

Build the Plan

1. Analyze the product.

What to Analyze

- Users (who they are and what they do)
- Operations (what it's used for)
- Product Structure (code, files, etc.)
- Product Functions (what it does)
- Product Data (input, output, states, etc.)
- Platforms (external hardware and software)

Ways to Analyze

- Perform product/prototype walkthrough.
- Review product and project documentation.
- Interview designers and users.
- Compare w/similar products.

Possible Work Products

- Product coverage outline
- Annotated specifications
- Product Issue list

Status Check

- Do designers approve of the product coverage outline?
 - Do designers think you understand the product?
 - Can you visualize the product and predict behavior?
 - Are you able to produce test data (input and results)?
 - Can you configure and operate the product?
 - Do you understand how the product will be used?
 - Are you aware of gaps or inconsistencies in the design?
 - Do you have remaining questions regarding the product?
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2. Analyze product risk.

What to Analyze

- Threats
- Product vulnerabilities
- Failure modes
- Victim impact

Ways to Analyze

- Review requirements and specifications.
- Review problem occurrences.
- Interview designers and users.
- Review product against risk heuristics and quality criteria categories.
- Identify general fault/failure patterns.

Possible Work Products

- Component risk matrices
- Failure mode outline

Status Check

- Do the designers and users concur with the risk analysis?
- Will you be able to detect all significant kinds of problems, should they occur during testing?
- Do you know where to focus testing effort for maximum effectiveness?
- Can the designers do anything to make important problems easier to detect, or less likely to occur?
- How will you discover if your risk analysis is accurate?

A work in progress by James Bach (james@satisfice.com)

3. Design test strategies.

General Strategies

- Domain testing (including boundaries)
- User testing
- Stress testing
- Regression testing
- Sequence testing
- State testing
- Specification-based testing
- Structural testing (e.g. unit testing)

Ways to Plan

- Match strategies to risks and product areas.
- Visualize specific and practical strategies.
- Look for automation opportunities.
- Prototype test probes and harnesses.
- Don't overplan. Let testers use their brains.

Possible Work Products

- Itemized statement of each test strategy chosen and how it will be applied.
- Risk/task matrix.
- List of issues or challenges inherent in the chosen strategies.
- Advisory of poorly covered parts of the product.
- Test cases (if required)

Status Check

- Do designers concur with the test strategy?
- Has the strategy made use of every available resource and helper?
- Is the test strategy too generic—could it just as easily apply to any product?
- Will the strategy reveal all important problems?

4. Plan logistics.

Logistical Areas

- Test effort estimation and scheduling
- Testability engineering
- Test team staffing (right skills)
- Tester training and supervision
- Tester task assignments
- Product information gathering and management
- Project meetings, communication, and coordination
- Relations with all other project functions, including development
- Test platform acquisition and configuration

Possible Work Products

- Issues list
- Project risk analysis
- Responsibility matrix
- Test schedule
- Agreements and protocols

- Test tools and automation
- Stubbing and simulation needs
- Test suite management and maintenance
- Build and transmittal protocol
- Test cycle administration
- Problem reporting system and protocol
- Test status reporting protocol
- Code freeze and incremental testing
- Pressure management in end game
- Sign-off protocol
- Evaluation of test effectiveness

Status Check

- Do the logistics of the project support the test strategy?
- Are there any problems that block testing?
- Are the logistics and strategy adaptable in the face of foreseeable problems?
- Can you start testing now and sort out the rest of the issues later?

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5. Share the plan.

Ways to Share

- Engage designers and stakeholders in the test planning process.
- Actively solicit opinions about the test plan.
- Do everything possible to help the developers succeed.
- Help the developers understand how what they do impacts testing.
- Talk to technical writers and technical support people about sharing quality information.
- Get designers and developers to review and approve all reference materials.
- Record and reinforce agreements.
- Get people to review the plan in pieces.
- Improve reviewability by minimizing unnecessary text in test plan documents.

Goals

- Common understanding of the test process.
- Common commitment to the test process.
- Reasonable participation in the test process.
- Management has reasonable expectations about the test process.

Status Check

- Is the project team paying attention to the test plan?
- Does the project team, especially first line management, understand the role of the test team?
- Does the project team feel that the test team has the best interests of the project at heart?
- Is there an adversarial or constructive relationship between the test team and the rest of the project?
- Does any member of the project team feel that the testers are "off on a tangent" rather than focused on important testing tasks?