### Test Specification Checklist

The Test Specification template (IDA-MS-TS) provides guidance and template material for use by IDA projects in producing project-specific test specifications. This checklist summarises the recommended structure and contents of documents based on the template.

<table>
<thead>
<tr>
<th>Sect No</th>
<th>Section Title</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Provide an overview of the entire document and a description of the scope and nature of the system from the IDA viewpoint</td>
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<td></td>
<td></td>
<td>• Purpose (1.1) – describe the purpose of the document and its intended readership</td>
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<td>• Scope of testing (1.2) – summarise the system features to be tested</td>
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<td>• Definitions, acronyms and abbreviations (1.3) – include or refer to an external document</td>
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<td>• References (1.4) – list all applicable and reference documents</td>
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<td>• Overview (1.5) – provide an overview of the document by section</td>
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<tr>
<td>2</td>
<td>Test planning</td>
<td>Describe detailed plans for the tests in the context of global plans described in the Review and Test Plan (RTP)</td>
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<td>• Test items (2.1) – identify test items such as test data, test harnesses and reporting tools</td>
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<td></td>
<td></td>
<td>• Features to be tested (2.2) – identify all features to be tested. Include precise but economical references to Requirements or Technical Design documents</td>
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<td>• Feature not to be tested (2.3) – identify all features not to be tested, and explain why</td>
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<td>• Approach (2.4) – specify the major activities, methods and tools that are to be used to test the designated features. Include sufficient detail to identify major testing tasks and estimate resources and time needed for tests</td>
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<td>• Item pass/fail criteria (2.5) – specify criteria to be used to decide whether each item has passed or failed. Preferably specify a scheme (consistent with other documents) for grading failures and deciding whether the system under test has passed or failed</td>
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<td>• Suspension criteria and resumption requirements (2.6) – specify criteria used to suspend all, or part of, the testing activities on the test items</td>
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<td>• testing activities to be repeated when testing is resumed</td>
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</tbody>
</table>
- Test deliverables (2.7) – identify
  - items that must be delivered before testing begins, including: test plan; test designs; test cases; test procedures; test input data and environment; test tools
  - items that must be delivered when testing is finished, including: test reports; test output data; problem reports
- Testing tasks (2.8) – identify tasks necessary to prepare for and perform testing. Include inter-task dependencies. Identify special skills required
- Environmental needs (2.9) – specify necessary and desired properties of the test environment
- Responsibilities (2.10) – identify people responsible for managing, designing, preparing, executing, witnessing and checking tests
- Staff and training needs (2.11)
- Schedule (2.12) – include milestones and all item delivery events. (Plan in contingency, where appropriate)
- Risks and contingencies (2.13) – identify high-risk assumptions, and associated impacts and contingencies

### 3 Test designs

Each test design should be uniquely identified. Each will result in one or more test cases. For each test design, specify
- Features to be tested (3.1.1) – test items and features. Refer to documented requirements and specifications
- Approach refinements (3.1.2) – application of methods described in the RTP. Include rationale for test-case selection, and packaging of test cases into procedures. Identify method for analysing test results, and tools employed
- Test case identification (3.1.3) – list of test cases associated with the design and their objectives
- Feature pass/fail criteria (3.1.4)

### 4 Test case specification

Test cases specify the inputs, predicted results and execution conditions. Each test case should be uniquely identified, and should aim to evaluate the operation of a key element or function of the system. For each test case, identify or specify
- Test items (4.1.1) – refer to other documents as necessary
- Input specifications (4.1.2) – inputs required to execute the test case
- Output specification (4.1.3) – outputs expected from executing the test case relevant to pass or fail criteria
- Environmental needs (4.1.4)
  - characteristics and configurations of required hardware
  - required system and application software
  - other special equipment or specially-trained personnel
- Special procedural requirements (4.1.5) – special constraints on test procedures that execute this test case
- Inter-case dependencies (4.1.6) – list test cases that must be executed before this test case
5 Test procedures

Test procedures correspond to one more test cases, and describe how to carry out the tests. Each test procedure should be uniquely identified. For each test procedure, identify or specify

- Purpose (5.1.1) – include references to each test case used by the procedure
- Special requirements (5.1.2) – special requirements for the execution of this procedure. State relevant test data files
- Procedure steps (5.1.3)
  - Log – method or format for logging test execution
  - Set up – sequence of actions to prepare for test execution
  - Start – actions to begin test execution
  - Actions – actions during test execution
  - Shut down – actions to suspend testing following unscheduled interruption
  - Restart – procedural restart points and associated actions
  - Stop – actions to bring testing to an orderly halt
  - Wrap up – actions to terminate testing
  - Contingencies – actions to deal with anomalous events that may occur during testing

6 Test reports

(This section may be extracted and produced as a separate document). The detail in each test report will depend on the level of testing. Each test report should be uniquely identified, and include

- Description (6.1.1) – identify the items being tested including their version numbers. The attributes of the environment in which testing was conducted should be recorded
- Activity and event entries (6.1.2) – record the start and end time of each activity or event, and one or more of
  - Execution description – describe test procedures executed and list people involved
  - Procedure results – record results observed. The type and location of any output should also be recorded. (It may be appropriate to replace this section by an annotated version of the test procedure)
  - Environmental information – record specific environmental conditions, particularly if they deviated from the nominal

Document control

Document control, signoff and change record