and schedule.
2	Management Review	The coach and team leader review the checkpoint plan and schedule with senior management.
3	Team Review	The coach and team leader review the checkpoint objectives, plan, and schedule with the team and answer questions.
4	Data Review	The coach reviews each members personal data (Form CHECKTMDR)
5	Role Review	The coach reviews material created by the role managers in performing their role (Specification Roles) using form CHECKTMDR.
6	Roundtable Discussions	The coach meets with team members to discuss their issues and concerns. - how they use the process and how it works for them - any problems or issues with the process - what the team leader or management could do to better support the team - accomplishments, progress, things working well - suggestions for improvement
7	Individual Discussions	The coach meets with individual team members to discuss - any questions about the team member's data - any questions about the team member’s team role - how to address any problems or concerns the member has raised - accomplishments, progress, things working well - other problems or suggestions
8	Preliminary Findings	The coach prepares preliminary checkpoint findings and recommendations for review with the team.
9	Team Discussion	The coach meets with the team to discuss - the preliminary checkpoint findings - any team problems or issues concerning management and the team leader - the coach's recommendations for addressing these problems - any problems, issues, or improvement suggestions by the team - the team’s ideas for changes or additions to the checkpoint report
10	Findings Review	The coach and team leader - review the checkpoint findings and recommendations with the team (the team may develop an action plan to address finding and recommendations prior to management review of checkpoint finding) - review the checkpoint findings and recommendations with management - obtain agreement to develop an action plan to address the recommendations

(continued on next page)

TSP Checkpoint Assessment - Script CHECKPOINT (continued)

11	The Checkpoint Report	The coach - prepares a written report of the checkpoint findings and recommendations - submits the report to the team leader for distribution in the organization

Exit Criteria	- The checkpoint report is prepared and submitted. - There is agreement to develop a plan to address the recommendations.

TSP High-Level Design - Script HLD

Purpose	- To produce the (hardware-)software system design specification - To establish the product development and design strategy
Entry Criteria	- Completed detailed next-phase plan which include high level design tasks and a current list of project risks and exposures - Inspected and baselined SRS and ERS documents - Draft user's manual - Forms: INS, ITL, LOGD, LOGT, MTG, PIP, SUMP, SUMQ - Specification: NOTEBOOK
General	On small projects, steps 1-3 can be accomplished during a (re)launch.

Step	Activities	Description
1	Structural Design	Produce the overall product design concept. - system architectural framework - product components, principal functions, and interfaces
2	Development Strategy	Define the development strategy. - component development sequence and dependencies - component integration sequence and dependencies - reuse and testing strategies
3	High-Level Design Strategy	Depending on system size and complexity, determine whether to - design the overall system in one high-level design cycle - design in multiple cycles, a layer or product area at a time
4	First Cycle Design	- Review the requirements. - For the first high-level design cycle, produce the class definitions, relationships, and transition diagrams.
5	Subsequent Design Cycles	- Assess the design issues from previous cycles. - Review the current design against the requirements. - Produce class definitions, relationships, transition diagrams. - Reassess the design, and recycle as needed.
6	Integration and System Test Strategies	- Define testing sequence, dependencies, and use cases. - Define normal, limit, and out-of-limit data values. - Specify tests for operator normal and error behaviors. - Specify installation and operational tests.
7	System Design Specification (SDS)	- Document the system design specifications: structural design; development and test strategies; interface, data, and component specifications; and any fix prerequisites and corequisites. - For each SDS item, reference its source in the ERS or SRS.
8	Design Walkthrough	Conduct a high-level design walkthrough (script MTG and form MTG). - Involve customer, marketing, systems, and test personnel. - Cover the functional, performance, and test specifications. - Rework the design to address identified deficiencies.
9	Design Inspection	Conduct a high-level design inspection (script INS). - Inspect all design, test, performance, and strategy materials. - Rework to address identified deficiencies. - Record inspection data on form INS.
10	SDS Baseline	Submit the SDS to the CCB for entry in the system baseline.
11	Postmortem	Follow script PM to conduct the phase postmortem.

Exit Criteria	- A completed, inspected, corrected, and baselined SDS - Component functional, performance, and test specifications - Forms INS, ITL, LOGD, LOGT, MTG, PIP, SUMP, SUMQ - Requirements plan, actual, and earned-value data recorded and entered in the project notebook (specification NOTEBOOK)

TSP Implementation - Script IMP

Purpose	To produce high-quality system components
Entry Criteria	- A detailed next-phase plan and a current list of project risks and exposures - Inspected and baselined SRS, EDS, and SDS documents - Forms: INS, ITL, LOGD, LOGT, PIP, SUMP, SUMQ - Specification: NOTEBOOK
General	During the (re)launch process, team members create detailed processes to be followed by each team member. At a minimum, these processes will include personal reviews and inspections.

Step	Activities	Description
1	Component Plan	Produce an implementation plan for each component and each fix. - Use personal or team data for the size, time, and defect estimates. - Produce a cycle development plan. - Record the SDS, EDS, or SRS reference for each function. - Complete forms SUMP, SUMQ.
2	Detailed Design	For each component and each fix - Produce the detailed design and unit test plan (script IMP6). - Conduct a design review, using the team's standard design verification methods and a personal review checklist. - Record design time, product size, review time, and review defects (forms LOGD, LOGT, SUMP, SUMQ).
3	Detailed Design Inspection	- Have team members conduct a DLD inspection (script INS). - Record inspection data (form INS).
4	Coding	- Produce the component and fix source code. - Using a personal checklist, conduct a code review and update the design. - Compile the code until it compiles without error. - Record coding time, product size, review time, and review defects (forms LOGD, LOGT, SUMP, SUMQ).
5	Code Inspection	- Have team members do a code inspection (script INS). - Record inspection data (form INS)
6	Unit Test	Follow script IMP6 - develop the unit tests cases and data, and conduct the unit tests - record unit test data (forms LOGD, LOGT, SUMP, SUMQ)
7	Component Release	- When component implementation is complete, release the component to the support manager. - The support manager enters the component in the configuration management system and releases to test, when appropriate.
8	Component Postmortem	For each component, the implementing engineer conducts a postmortem to ensure that all work is completed and the data are properly recorded.
9	Product Baselines	Submit the products to the CCB for entry into the system baseline.

Exit Criteria	- All components implemented, inspected, and accepted - INS, ITL, PIP, SUMP, SUMQ forms - Implementation plan, actual, and earned-value data recorded and entered in project notebook (specification NOTEBOOK)

TSP Unit Test and Test Development - Script IMP6

Purpose	- To guide you in unit testing fixes, modules, or components - While all defects should already have been found, thorough unit testing ensures that few if any defects remain. - Care is warranted because defects missed in unit test can take five to 40 hours each to find in later testing.
Entry Criteria	- The fix, module, or component program has been developed, reviewed, compiled, and inspected. - Forms: LOGD, LOGT, SUMP, SUMQ
General	- If properly done, unit testing can find all remaining defects. - It is important to carefully review and retest every test fix. - Errors are much more likely with test fixes than new code.

Step	Activities	Description
1	Unit Test Development	- Develop a test plan to cover steps 2 through 8 of this script with a minimum of test case and testing duplication. - Develop the required test cases and test data. - Review the test materials to ensure that they are not defective. - A careful review of the test materials will save time since test case defects are generally harder to find and take longer to fix than product defects.
2	Scenario Tests	Test all the use case scenarios.
3	Logic Tests	- Test every logic branch path. - Test every condition of every case statement. - Verify the proper stepping and termination of every loop. - Check for pointer allocate, free, null, and stepping problems.
4	Interface Tests	Check the proper behavior of every interface. - proper returns for all input cases - the types match - interface error conditions handled as specified, etc.
5	Error Tests	Test all program error conditions. - improper values or types - overflow and underflow - integer, long integer, precision problems, etc.
6	Variable Tests	Check every variable and parameter value - at nominal, maximum, and minimum values - above the upper specified value - below the minimum specified value - for proper operation with 0, no input, incorrect data type, etc.
7	Device Tests	Check for proper device operation. - printers, displays, inputs, sensors, etc. - normal and incorrect operation: no paper, jam, power off, etc.
8	Other Tests	Check other important product specifications. - buffer size, limits, and overflow - throughput performance and response time - data rates and limits - dates and date calculations - security, compatibility, conversion, installation, recovery

Exit Criteria	- A completed unit test, with all defects fixed - Unit test data entered in forms LOGD, LOGT, SUMP, SUMQ

TSP Inspection Script - Script INS

Purpose	- To help team members produce quality products and product fixes - To identify poor quality products for rework or redevelopment
Entry Criteria	- A completed and personally reviewed high-quality product - The requirements and/or design documents are available. - The producer's personal process data: size, defects, and time - All inspection participants are present. - Forms: LOGT, INS

General	- Inspection roles are defined in the Inspection Roles and Responsibilities
	- The purpose of inspections is to focus on sophisticated design issues, not on finding simple defects.
	- Even a few simple defects can distract reviewers so they are more likely to miss sophisticated design issues.
	- In general, one of the reviewers performs the role of the moderator.
	- For large inspections with more than 5 reviewers, the moderator should not be a reviewer.
	- The producer developed the product. He or she
	  - arranges with a qualified moderator to lead the inspection
	  - provides the product briefing and supplies the product materials
	  - answers product questions during the inspection process
	  - fixes the identified defects and verifies the defect fixes
	- A qualified moderator
	  - leads the inspection process and chairs the inspection meeting
	  - reports the inspection results and data (form INS)
	- The reviewers are usually other engineers who work on the project.
	- The recorder and timekeeper supply meeting data to the moderator for the inspection report.
	  - The recorder records the defect data on a visible medium.
	  - The timekeeper keeps track of the meeting time.

Step	Activities	Description

1	Preliminary Review	- Before starting the inspection process, the moderator
		  - reviews the product to ensure it is of inspection quality
		  - notes all defects found during this review
		  - does not tell the developer about the defects found
		  - may ask a reviewing engineer to do this review.
		- If the product is of high quality, it is inspected. If not, the developer is asked to re-review the product, record all defects found, and resubmit the product for the inspection.
		- When the developer resubmits the product, use the quality projection methods on form INS to estimate product quality.
		- Until the product is of reasonable quality, it is not inspected.

(continued on next page)

TSP Inspection Script - Script INS (continued)

Step	Activities	Description

2	Inspection Briefing	A briefing meeting is only required when the reviewers are unfamiliar with the products being produced. When a briefing meeting is needed:
		- The moderator verifies that the inspection entry criteria have been met, or defers the briefing meeting until they are met.
		  - reviews the inspection process and meeting roles (script MTG)
		- The producer familiarizes the inspection team with the product.
		When a meeting is not required, the moderator assigns the following; else it is decided during the briefing meeting.
		- The reviewers select viewpoints or areas for product concentration.
		  - example viewpoints: operation, recovery, maintenance, security, installation, size, performance
		- In design inspections, the reviewers also ensure that at least one reviewer will
		  - verify each segment of the design
		  - use a trace table, state machine, or other design analysis method on every design segment
		- The moderator schedules the inspection meeting.

3	Inspection Preparation	- The reviewers separately make detailed product reviews, and mark their defects on the product documentation. - The reviewers concentrate on selected viewpoints or product areas. - The reviewers record preparation time in their individual form LOGT and record defect data to bring to the inspection meeting.
4	Inspection Meeting: Opening	The moderator opens the inspection meeting and - if any reviewers are not prepared, reschedules the meeting - outlines the inspection meeting procedure - selects the timekeeper and recorder - enters the inspection preparation data on form INS

5	Product Walk-through	- The reviewers review each section of the product materials. Each reviewer
		  - describes any defects found in that section
		  - records each defect on form INS
		  - checks form INS for every reviewer who found each defect
		  - resolves questions with the producer and other reviewers
		  - does not attempt to solve or fix defects during the inspection
		- The recorder verifies each defect report with the reviewers.
		- This process continues until all materials have been reviewed.

6	Defect Check	After all issues have been discussed and defects recorded - The moderator asks the reviewers for any unrecorded defects. - Each new defect is clarified, recorded, and verified as before.

(continued on next page)

TSP Inspection Script - Script INS (continued)

Step	Activities	Description
7	Estimating Remaining Defects	- After all defects are entered, count the major defects that each reviewer found, and that no other reviewer found (the reviewer's unique defects). - Identify the engineer who found the most unique defects. - Check the defects that reviewer found in column A. - In column B, check all of the defects found by the other reviewers. - Count the common defects (C) between columns A and B. - The estimated number of defects in the product is AB/C. - Round fractional results to the nearest integer. - The number of defects found in the inspection is A+B-C. - Number remaining: total less the number found: (AB/C)-A-B+C. - This defect estimate is only reliable when all the numbers A and B are greater than 4 and A-C, and B-C are both greater than 1. - Even with these criteria, estimate error is likely 10% or more. - Generally, larger numbers, give more reliable estimates. - If A=B=C, you are likely to have found all the defects. - If several reviewers found the most unique defects, repeat these calculations, using each of these reviewers as A, and use the largest resulting number as the total defect estimate. - Enter total meeting time, inspection hours, and inspection rate.
8	Inspection Meeting: Conclusion	- The team decides if a reinspection is needed and who will do it. - The reviewers decide how to verify the defect corrections. - The recorder and moderator complete form INS.
9	Product Rework and Verification	The producer makes repairs and updates documentation. - holds needed re-reviews and/or re-inspections - has the fixes verified as the reviewers recommended in step 8

Exit Criteria	- Form INS completed and recorded in the project notebook (specification NOTEBOOK) - A fully inspected and high-quality product

TSP Team Launch - Script LAU

Purpose	To guide teams in launching a software-intensive project
Entry Criteria	- The launch preparation work has been completed (PREPL, PREPT). - All team members and the team leader are committed to attend launch meetings 1 through 9 and the launch postmortem, and management and marketing representatives are prepared and available for meetings 1 and 9. - A certified TSP coach is on hand to lead the launch process.
General	<table><tr><th>Day</th><th>1</th><th>2</th><th>3</th><th>4</th></tr><tr><td>**Timing**</td><td>8:30-6:45</td><td>8:00-5:00</td><td>8:30-5:30</td><td>8:30-4:30</td></tr><tr><td>**Meetings**</td><td>1, 2, and 3</td><td>3 (cont.), 4, 5, and 6</td><td>6 (cont.), 7 and 8</td><td>9 and PM</td></tr></table> Notional schedule can be compressed or extended to meet scope of launch

Step	Activities	Description
1	Project and Management Objectives	Hold team launch meeting 1 (script LAU1). - Review the launch process and introduce team members. - Discuss the project goals with management and marketing.
2	Team Goals and Roles	Hold team launch meeting 2 (script LAU2). - Define and document the team's goals. - Allocate team roles among team members.
3	Project Strategy and Support	Hold team launch meeting 3 (script LAU3). - Produce a system conceptual design, and, if needed, a fix list. - Determine the development strategy and products to be produced. - Define the development process to be used. - Produce the process and support plans.
4	Overall Plan	Hold team launch meeting 4 (script LAU4). - Develop size estimates and the overall team plan.
5	Quality Plan	Hold team launch meeting 5 (script LAU5). - Develop the quality plan.
6	Balanced Plan	Hold team launch meeting 6 (script LAU6). - Allocate work to team members. - Produce bottom-up next-phase or cycle plans for each team member. - Produce a balanced next-phase or cycle plan for the team and each team member.
7	Project Risk Analysis	Hold team launch meeting 7 (script LAU7). - Identify and evaluate project risks. - Define risk assessment checkpoints and responsibilities. - Propose mitigation actions for near-term, high-impact risks.
8	Launch Report Preparation	Hold team launch meeting 8 (script LAU8). - Prepare a launch report for management.
9	Management Review	Hold team launch meeting 9 (script LAU9). - Review the launch report with management. - Discuss project risks, responsibilities, and planned actions.
PM	Launch Postmortem	Hold team launch postmortem meeting (script LAUPM). - Gather launch data and produce a launch report. - Put the launch report in the project notebook. - Assess the launch process and prepare PIPs.

Exit Criteria	- The launch is completed with documented team and team member plans. - Team roles, goals, processes, and responsibilities are defined. - Management agrees with the team plan, or resolution actions have been identified and responsibilities assigned. - The launch data are in the project notebook (NOTEBOOK specification).

TSP Launch Meeting 1 - Script LAU1

Purpose	To review management goals and product objectives with the team
Entry Criteria	- The team and team leader are prepared. - All participants are present (TSP coach, team members, team leader, management and marketing representatives). - Forms: MTG, ITL, PIP
General	Meeting 1 generally takes from 1 to 2 hours.

Step	Activities	Description
1	TSP and Launch Overview Meeting Role Assignments	The TSP coach leads the meeting (script MTG). The TSP coach - describes the TSP launch process and the launch products - reviews the TSP team roles - reviews the meeting roles and assigns a timekeeper and recorder (specification ROLE) - discusses the work to be done in this meeting
2	Project Goals	A senior management representative - describes the business reasons for wanting to do this project - describes the business goals for the project - answers the team's questions
3	Goal Questions	The team members should satisfy themselves that they understand the project goals (Team Member Meeting 1 Discussion Guidelines). - management's goals for the project - the reasons for these goals - how management will measure goal attainment - management's minimum and ideal goals for the project
4	Product Objectives	A marketing or customer representative - describes the characteristics of the desired product - summarizes the customers' needs for the product - compares these needs with competitive offerings - answers the team's questions
5	Product Questions	The team members should satisfy themselves that they understand the product objectives (Team Member Meeting 1 Discussion Guidelines). - users' and customer's needs - any items that are especially important to the customer
6	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees - saves the completed form MTG to give to the planning manager in launch meeting 2

Exit Criteria	- Launch meeting 1 activities have been completed. - The team understands the customer's needs and management's goals. - All of the team's questions have been answered, or actions are planned to get answers for the team. - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manager has copies of all meeting products.

TSP Launch Meeting 2 - Script LAU2

Purpose	To guide the team in setting goals and establishing roles
Entry Criteria	- All participants are present (TSP coach, team members, team leader). - Forms: GOAL, ITL, MTG, PIP, ROLE, ROLEMX
General	Meeting 2 generally takes 3 to 5 hours.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Meeting Overview	The TSP coach reviews the work to be done in this meeting and the products to be produced.
3	Review Management's Stated Goals	The team leader leads the team in reviewing management's goals to - get agreement on what management stated as the goals - identify one or more measure for the key management goals - record results on form GOAL
4	Implied Goals	The team leader leads the team in defining the goals that are implied by management's stated goals. Considerations include customer satisfaction, financial performance, and competitive capability.
5	Team Goals	The team leader leads the team in - establishing team goals to meet management's stated and implied goals - defining product, process, quality, and project goals - identifying one or more measures for each key team goal - record results on form GOAL
6	Team Role Selection	The team uses the procedure given with form ROLEMX to - review the team roles - allocate the roles among the team members - identify an alternate for each role - document the role assignments (form ROLE) Note that the team leader generally is not assigned any of the TSP team roles.
7	Goal Tracking	The team leader leads the team in - assigning team-member tracking responsibility for each goal - recording the assignments on form GOAL - establishing a tracking schedule for each goal Note that role assignments may determine goal-tracking responsibility.
8	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager.

Exit Criteria	- Launch meeting 2 activities have been completed. - Team roles and alternates are documented (form ROLE). - Project goals are documented (form GOAL). - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manager has copies of all meeting products.

TSP Launch Meeting 3 - Script LAU3

Purpose	To help the team produce the development strategy, development process, and support plan
Entry Criteria	- All participants are present (TSP coach, team members, team leader). - Documented project goals and team roles are available. - Forms: INV, ITL, MTG, PIP, STRAT, SUMS, SUMTASK
General	Meeting 3 generally takes from 3 to 5 hours, depending on project status, product complexity, team size, and the team's TSP experience.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Meeting Overview	The TSP coach reviews the work to be done in this meeting and the products to be produced.
3	Product Conceptual Design	The design manager leads the team in - producing a conceptual design - defining the principal product components, elements, or features of the conceptual design - making a gross size estimate of each component, element, or feature

4	Development Strategy	- The team leader leads the team in establishing the project strategy. In developing the project strategy, the team considers
		  - the gross size of each principal product component, element, or feature
		  - whether the product should be developed in one or multiple versions
		  - the general content of each development version
		  - the number of development cycles, and estimated size and hours of each
		  - whether prototypes are needed, when they are needed, and their purpose
		- The results, principal product components or elements, estimated size and development hours, and development cycle, are recorded on form STRAT.

5	Products Produced	- The team leader leads the team in defining the work products to be produced for the next phase or cycle, and all subsequent phases or cycles. These items are recorded on form SUMS. Examples include
		  - prioritized list of fixes to the existing product
		  - requirements documents and specifications
		  - design documents and specifications
		  - prototypes
		  - principal product elements or components
		  - installation, user, and maintenance manuals
		  - test programs, scripts, data, and plans
		- When defining the principal product elements or components, use a level of detail that is appropriate for the phase being planned. Subsystems or components are sufficient for the requirements and high-level design phases, and modules or objects may be needed for the implementation phase. The items on form STRAT may be used as a starting point and may be further refined as needed.

(continued on next page)

TSP Launch Meeting 3 - Script LAU3 (continued)

Step	Activities	Description

6	Development Process	- The process manager leads the team in defining the development process.
		- Define the overall development process up to final delivery.
		  - principal process phases
		  - major activities in each phase
		  - items to be baselined at each phase
		- Refine the process steps for the next project phase or cycle to sufficient detail to support planning individual tasks that are 10 hours or less.
		  - detailed steps required to produce each of the phase or cycle products
		  - steps required to verify the quality of the inputs and the products
		  - the point at which each product will be baselined
		  - items to be baselined at each phase
		- Using form INV, make a plan to develop, modify, or obtain each missing development process element. Include the estimated size; estimated hours; the date, phase, or cycle when needed; and who will document the process.

7	Process Plan	- The process manager leads the team in identifying any other process elements that are needed. Examples include
		  - design, code, size, naming, and message standards
		  - guidelines for team processes and procedures; i.e. resolving issues, making decisions, approving standards
		  - change control and change management procedures
		- Make a plan on form INV for each missing process element.

8	Support Plan	- The support manager leads the team in reviewing the available development and process support tools and facilities, and identifying any that are missing
		  - requirements and design aids
		  - editors, compilers, debug aids, testing tools
		  - defect tracking, configuration management, issue tracking
		  - LOC counting, difference counting, data analysis
		- Make a plan on form INV for obtaining each missing item.

9	CCB Membership	The TSP coach leads the team in identifying the membership of the configuration control board (CCB) and the CCB chair. - The support manager typically chairs the CCB. - Other typical members are the design manager, team leader, and customer interface manager.
10	Role Plan	The TSP coach leads the team in defining the tasks and weekly reporting for each role, and records the tasks on form INV.
11	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager

Exit Criteria	- Launch meeting 3 activities have been completed. - Development strategy is defined (form STRAT). - List of products to be produced has been recorded (form SUMS). - Overall and detailed development process steps are documented. - Process plan and support plan are documented (form INV). - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manager has copies of all meeting products.

TSP Launch Meeting 4 - Script LAU4

Purpose	To guide the team in producing the overall plan
Entry Criteria	- All participants are present (TSP coach, team members, team leader). - The team development strategy and the process and support plans - Forms: INV, ITL, MTG, PIP, SCHED, SUMP, SUMS, TASK - Guideline: Planning
General	Meeting 4 generally takes 3 to 5 hours, depending on team size, project status, product complexity, and the team's TSP experience.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Meeting Overview	The TSP coach reviews the work to be done in this meeting and the products to be produced.

3	Size Estimate	- The design manager leads the team in estimating the size of each item on form SUMS. Record the estimates on SUMS. Examples include
		  - requirement pages, design classes, high-level design pages, screen forms, reports, document text pages
		  - program LOC and test case LOC, test and operational data
		- The size estimates made earlier on form STRAT can be used as a starting point for the estimates on form SUMS.

4	Determine Project Tasks	- The team leader leads the team in producing a detailed task plan for the near term and a high-level plan for the remainder of the project.
		  - Use the project's development process defined in meeting 3 as a template for defining tasks for every product element listed on SUMS that meet the detailed plan criteria.
		  - Review the process plan and support plan items documented on form INV and ensure that tasks are also identified to produce these items.
		- Use the following guidelines for the detailed plan.
		  - The detailed plan generally extends to the end of the next phase or cycle.
		  - The detailed plan tasks are each 10 hours or less per team member.
		- Use the following guidelines for the high-level plan that covers the remaining project phases and/or cycles.
		  - Tasks for the high-level plan may be of any duration.
		  - At least one task must be defined in the high-level plan for each TSP phase on forms SUMP to produce the quality plan (LAU5).
		- The planning manager records the tasks on form TASK.

5	Overall Resource Estimate	- The planning manager leads the team in estimating the resources required for every task defined in step 4.
		  - Use team data or available standards (Planning Guidelines).
		  - When available, use personal and/or team data for similar work.
		  - Use methods and data that are appropriate for the level of detail represented by the task.
		- Enter the time required for each task on form TASK and calculate the total plan task hours for the project.

(continued on next page)

TSP Launch Meeting 4 - Script LAU4 (continued)

Step	Activities	Description

6	Resource Availability	- The planning manager leads the team in estimating the aggregate team tasks hours for each project week. Consider
		  - vacations, training, and other assignments
		  - allocation percentages and new members
		- Enter week schedule hours on form SCHED and calculate the total plan schedule hours until they meet or exceed the total plan task hours on form TASK.

7	Generate the Overall Plan	The planning manager generates the size and time estimates and the team plan for the entire project. - team task and schedule templates - earned-value plan to the project completion - size and resource data (forms SUMP, SUMS) - Gantt schedule (optional)

8	Review and Assess Plan	- The team leader leads the team in reviewing the plan to ensure that it
		  - follows the defined strategy
		  - produces the required products
		  - meets the established team goals
		  - includes tasks for every product defined on SUMS or INV
		- When issues are identified, they are entered on ITL forms and assigned to a team member for tracking.
		- In the event that all cost, schedule, and functionality goals are not met, consider alternative plans (i.e., increase cost to meet schedule and functionality, or reduce functionality to meet cost and schedule constraints) to present to management.

9	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager

Exit Criteria	- Launch meeting 4 activities have been completed. - Overall size and resource estimates are documented (forms SUMP, SUMS, INV). - The overall development plan has been documented. - The earned value plan has been documented (forms TASK and SCHED). - A Gantt schedule has been produced (optional). - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manager has copies of all meeting products.

TSP Launch Meeting 5 - Script LAU5

Purpose	To guide the team in producing the quality plan
Entry Criteria	- All participants are present (TSP coach, team members, team leader). - Forms: ITL, MTG, PIP, SUMP, SUMQ, SUMS - Guidelines: Planning, Quality
General	Meeting 5 generally takes about 1 hour, depending on team size, project status, product complexity, and the team's TSP experience.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Meeting Overview	The TSP coach reviews the work to be done in this meeting and the products to be produced.
3	Quality Goals	The quality manager leads a review of the team's quality goals (form GOAL). - identifies quality data or uses Quality and Planning guidelines - establishes the quality guidelines for the quality plan
4	Estimate Defects Injected	Using the quality guidelines and historical data, the quality manager guides the team in estimating the defects to be injected by phase for each process identified in Meeting 3 (script LAU3). - The planned defects injected for phase *P* are estimated as the planned hours for phase *P* times the hourly defect injection rate for phase *P*. $Defects\ injected_p = Time\ in\ phase_p * Defect\ injection\ rate_p$ - If phase injection rates are not available, the team makes a best estimate.

5	Estimate Defects Removed	- Using the quality guidelines and historical data, the quality manager guides the team in estimating the defects to be removed by phase for each process identified in Meeting 3 (script LAU3).
		  - The number of defects removed in a phase is the phase defect-removal yield times defects present at the phase divided by 100.
		  - $Defects\ removed_p = Defects\ present\ in\ phase_p * Phase\ yield_p / 100$
		  - Defects present in phase are the total defects injected by the end of the phase less the total removed before phase entry.
		  - $Defects\ present\ in\ phase_p = Defects\ injected_{(1...p)} - Defects\ removed_{(1..p-1)}$
		- If phase yields are not available, the team makes a best estimate.

6	Produce the Quality Plan	The quality manager leads the team in calculating the remainder of the quality plan (form SUMQ), and in evaluating and adjusting the plan until the team's quality goals and schedule are met. - evaluating the resulting defect densities and removal rates - making needed adjustments in phase times or yields if goals are not met - recalculating the quality parameters and checking again
7	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager

Exit Criteria	- Launch meeting 5 activities have been completed. - Overall quality plan has been documented (forms SUMP, SUMQ). - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manager has copies of all meeting products.

TSP Launch Meeting 6 - Script LAU6

Purpose	To help the team produce a balanced next-phase or cycle plan
Entry Criteria	- All participants are present (TSP coach, team members, team leader). - Documented process, quality, and support plans are available. - Documented overall plan has been prepared. - Overall and next-phase or cycle effort estimates are available. - Forms: SCHED, TASK, INV, ITL, MTG, PIP, SUMP, SUMQ, SUMS
General	Meeting 6 generally takes 3 to 5 hours, depending on team size, project status, product complexity, and team TSP experience.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Meeting Overview	The TSP coach reviews the work to be done in this meeting and the products to be produced.

3	Allocate Tasks to Team Members	- The team allocates the tasks for the next phase or cycle to individual team members using the following guidelines.
		  - The team and team leader review the tasks for the next phase, and allocate these tasks among the team members.
		  - The team may do load balancing during task allocation, or may do load balancing after each team member has produced their individual plans.
		- To maintain a balanced workload while allocating tasks, the team works through the plan one week at a time.
		  - agrees on which team member will do each task
		  - maintains a balanced workload among the team members

4	Build Bottom-up Plans	- Using personal data where possible, each team member
		  - assesses his or her work and adds any role tasks
		  - subdivides tasks longer than about 10 hours into smaller steps
		  - produces personal task, schedule, and earned value plans

5	Review and Rebalance Team Workload	The planning manager leads the team review of the bottom-up plans. - ensures that the quality criteria are met - resolves conflicts, duplications, and critical path conflicts - rebalances tasks until a minimum schedule is achieved
6	Produce the Next-Phase or Cycle Development Plan	The planning manager combines the bottom-up plans and generates the consolidated next-phase or cycle team plan, which contains - consolidated team size estimates on form SUMS - combined team plan on TASK and SCHED forms - a team earned-value plan for tracking planned value, earned value, and projected earned value by week for the next phase or cycle - an optional Gantt schedule for the next phase or cycle - SUMP and SUMQ forms with size, resource, and quality data for the system and its components (as appropriate for the phase) In the event that all cost, schedule, and functionality goals are not met, consider alternative plans (i.e., increase cost to meet schedule and functionality, or reduce functionality to meet cost and schedule constraints) to present to management.

(continued on next page)

TSP Launch Meeting 6 - Script LAU6 (continued)

Step	Activities	Description
7	Launch Meeting Documentation	The recorder completed form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager

Exit Criteria	- Launch meeting 6 activities have been completed. - Detailed next-phase plans for each team member and the team are documented (forms INV, SUMP, SUMQ, TASK, SCHED). - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manger has copies of all meeting products.

TSP Launch Meeting 7 - Script LAU7

Purpose	To guide the team through a project risk assessment
Entry Criteria	- All participants are present (TSP coach, team members, team leader). - Documented overall and next-phase development plan are available. - Forms: ITL, MTG, PIP
General	- A risk is something that may or may not happen. Something that is certain is an issue, not a risk. - Meeting 7 generally takes 1 to 2 hours, depending on team size, project status, product complexity, and the team's TSP experience.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Meeting Overview	The TSP coach reviews the work to be done in this meeting and the products to be produced.
3	Risk Identification	The team leader asks the team to identify risks. - All team members participate in suggesting risks. - Use a brainstorm approach; i.e., do not evaluate risks during this step. - The process continues until no one can think of any more risks. - Record each risk to aid subsequent evaluation by the team. Use a flip chart or white board.
	Impact Evaluation	For each risk, the team evaluates its likely impact. - Impact is high if the project schedule impact would be high. - Risks may also have medium or low schedule impact. - Note the impact evaluation. Use a flip chart or white board.
	Likelihood Evaluation	For each risk, the team judges its likelihood. Likelihood is also measured as high, medium, or low.
	Assign Risks	For the high and medium priority risks (i.e., high-high, high-medium, medium-high, or medium-medium), the team - assigns a member to track the risk - sets a date by which mitigation action must be taken - documents the risk, responsibility, and flag date on form ITL
4	Risk Mitigation	For the high and medium priority risks, identify those that are near-term. - Determine an effective mitigation plan. - Recommend actions to reduce or eliminate risk impact.
5	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager

Exit Criteria	- Launch meeting 7 activities have been completed. - All risks and issues are documented (form ITL). - The high-priority risks have mitigation plans. - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manger has copies of all meeting products.

TSP Launch Meeting 8 - Script LAU8

Purpose	To guide the team in preparing for the management meeting (LAU9)

Entry Criteria	- All participants are present (TSP coach, team members, team leader).
	- All team members have copies of
	  - personal task and schedule spreadsheets
	  - team task and schedule spreadsheets
	  - project goals and role assignments
	  - risk evaluation, assessments, and mitigation plans
	- Forms: ITL, MTG, PIP
	- Guideline: Management Briefing Guideline
	- Specifications: NOTEBOOK and STATUS

General	- In the management meeting (meeting 9), the team will
	  - review the launch process and launch products
	  - review the project plan and any questions or issues with this plan
	  - demonstrate to management that they have made a thoughtful, realistic, and complete plan.
	- Meeting 8 generally takes 1 to 2 hours, depending on team size, project status, product complexity, and the team's TSP experience. Additional time is needed to prepare materials for the management meeting (meeting 9).

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Meeting Overview	The TSP coach reviews the objectives and procedure for the meeting, and describes the example contents of the management presentation.

3	Planning for the Management Meeting	- The team leader reviews each agenda item for the management meeting (guideline Management Briefing and script LAU9).
		  - discusses the material to be covered
		  - decides what to present and who will present it
		  - assigns the preparation work to one or more team members
		- The team leader recommends what to present, but the team should be in agreement.

4	Management Meeting Preparation	The team leader summarizes - the work to be done - who will produce each item - the times when the items will be completed - who will present each item
5	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager

Exit Criteria	- Launch meeting 8 activities have been completed. - The management meeting topics were decided and the preparation work planned. - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manger has copies of all meeting products.

TSP Launch Meeting 9 - Script LAU9

Purpose	To guide the team through the final launch management meeting
Entry Criteria	- All participants are present (TSP coach, team members, team leader, management and marketing representatives). - The management briefing guidelines were reviewed before the meeting. - Copies of the launch products and team presentation are available. - Forms: ITL, MTG, PIP

General	- In the management meeting, the team reviews with management their project plan and any questions or issues on the plan.
	- If management asks the team to modify or provide an alternate plan, the team needs to understand
	  - the desired plan changes
	  - what resource or work content changes to plan
	- Under no conditions should the team agree to a new schedule or plan without taking time to study and replan the work.
	- Meeting 9 generally takes 1 to 2 hours, depending on team size, project status, product complexity, and the team's TSP experience.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Agenda and Objectives	The team leader reviews the meeting agenda and objectives.
3	Overview of Work Done	The team leader or a team member hands out copies of the launch products, reviews the launch process, and describes how the plan was produced.
4	Team Goal and Plan Comparison	The team leader or a team member summarizes the project goals. - management's stated and implied goals - a summary of the team's plan and goals - how the team's plan and goals compares with management's goals
5	Alternate Team Plan	If an alternate plan was prepared, the team leader or a team member distributes and reviews the alternate plan and the expected impact.
6	Risks	The team leader or a team member reviews each key project risk. - summarizes the risk's likelihood and schedule impact - discusses mitigation recommendations for high-impact risks
7	Discussion	The team leader asks for any questions and closes the meeting.
8	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager

Exit Criteria	- Management agrees with the team plan or resolution actions identified and responsibilities assigned. - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manger has copies of all meeting products.

TSP Launch Postmortem Meeting - Script LAUPM

Purpose	To guide the team through the launch postmortem

Entry Criteria	- All participants are present (TSP coach, team members, team leader).
	- Team members' personal task and schedule templates are available.
	- The planning manager has produced copies for the team of the
	  - overall team task and schedule plan
	  - team plan for the next phase
	- Forms: ITL, MTG, PIP
	- Specification: NOTEBOOK

General	Timing - The launch postmortem meeting is held after meeting 9 on day 4, or at the end of day 3 right after meeting 8. - The PM generally takes about 1 hour, depending on team size, project status, product complexity, and the team's TSP experience.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Meeting Overview	The TSP coach reviews the work to be done in this meeting and the products to be produced.
3	Launch Postmortem	The planning manager reviews the launch data to ensure that - all required launch data are gathered and recorded - data are properly entered in the appropriate project forms and databases - responsibility is assigned for preparing the launch materials for entry in the project notebook (specification NOTEBOOK)
4	Prepare PIPs	The TSP coach leads the team through a process evaluation. - identify launch process problems or inconveniences - suggest process improvements and complete PIPs for these suggestions
5	Launch Evaluation	- The team and team leader complete the Launch Participant Feedback forms and submit a copy of these forms to the SEI. - The TSP coach completes the TSP Coach Feedback form and submits a copy of this form to the SEI.
6	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees and gives the completed form MTG to the planning manager

Exit Criteria	- Launch postmortem activities have been completed. - The management presentation has been added to the project notebook. - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manger has copies of all meeting products.

TSP General Meeting Process - Script MTG

Purpose	Use this script as a guide in planning and conducting meetings; it will help you hold useful meetings in a minimum time.
Entry Criteria	- You need a meeting and know who should attend. - Form: MTG - Specification: NOTEBOOK
General	Meetings can be held to - resolve issues or make decisions - inform or educate - produce work products; i.e., a design, plan, process, or standard

Step	Activities	Description
1	Meeting Preparation	In planning a meeting, complete form MTG. - What is the meeting's purpose? Write it down. - What outcome do you want? Be specific. - Who should attend the meeting and why? - What topics should be covered? - Who should present what and for how long? - Are discussion periods needed and for how long? - Are decisions needed, on what, and by whom? - Set the agenda topics, times, and speakers. - Are actions desired after the meeting? - List the data needed: responsibilities, dates, resources, etc. - After ensuring that the key attendees can attend, schedule the meeting. - Check facilities: setup, equipment, supplies, refreshments, etc. - Provide each attendee a completed copy of form MTG.
2	Meeting Roles	Select the meeting roles (specification Meeting Roles). - The chairperson leads the meeting. - The timekeeper keeps the meeting on schedule. - The recorder notes meeting decisions and actions and helps to write the meeting report.
3	Meeting Introduction	- Review the meeting purpose and agenda. - Check for any changes in the purpose or agenda.
4	The Meeting	During the meeting, all attendees should do the following. - Follow the agenda. - When important topics are raised that are not on the current subject, defer them to later in the agenda or to another meeting. Record the deferred topic on a visible chart, white board, etc. - Be specific on each decision: what was decided and by whom. - Be clear on each planned action: who will do what and when. - Give everyone an opportunity to contribute and speak up.
5	Meeting Conclusion	- The recorder reviews and confirms the decisions and actions. - Briefly review the meeting process for suggested improvements.
6	Meeting Report	Promptly issue the meeting report (form MTG). The recorder - lists the purpose, attendees, and results - describes decisions made, and by whom - documents pending actions: what, when, and by whom - verifies with the attendees that the report is correct and complete

Exit Criteria	The meeting was held and the meeting report was issued and filed in the project notebook.

TSP Postmortem - Script PM

Purpose	- To gather, analyze, and record phase or cycle and project data - To analyze project performance against plans and goals - To identify potential areas for improvement and submit PIPs
Entry Criteria	- All planned work for the phase or cycle has been completed or near completion. - All project and process data available. - Forms: all TSP forms - Specification: NOTEBOOK Note: to meet aggressive schedules, the next phase or cycle may be relaunched before the postmortem for the current phase or cycle.

Step	Activities	Description
1	Meeting Roles	- The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Baseline Evaluation	The support manager leads the team in evaluating the adequacy of the configuration management process, system baseline, and development environment.
3	Plan Evaluation	The planning manager leads the evaluation of team performance. - actual versus plan for size, resource, and schedule estimates
4	Quality Performance	The quality manager leads the evaluation of team performance. - quality of the products produced (script PMTD) - team performance versus the goals and quality plan
5	Planning Data	Provide updated planning data. - size, resource, and productivity data - defect, yield, PDF, ratio, rate data, and component quality criteria
6	Process Evaluation	Where improvement is needed, - identify process, training, tool, support, or management actions needed - submit PIPs as required
7	Stakeholder Survey (optional)	For the final project postmortem, obtain stakeholder evaluations. - Standardize on one set of opinion surveys for all projects. - Request suggestions for improvement. - Prepare recommendations on areas requiring future action.
8	Goals Evaluation	The team leader leads the team in determining and documenting performance against team goals (form GOAL).

9	Final Project Report Preparation	- At the end of each project phase or cycle, it is important that the team decide who will prepare the final report materials for this phase or cycle.
		  - This report should provide the information subsequent projects will need to make accurate plans.
		- The team should decide
		  - what the report will contain (see SUMMARY specification)
		  - who will obtain and document the material
		- At a minimum the report should conform to the PM Report Specification.

Exit Criteria	- The project has completed most, if not all, tasks for the current phase or cycle. - All project data are entered in the process database. - All PIPs have been identified, prioritized, and submitted. - Completed plan summary forms are available for all completed project phases or cycles (SUMP, SUMQ). - Completed meeting report (form MTG) - The final project report has been completed, submitted, and filed in the project notebook (see SUMMARY specification).

TSP Postmortem Test Defects - Script PMTD

Purpose	To decide what actions to take to ensure that in the future - similar defects are found and fixed before release to test - actions are devised to prevent a repetition of similar defects
Entry Criteria	- Data on defects found during build, integration, or system testing. - Form: MTG - Specification: NOTEBOOK
General	- When testing finds defects in a system, they are generally clustered in a relatively small percentage of the code. - Re-inspecting defect-prone components and fixes can save substantial test time and produce high-quality products.

Step	Activities	Description
1	Process Analysis	For each defect found during build, integration, or system testing, analyze the defect and process data to determine - what process steps missed finding the defect - the process step in which the defect was injected
2	Defect Meeting	The project leader - describes the meeting's purpose and the decisions to be made - determines who will fill the meeting roles (script MTG)

		- The team reviews the available process data to decide
		  - what mistakes or oversights permitted the defect to escape detection in each step that missed it
		  - the actions to be taken to prevent this happening again (PIP)
		- The team also determines what caused the defect and, where they can, decides on prevention actions (PIP).

		The recorder and timekeeper complete the meeting report, including - defect, product, and process analysis results - who, what, and when of each decision (MTG form)

Exit Criteria	- The defect meeting report, including all component, defect, and process data, has been entered in MTG form and the project notebook (specification NOTEBOOK). - Prevention actions have been identified, recorded (form PIP), prioritized, and submitted.

TSP Team Relaunch - Script REL

Purpose	To guide integrated teams in relaunching a software-intensive project
Entry Criteria	- The relaunch preparation work has been completed (PREPR, PREPT). - The team leader has prepared the project status report. - The team leader and team members are available for the entire relaunch. - A certified TSP coach is on hand to lead the relaunch. - The updated project notebook is available. - Note: to meet aggressive schedules, the next phase may be relaunched before the postmortem for the current phase.
General	If there are significant project changes, follow script LAU. Timing: Day 1 | 2 | 3; Meeting 1, 2, and 3 | 4 and 5 | 6, 7, and PM Notional schedule can be compressed or extended to meet scope of relaunch.

Step	Activities	Description
1	Project Status and Objectives	Hold team relaunch meeting 1 (script REL1). - Review the relaunch process and introduce new team members. - Review the project status to date. - Understand management's goals for the project.
2	Team Goals and Roles	Hold team relaunch meeting 2 (script LAU2). - Update and document the team's goals. - Allocate team roles among team members.
3	Project Strategy and Support	Hold team relaunch meeting 3 (script LAU3). - Update the system conceptual design, and, if needed, a fix list. - Update the development strategy and products to be produced. - Review and update the development process to be used. - Review and update the process and support plans.
4	Overall Plan	Hold team relaunch meeting 4 (script LAU4). - Develop or update the size estimates and overall plan.
5	Quality Plan	Hold team launch meeting 5 (script LAU5). - Update the quality plan.
6	Balanced Plan	Hold team relaunch meeting 6. (script LAU6.). - Allocate work to team members. - Produce bottom-up next-phase plans for each team member. - Produce a balanced next-phase plan for the team and each team member.
7	Project Risk Analysis	Hold team relaunch meeting 7 (script LAU7). - Identify and evaluate any new project risks. - Define risk assessment checkpoints and responsibilities. - Propose mitigation actions for near-term, high-impact risks.
8	Launch Report Preparation	There is no relaunch meeting 8.
9	Management Review	There is no relaunch meeting 9.
PM	Launch Postmortem	Hold team launch postmortem meeting (script LAUPM). - Gather launch data and produce a launch report. - Put the launch report in the project notebook. - Assess the launch process and prepare PIPs.

Exit Criteria	- The relaunch is completed. - Team roles, goals, processes, responsibilities, and plans are defined. - The relaunch data are in the project notebook (specification NOTEBOOK).

TSP Relaunch Meeting 1 - Script REL1

Purpose	To review project status and update the team on any customer requirements or management goal changes
Entry Criteria	- The team and team leader are prepared. - All participants are present (TSP coach, team members, team leader). - Forms: MTG, ITL, PIP
General	Meeting 1 generally takes from 1 to 2 hours.

Step	Activities	Description
1	Meeting Roles	Select the meeting roles (specification ROLE). - The TSP coach leads the meeting (script MTG). - The timekeeper tracks time and keeps the meeting on schedule. - The recorder notes meeting decisions and actions and writes the meeting report (form MTG).
2	Relaunch Overview	The TSP coach - reviews the relaunch process and the products to be produced - discusses the work to be done in this meeting
3	New Members	The team leader introduces new team members.
4	Project Status	The team leader presents a full project status report to the team and TSP coach (specification STATUS). - schedule status versus plan - actual earned value and task hour performance versus plan - actual size and time data versus plan - quality performance versus plan
5	Goal Performance	- The team leader reviews the team's quality, schedule, and cost performance versus goals. - Where performance fell short, the team discusses recovery options. - Where performance met or exceeded goals, the team discusses improvement opportunities.
6	Management Update	The team leader describes any changes in management's goals for the project. - reasons for any goal changes - how management will measure goal attainment - answers questions on the goals
7	Launch Meeting Documentation	The recorder completes form MTG. - lists the attendees and the time spent by agenda item - describes decisions made and by whom - documents pending actions: what, when, and by whom - verifies the meeting report with the meeting attendees - saves the completed form MTG to give to the planning manager in launch meeting 2

Exit Criteria	- Relaunch meeting 1 activities have been completed. - The team fully understands project status and any changes in management's goals. - All of the team's questions have been answered, or actions are planned to get the answers for the team. - All issues have been recorded (form ITL). - All process improvement suggestions have been recorded (form PIP). - The meeting report has been completed (form MTG and attachments). - The planning manager has copies of all meeting products.

TSP Requirements - Script REQ

Purpose	To produce a complete, valid, and accurate system requirements specification (SRS) and (hardware-)software engineering requirement spec (ERS).
Entry Criteria	- Completed requirements-phase launch, a detailed next-phase plan, and a current list of project risks and exposures - Product requirements statement or request for proposal - Forms: INS, ITL, LOGD, LOGT, MTG, PIP, SUMP, SUMQ - Specification: NOTEBOOK

Step	Activities	Description
1	Market Requirements Study	Study the requirements to identify errors and omissions and clarify questions. - Produce an elicitation plan and detailed questions. - Double-check correctness of **ALL** requirements assumptions.
2	Requirements Elicitation	- Hold customer/marketing elicitation meeting(s) (script MTG). - Document each elicitation meeting and its results (form MTG).
3	Requirements Prototypes	- Prototype and/or simulate all important specification questions and review results with systems, marketing and the customer. - Where needed, use prototypes to obtain data for validating design, planning, resource, or size assumptions.

4	System Requirements Specification	- Produce or update the system requirements specification (SRS).
		  - normal, abnormal, and recovery behavior and performance
		  - operational and user interfaces
		  - documentation, training, distribution, installation, maintenance, and support requirements
		- For each SRS item, reference its source in the market requirements.

5	User Manual Draft	Produce a detailed user manual outline and initial draft or update existing user manual.
6	System Test Plan	Define tests to verify the system and products to the specifications. - normal and abnormal interfaces, functions, and performance - security, safety, failure, and recovery conditions Establish and maintain bi-directional traceability between test plan and SRS.
7	SRS Inspection	Inspect the SRS, user manual draft, and system test plan (script INS). - Record size, time, and defect data (form INS). - Include customer/marketing/systems personnel. - Clarify and/or resolve all issues and update the SRS.
8	Engineering Requirements Specification	Produce or update the hardware/software engineering requirements specification (ERS). - principal (hardware-)software functions and performance - (hardware-)software-system interfaces - For each ERS item, reference its source in the SRS. - Establish and maintain bi-directional traceability between the ERS and SRS.
9	ERS Inspection	- Inspect the ERS (script INS). - Record size, time, and defect data (form INS). - Include hardware, software, and systems personnel. - Where appropriate, include customer personnel. - Clarify and/or resolve all issues and update the ERS.
10	SRS Baseline	Submit the SRS, ERS, and system test plan to the CCB for baselining.
11	Postmortem	Follow script PM for the phase postmortem, and submit PIPs.

Exit Criteria	- Inspected, completed SRS, ERS, user manual draft, and system test plan - Forms INS, ITL, LOGD, LOGT, MTG, PIP, SUMP, SUMQ - Requirements plan, actual, and earned-value data recorded and entered in the project notebook (specification NOTEBOOK)

TSP Management and Customer Status Meeting - STATUS

Purpose	- To guide in planning and conducting the periodic management and customer status meetings - The purpose of these meetings is to keep management and the customer informed on project progress, status, and risks. - By being informed, management and/or the customer can help prevent problems and better resolve those problems that cannot be prevented.
Entry Criteria	- Management meeting topics agreed to in the weekly team meeting - Customer meeting topics agreed to in the management meeting - Specification: STATUS

General	- Timing
	  - These meetings are held frequently: weekly, biweekly, or monthly.
	  - The choice should be left to management and the customer.
	- Meeting preparation
	  - These meetings should follow a standard agenda.
	  - Produce and distribute form MTG to all attendees in advance.
	- Meeting roles
	  - The team leader typically conducts the meetings (script MTG).
	  - Unless other team members attend to handle them, the team leader also handles the timekeeper and recorder roles.
	- Customer meeting
	  - The customer meeting can follow the same agenda with changes.
	- Meeting report
	  - The team leader prepares form MTG (specification STATUS).
	  - Record any risks requiring attention and their likely consequences.
	  - Record any decisions, planned actions, or other key information.
	  - Include a copy of the team's weekly status data.

Step	Activities	Description
1	Meeting Introduction	The team leader opens the meeting by - summarizing the topics and key issues to be covered - stating all of the key issues (no late surprises) - reviewing the meeting purpose and agenda - asking for suggested changes or additions
2	Project Status	The team leader or planning manager summarizes team status (see STATUS). - actual versus planned team earned value and hours spent - current earned value projection to complete - the planned recovery actions if delays are indicated
3	Risks and Actions	The team leader - lists previously agreed to actions and their status - reviews the status of project risks - summarizes the status of previously identified risks - requests management help for out-of-control risks - discusses any newly identified risks and likely consequences
4	Other Agenda Items	Any other agenda items are covered.
5	Meeting Conclusion	The team leader - restates and verifies each meeting decision - confirms the who, what, and when for each planned action - reviews customer meeting topics and asks for agreement - asks for suggested meeting process improvements

Exit Criteria	Meetings held and meeting reports distributed to all attendees and filed in the project NOTEBOOK

TSP Release Test - Script TEST

Purpose	- To integrate product components into a working system - To identify inter-component and system defects and return defective components to the developers for rework - While occasional defects may be found, integration and system test are not intended to be defect-removal activities.
Entry Criteria	- Detailed next-phase or cycle plan and fix prerequisites and co-requisites - A current list of project risks and exposures - All components and fixes inspected, unit tested, and baselined - Development, inspection, and unit test data available - Forms: DEFECT, ITL, LOGT, PIP, SUMP, SUMQ, TestLog
General	

Step	Activities	Description
1	Build	- Using script TEST1, produce a detailed build plan. - Review the build plan and make needed corrections. - Review component submissions for quality and completeness. - Return defective products or fixes to development. - Following the plan, build the product. - Check the build for completeness. - Regression test the built product and record data in TestLog. - Release the build to integration and system test. - When defects are found during build, follow script TESTD. - Repeat the build process until system testing is complete. - Build as often as required to ensure that the implementation and test engineers are working with a current-level product. - With many defect fixes or changes, daily builds are required.
2	Integration	- Using script TEST2, produce a detailed integration plan. - Review the integration plan and make needed corrections. - Review component and fix submissions for quality. - Return defective products or fixes to development. - Following the plan, integrate the product. - Check the integration for completeness. - Regression test the integrated product, record data in TestLog. - Release the integrated product to development and system test. - When defects are found in integration, follow script TESTD. - Continue integration until all components are integrated.
3	System Test	- Using script TEST3, produce a detailed system test plan. - Review the system test plan and make needed corrections. - Review test submissions for quality and completeness. - Return defective products or fixes to integration. - Following the plan, system test product, record data in TestLog. - Release the tested system for customer acceptance and use. - When defects are found in system test, follow script TESTD. - Continue system testing until the product is fully integrated and meets the quality criteria.

Exit Criteria	- All components and fixes pass all integration and system tests. - Forms DEFECT, ITL, LOGT, PIP, SUMP, SUMQ, TestLog - Test plan, actual, and earned-value data recorded and entered in project notebook (specification NOTEBOOK)

TSP Product Build - Script TEST1

Purpose	- To integrate components and fixes into a working system - To return defective components or fixes for rework - While occasional defects may be found, product build is not intended as a defect-removal phase.
Entry Criteria	- Detailed next-phase or cycle plan, which includes activities described below, and a list of project risks and exposures - All submitted components inspected, unit tested, and baselined - Development, inspection, and unit test data available - Forms: DEFECT, ITL, LOGT, SUMP, SUMQ, TestLog
General	

Step	Activities	Description
1	Build Development	- Develop required procedures and support facilities. - Produce the initial regression test package. - Using any previous build, integration, and system test cases, update the regression package for subsequent builds.
2	Build Acceptance	- Review component and fix submissions for quality. - Check all components and fixes for dependency requirements. - Review the process data to verify that all component and fix development followed the team process. - Return unqualified components and fixes for rework.
3	Product Build	- Check the proposed build for consistency and completeness. - Recompile all accepted new components and fixes. - Link all components and fixes into a completed system.
4	Build Verify	Review the completed build to ensure that - all planned components and fixes are included - all prerequisites and corequisites are satisfied - the system will perform basic functions

5	Regression Test	- Run the regression tests and record test data in the TestLog.
		  - If defects are found, determine if they are in the components and fixes, or in the build or testing processes.
		  - If in the testing or build processes, correct, rebuild, and retest.
		  - If in the components or fixes, follow script TESTD.
		- When the regression tests are satisfactorily completed, release the build for integration, system test, and use by development.

6	Build Release	- Produce the build release inventory with component, fix, and function content, fix numbers, and change locations.
		- Update the configuration management system.
		  - complete build release package
		  - component and fix control numbers and file location data
		  - data on all regression test runs and their results

7	Test Data Summary	Complete DEFECT, SUMP, and SUMQ forms.

Exit Criteria	- All components and fixes are incorporated in the system build. - The build correctly runs all regression tests. - The completed build release is under configuration control. - Completed DEFECT, ITL, LOGT, SUMP, SUMQ, TestLog - Test plan, actual, and earned-value data are recorded and entered in project notebook (specification NOTEBOOK).

TSP Integration - Script TEST2

Purpose	- To integrate components and fixes into a working system - To ensure that only accepted and high-quality components and fixes are integrated into the system - To identify inter-component defects and return defective components for reinspection and rebuild - While occasional defects may be found, integration is intended to check system interfaces, not to find and fix defects.
Entry Criteria	- Detailed next-phase or cycle plan, which includes activities described below, and a list of project risks and exposures - A complete, documented, and regression tested build package - Forms: DEFECT, ITL, LOGT, SUMP, SUMQ, TestLog

Step	Activities	Description
1	Integration Acceptance	- Check the build package and return it if incomplete. - Review the testing data against the component and fix criteria. - Return non-complying components and fixes.
2	Integration Plan	- Determine the interfaces to be tested and a test strategy. - Take advantage of available test materials from all test phases. - Estimate and plan the integration development effort. - The plan should consider the integration process, integration resources, number of integration cycles, and their schedule.
3	Integration Plan Review	Review the integration plan to ensure that all - interfaces are tested under normal and error conditions - defects found in prior integration cycles are retested
4	Integration Development	- Produce the integration test package. - Develop required test data, procedures, and support materials.
5	Test Package Verify	Check the integration test package to ensure that - tests are properly documented and (if possible) self-checking - all new code has been reviewed, inspected, and tested
6	Integration Testing	- Follow the test plan and record test data in the TestLog. - For every defect, complete a DEFECT form and call for a test defect review (script TESTD). - Suspend integration of the defective components and fixes until the review is completed.
7	Integration Review	Review the integration process to ensure that - all planned products, features, and fixes are included - any defect fixes have been retested - the test data are complete and properly documented - DEFECT forms are completed for all defects found

8	Integration Release	- Update the build package release inventory for any changes.
		  - fix numbers and change locations
		- Update the configuration management system.
		  - complete integration release package
		  - fix control numbers and change locations
		  - data on all integration and regression test runs and results

9	Test Data Summary	Complete DEFECT, SUMP, and SUMQ forms.

Exit Criteria	- All components and fixes incorporated in the system - System correctly runs all integration tests - Completed integration release under configuration control - Completed DEFECT, ITL, LOGT, SUMP, SUMQ, TestLog - Test plan, actual, and earned-value data recorded and entered in project notebook (specification NOTEBOOK)

TSP System Test - Script TEST3

Purpose	- To stress test the system, verify that it is usable, and that it works properly under all normal and abnormal conditions - To ensure that high-quality components and fixes are released - To identify and return defective components and fixes - While defects may be found, system test is intended to usability and stress test the system, not to find and fix defects.
Entry Criteria	- A built and integrated system released from integration - Forms: DEFECT, ITL, LOGT, SUMP, SUMQ, TestLog
General	

Step	Activities	Description
1	System Test Acceptance	- Check the integration package and return it if incomplete. - Review the testing data against the component and fix criteria. - Return non-complying components.
2	System Test Plan	- Determine the conditions to be tested and a test strategy. - Take advantage of available test materials from all test phases. - Estimate and plan the system test development effort. - The plan should consider the system test process, resources, number of system test cycles, and their schedule.
3	System Test Plan Review	Review the system test plan to ensure that all - system conditions are tested in normal and stress conditions - installation, conversion, operating, recovery, and performance capabilities are tested for correctness and usability - defects found in prior system test cycles are retested
4	System Test Development	- Produce the system test package. - Develop required test data, procedures, and support materials.
5	Test Package Verify	Check the system test package to ensure that - tests are properly documented and (if possible) self checking - all new code has been reviewed, inspected, and tested
6	System Testing	- Follow the test plan and record test data in the TestLog. - For every defect, complete a DEFECT form and call for a test defect review (script TESTD). - Suspend system test of the defective components and fixes until the review is completed.
7	System Test Review	Review the system test process to ensure that - all planned products, features, and fixes are included - any prior defect fixes have been retested - the test data are complete and properly documented
8	System Release	Update the system release inventory for any changes. - fix numbers and change locations Update the configuration management system. - complete system release package - fix control numbers and change locations - data on all system test runs and results
9	Test Data Summary	Complete DEFECT, SUMP, and SUMQ forms.

Exit Criteria	- All components and fixes are incorporated in the tested system. - The system correctly runs all system usability and stress tests. - The completed system release is under configuration control. - Completed DEFECT, ITL, LOGT, SUMP, SUMQ, TestLog - Test plan, actual, and earned-value data are recorded and entered in the project notebook (specification NOTEBOOK).

TSP Test Defect Handling - Script TESTD

Purpose	- To review every defect found in build, integration, or system test and decide whether
	  - defects are symptoms of quality problems and the defective components or fixes should be returned to development
	  - the defects that are not symptoms of quality problems, should be fixed by development, and test should continue

Entry Criteria	- One or more defects have been found during build, integration, or system testing. - Form: MTG - Specification: NOTEBOOK
General	- When testing finds defects in a system, they are generally clustered in a relatively small percentage of the code. - Re-inspecting defect-prone components and fixes can save substantial test time and produce high-quality products.

Step	Activities	Description
1	Defect Data Analysis	Analyze the defect and process data on each defect to determine - the defective module, component, or fix - when the defect was injected - the phases that missed finding the defect
2	Product Analysis	- Update the component defect-density map for all test defects. - Analyze the component or fix defect-density map to identify defect-prone modules, components, or fixes.
3	Address Defects	The project leader - describes the meeting's purpose and the decisions to be made - determines who will fill the meeting roles (script MTG)
		The team reviews the available defect data to decide if components or fixes are defective and should be returned to development. - remedial actions to be taken - criteria for resubmitting each component or fix to test
		The reporter and timekeeper complete the meeting report, including - defect and product analysis results - who, what, and when of each decision (MTG form)
4	Product Resubmission	When previously rejected products are resubmitted, the quality and process managers verify that the actions meet the team's criteria.

Exit Criteria	- The defective products are reworked and resubmitted to test. - The defect meeting report, including all component defect data, has been entered in MTG form and the project notebook (specification NOTEBOOK).

TSP Weekly Team Meeting - Script WEEK

Purpose	- To plan and conduct the weekly team meetings - These meetings are held to ensure that all team members understand current project status and know what to do next.

Entry Criteria	- All team members have provided the planning manager with
	  - updated task and schedule plans
	  - development, role, and risk status and plans
	- The planning manager has updated the project plan
	- Forms: MTG, WEEK
	- Specifications: NOTEBOOK, ROLE, STATUS

General	- The meetings are scheduled at a standard time every week. - All team members should regularly attend.

Step	Activities	Description
1	Meeting Roles	- The team leader typically leads the meeting (script MTG).
2	Meeting Agenda	- Review the meeting purpose and agenda and select the roles. - Check for any changes in the purpose or agenda.
3	Manager's Report	The team leader opens the meeting with a brief summary of any new developments or issues.
4	Role Report	The team members review their assigned role responsibilities and the status against each (specification ROLE).

5	Project Status	- Each team member reviews his or her progress and status.
		  - actual versus planned tasks completed in the prior week
		  - actual versus planned earned value and hours spent
		- The planning manager summarizes the team progress and status.
		  - actual versus planned team earned value and hours spent
		  - current earned value projection to complete

6	Goal and Risk Reports	At a minimum, goals and risks should be discussed biweekly on an alternating basis. - Goal reporting: Each responsible team member reports on status against team goals. Risk Reporting: The team members review status and changes in their assigned risks since the last report, and highlight any impending flag dates and required actions.
7	Next Week Plans	- Each team member summarizes tasks planned for the next week and any special dependencies. - The team leader reviews expected issues or actions. - The team sets task, hour, and EV goals for the next week.
8	Meeting Wrap-up	The team leader checks that all needed items have been covered. - All engineers have reported their project status. - All risks and roles have been reported on. - Any newly identified risks have been evaluated and assigned. - Any other agenda topics are covered.
9	Meeting Conclusion	The team leader asks if there are any further comments. - confirms the meeting decisions and planned actions - agrees on topics for the management and customer meetings (specification STATUS) - asks for any suggested improvements in the meeting process
10	Meeting Report	The recorder and team leader produce the meeting report (form MTG). - planned versus actual hours and earned value - risks requiring management attention and why - any decisions, planned actions, or other key information

Exit Criteria	The completed WEEK and MTG forms are filed in the project notebook.

Los pasos 5 y 6 fueron intercambiados

