7. Technical review and audit application guidance for defense programs

7.1 General

For each technical review and audit contained in Clause 5 of this standard, this clause provides detailed, best-practice guidance for applying the detailed criteria of the corresponding portion of Clause 6 of this standard to various kinds of defense programs.

While the technical reviews and audits included in this standard all address the system that is the object of a particular acquirer-supplier agreement, there may be enabling systems with applicability to the requirements in the technical reviews. The supplier of the system under review may have no obligation under the associated acquirer-supplier agreement to ensure that any needed enabling systems are available and ready for use when required. Since the enabling systems will have their own life cycle, the responsibility for the development or acquisition of enabling systems should be clearly documented in the acquirer-supplier agreement for the system under review.

7.2 Alternative systems review (ASR) application guidance

The following is a set of observed good practices for consideration:

a) The AoA Report may not be complete for ASR, but the AoA itself should be complete for the technical review.

b) The high-level conceptual architectural description of the preferred materiel solution(s) should be communicated with artifacts that enable clear understanding by technical review team members that are not conversant with the standard artifacts produced within structures such as DoDAF or native formats of system modeling tools if employed.

c) The program risk assessment should address the relative risk(s) associated with the use of COTS/NDI versus a new design. Carefully consider whether COTS/NDI is a requirement or is satisfying a requirement specified by the logical architecture.

d) The program cost estimate should include planned investments for technology development to mature design and manufacturing technologies.

e) The proposed KPPs should address the complete performance required by the systems' intended operating environment, including net-centric and net-ready KPP requirements as appropriate.

f) Prototyping required by a given program should occur in the TMRR phase. Therefore, the ASR should identify critical technologies that will be prototyped.

g) The program manager should tailor the ASR to the technical scope and risk of the system, and address the ASR in the SEP.

h) In order to help ensure a comprehensive and balanced assessment of all ASR work products and proper recording of the activities and decisions, ASR participants should include the following, as applicable:
   1) Program management
   2) Systems engineering
   3) Software engineering
   4) Hardware engineering
   5) Domain specialists and specialty engineers
   6) Logistics
   7) Test and evaluation
   8) All certification authorities

9) System users
10) Cost estimating team
11) Legal counsel, if required
12) Contracting officers
13) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

7.3 System requirements review (SRR) application guidance

The following is a set of observed good practices for consideration:

a) In order to help ensure the requirements are thoroughly and properly understood, the SEP should include the requirement to conduct an SRR. If there are competing contractual efforts, an SRR should be held with each participating developer.

b) The request for the SRR chair should occur at least 60 days prior to conduct of the technical review.

c) The understanding of requirements and verification procedures, and the supplier's ability to comply with the system specification, should be covered in the technical risk assessment.

d) The ability of the requirements set documented in the system specification to achieve the capabilities specified in the draft CDD within the program budget and schedule should be included in the program execution risk assessment.

e) Of critical importance to the SRR is the understanding of the risks inherent in the supplier's proposed system concept and products and processes. The SRR needs to assess the risks to be at an acceptable level consistent with the IMP, IMS, and to be manageable by the acquisition agency.

f) A work breakdown structure (WBS) is defined as a function of the element partitioning performed during the system logical architecture development. If the WBS is declared before the availability of the initial system logical architecture, it will ultimately constrain the architecture.

g) The PPP should cover countermeasures which address foreign collection, malicious content insertion and supply chain threats to the initial system CPI, critical functions, and components.

h) In order to help ensure a comprehensive and balanced assessment of all SRR work products and proper recording of the activities and decisions, SRR participants should include the following, as applicable:
   1) Program management
   2) Systems engineering
   3) Software engineering
   4) Hardware engineering
   5) Domain specialists and specialty engineers
   6) Logistics
   7) Test and evaluation
   8) All certification authorities
   9) System users
   10) Cost estimating team
   11) Legal counsel, if required
   12) Contracting officers
   13) Recorder or secretary

   NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

7.4 System functional review (SFR) application guidance

The following is a set of observed good practices for consideration:

a) In order to help ensure that the functional baseline fully satisfies performance requirements and that the program can begin preliminary design with acceptable risk, the SEP should include the requirement to conduct an SFR. If there are competing contractual efforts, an SFR should be held with each participating developer.

b) The request for the SFR chair should occur at least 90 days prior to conduct of the technical review.

c) The acquirer should establish government configuration control of the functional baseline at the successful conclusion of the SFR which will eventually be verified through FCA leading up to the system-level FCA or the SVR.

d) Since the SFR is the first technical review that begins to allocate requirements to separated subsystems and organizational IPTs, program teams must create interface design documents at this point in order to define areas of responsibility and constraints requiring coordination across IPTs.

e) Successful completion of the SFR does not represent concurrence from the procuring authority that future design maturity will result in acceptable system performance. The SFR, as a component of the systems engineering technical review (SETR) process, serves as technical monitoring of program execution by senior functional area experts. The supplier remains responsible for the system design/performance requirements within the terms of the contract.

f) In order to help ensure a comprehensive and balanced assessment of all SFR work products and proper recording of the activities and decisions, SFR participants should include the following, as applicable:

1) Program management
2) Systems engineering
3) Software engineering
4) Hardware engineering
5) Domain specialists and specialty engineers
6) Logistics
7) Test and evaluation
8) Configuration management
9) All certification authorities
10) System users
11) Cost estimating team
12) Legal counsel, if required
13) Contracting officers
14) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

7.5 Preliminary design review (PDR) application guidance

The following is a set of observed good practices for consideration:

a) For complex systems, a PDR may be conducted incrementally for each subsystem or system element, depending on the scope and complexity of the system.

b) If incremental PDRs are held, it is important that all conflicts or other issues arising from the results of the incremental PDRs be resolved before conducting the system-level PDR.

c) The request for the PDR chair should occur at least 90 days prior to conduct of the technical review.

d) The PDR technical review criteria should be tailored to best support the program's technical scope and risk.

e) For software intensive systems, the SAR or SSR should be completed before the system-level PDR is held.

f) In order to help ensure a comprehensive and balanced assessment of all PDR work products, PDR participants from both the acquirer and supplier should include the following, as applicable:

1) Program management
2) Systems engineering
3) Software engineering
4) Hardware engineering
5) Domain specialists and specialty engineers
6) Logistics
7) Test and evaluation
8) Configuration management
9) All certification authorities
10) System users
11) Cost estimating team
12) Legal counsel, if required
13) Contracting officers
14) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

g) Assessment of the allocated baseline should assure that technical budget allocations (weight, power, cooling, etc.) have been properly allocated to one or more system elements with acceptable design growth margins.

h) Since multiple teams are usually performing detailed design in parallel for subsystems or elements of the total system, system-level coordination and problem resolution often become difficult. A robust and efficient cross-team communication system should be established, both within the supplier's organization and between the supplier team leads and their acquirer counterparts, to minimize the chances of rework and the associated cost and schedule impact from conflicting interpretations of the interface requirements by the various design groups.

i) Some design decisions made at the PDR may precipitate discussions with the operational requirements community because they could have an impact on the CDD. Depending upon the nature/urgency of the capability required and the current state of technology, incremental development may be necessary.

j) Margins should be defined by acquirer-supplier agreement requirements documents, domain specialists, product history, supplier internal company command media, or military standards and handbooks.

7.6 Critical design review (CDR) application guidance

The following is a set of observed good practices for consideration:

a) For complex systems, a CDR may be conducted incrementally for each subsystem or CI, depending on the scope and complexity of the system.

b) If incremental CDRs are held, it is important that all conflicts or other issues arising from the results of the incremental CDRs be resolved before conducting the system-level CDR.

c) The system-level CDR assesses the system design as captured in product specifications for each CI in the system's initial product baseline, and helps ensure that each CI in the initial product baseline has been captured in the detailed design documentation.

d) The request for the CDR chair should occur at least 90 days prior to conduct of the technical review.

e) The CDR technical review criteria should be tailored to best support the program's technical scope and risk.

f) In order to help ensure a comprehensive and balanced assessment of all CDR work products, CDR participants from both the acquirer and supplier should include the following, as applicable:

1) Program management
2) Systems engineering
3) Software engineering
4) Hardware engineering
5) Domain specialists and specialty engineers
6) Logistics
7) Test and evaluation
8) Configuration management
9) All certification authorities
10) System users
11) Cost estimating team
12) Legal counsel, if required
13) Contracting officers
14) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

g) Assessment of the allocated baseline against the initial product baseline should assure that technical budget allocations (weight, power, cooling, etc.) have been properly implemented in the detailed design.

h) As a rule of thumb, "initial product baseline complete" can be satisfied by achievement of all of the following:

1) 75% to 90% of the manufacturing and hardware, build-to drawings and associated instructions are complete.

2) 100% of all critical component (e.g., components containing critical technologies) drawings are complete.

3) Detailed software design content is documented in all SWCI design documents as applicable for the software increments up to this point in the selected software life cycle model, and for interface design documents, as applicable.

7.7 Test readiness review (TRR) application guidance

The following is a set of observed good practices for consideration:

a) For complex systems, a TRR may be conducted incrementally for each subsystem or CI, depending on the scope and complexity of the system.

b) If incremental TRRs are held, it is important that all conflicts or other issues arising from the results of the incremental TRRs be resolved before conducting the system-level TRR.

c) The system-level TRR assesses test objectives, test methods and procedures, scope of tests, and safety, and confirms that required test resources have been properly identified and coordinated to support planned tests.

d) The request for the TRR chair should occur at least 60 days prior to conduct of the technical review.

e) The TRR technical review criteria should be tailored to best support the program's technical scope and risk.

f) In order to help ensure a comprehensive and balanced assessment of all TRR work products, TRR participants from both the acquirer and supplier should include the following, as applicable:

1) Program management
2) Chief developmental tester
3) Lead DT&E organization
4) Operational test agency (OTA)
5) Test facilities/ranges
6) Configuration management
7) Systems engineering
8) Software engineering
9) Hardware engineering
10) Domain specialists and specialty engineers
11) Logistics
12) Test and evaluation
13) All certification authorities
14) System users
15) Cost estimating team
16) Legal counsel, if required
17) Component T&E organization
18) Contracting officers
19) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

g) Assessment of the program's remaining risks at the time of TRR should take into account that the level of specific risk will vary as the system proceeds from component level to system level testing.

h) TRR scope should be tailored in accordance with the technical scope and risk of the system or system element(s) under test, but the TRR should under no circumstances be tailored out of the program's T&E plans.

i) Any TRR tailoring should be documented in the program TEMP or should be described as part of the chief developmental tester's coordination of the TRR agenda and content with the technical review chair and members.

j) The test plans, procedures, and results should undergo a peer review to determine the applicability, effectiveness and completeness of any formal test event, and the review results should be used to update plans and procedures for remaining program testing.

k) TRR can be used prior to any test in any program phase, but is specifically to be conducted prior to, and in support of, system-level DT.

l) If a given program chooses to conduct IRRs as part of the system's incremental integration phases, the TRR for any specific system element(s) under test should be conducted after the corresponding IRR(s) are complete for that system element(s) under test.

m) Any specific TRR should assess the planned formal test event's contribution to the system's operational suitability evaluation by considering items such as any special needs for the number of operating hours, environmental testing, maintenance demonstrations, specific testing profiles, or other unique test requirements.

n) For systems under live fire test and evaluation (LFT&E) oversight, TRRs should assess the formal test event's planned test results for support of the following:

1) Personnel survivability.
2) System vulnerability.
3) System recoverability from battle damage, and battle damage repair capabilities and issues.

4) Real time casualty assessment (RTCA) during IOT&E to ensure assumptions supporting RTCA remain consistent with LFT&E results.
5) Sufficient testing of the system under realistic combat conditions.
6) Collecting LFT&E results early enough in the program life cycle to allow time to correct any design deficiencies that are found

o) For operational test readiness review (OTRR):

1) The system technical documentation should provide the technical review team with a clear understanding of available system performance to meet the CDD or CPD.
2) Operational requirements defined in the CDD/CPD must match the requirements documented in the TEMP to be verified during OT&E.
3) DT&E results should indicate that development test (DT) objectives and performance thresholds identified in the TEMP have been satisfied, or are projected to meet system maturity for the ICD/CDD/CPD as appropriate.
4) DT&E data and reports should be provided to the OTA no later than 30 days prior to the planned commencement of operational test (OT) unless otherwise agreed by the OTA.
5) System operating, maintenance, and training documents should be provided to the OTA 30 days prior to the OTRR, unless otherwise agreed to by the OTA.
6) Logistic support, including spares, repair parts, and support/ground support equipment should be available as documented. Discuss any logistics support which will be used during OT&E, but will not be used with the system when fielded (e.g., supplier-provided depot level maintenance).
7) The OT&E manning of the system should be assessed to be adequate in numbers, rates, ratings, and experience level to simulate normal operating conditions.
8) Training has been completed and is representative of that planned for fielded units.
9) The system provided for OT&E, including software, should be production representative. Differences between the system provided for test and production configuration should be addressed at the OTRR.
10) Threat information (e.g., threat system characteristics and performance, electronic countermeasures, force levels, scenarios, and tactics), to include security classification required for OT&E, should be available to satisfy OTA test planning.
11) The system should be demonstrated as safe to use as planned in the concept of employment. Any restrictions to safe employment should be stated. The ESOH program requirements should have been satisfied. The system complies with all environmental, safety, and occupational health/hazardous waste requirements, where applicable. ESOH hazardous waste reviews and reports have been provided to the OTA. When an energetic is employed in the system, weapon system explosives safety review board criteria for conduct of test should have been met.
12) All software should be sufficiently mature and stable for field introduction. All software trouble reports should be documented with appropriate impact analyses. There should be no outstanding trouble reports that
    i) Prevent the accomplishment of an essential capability;
    ii) Jeopardize safety, security, or other requirements designated “critical”;
    iii) Adversely affect the accomplishment of an essential capability and no work-around solution is known; or
    iv) Adversely affect technical, cost, or schedule risks to the project or to life-cycle support of the system, and no work-around solution is known.
13) For programs with interoperability requirements (e.g., information exchange requirements in ICD/CDD/CPDs), appropriate authority has approved the integrated support plan; and joint

interoperability test command concurs that program interoperability demonstrated in development has progressed sufficiently for the phase of OT to be conducted.

14) Approval of spectrum certification compliance and spectrum supportability has been obtained.

15) For information technology systems, including national security system, the system has been assigned a medium access control and confidentiality level. System certification accreditation documents, including the system security authorization agreement and the authority to operate or interim authority to operate, have been provided to the OTA.

16) The TRR should discuss the contingency of holding a break of test configuration review at the conclusion of planned test. Considerations that may warrant a break of test configuration review include complexity of test setup to retest, amount of anomalous or out-of-family results, or timing of the SVR relative to completion of the test.

7.8 Functional configuration audit (FCA) application guidance

The following is a set of observed good practices for consideration:

a) For complex systems, an FCA may be conducted incrementally for each subsystem or CI, depending on the scope and complexity of the system. Each increment should address a specific system functional area, and document any discrepancies that are found in the performance capabilities of that increment.

b) If incremental FCAs are held, it is important that all conflicts or other issues arising from the results of the incremental FCAs be resolved before conducting the system-level FCA.

c) A system-level FCA assesses performance of the system against the functional baseline, and may be conducted in conjunction with the system-level SVR, which examines more than just system functionality. The main difference in focus between the two activities is that a system-level FCA focuses primarily on verification of the functional baseline, while SVR assesses system functionality as well as other implementation details to include program readiness to proceed into the production and deployment phase.

d) The system-level FCA assesses the collected test, analysis, and M&S results of the system product baseline after completion of acceptance and development testing, and verifies that actual system performance satisfies the functional and allocated baseline requirements.

e) When a full-up system prototype is not part of the program's acquisition strategy, the FCA is used to validate system element functionality. Other system-level analysis is then used to ascertain whether program risk warrants proceeding to system initial production for OT&E. Verification of system performance is later accomplished on a production system.

f) Drawings of HWCI parts that are to be provisioned should be selectively sampled to assure that test data essential to manufacturing are included on, or furnished with, the drawings.

g) The request for the FCA chair should occur at least 45 days prior to conduct of the technical review.

h) The FCA technical review criteria should be tailored to best support the program's technical scope and risk.

i) FCA requirements should be included in the work scope of the acquirer-supplier agreement.

j) An FCA for system software elements should be delayed until after integration testing.

k) In order to help ensure a comprehensive and balanced assessment of all FCA work products, FCA participants from both the acquirer and supplier should include the following, as applicable:

1) Program management
2) Configuration management

3) Systems engineering
4) Design engineering
5) Domain specialists and specialty engineers
6) Computer-aided design and manufacturing
7) Production
8) Test and evaluation
9) All certification authorities
10) System users
11) Cost estimating team
12) Legal counsel, if required
13) Contracting officers
14) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

7.9 System verification review (SVR) application guidance

The following is a set of observed good practices for consideration:

a) SVR may be held concurrently with the system-level FCA due to the overlap of system documentation to be assessed. The main difference in focus between the two activities is that a system level FCA focuses primarily on verification of the functional baseline while SVR assesses system functionality as well as other implementation details to include program readiness to proceed into the production and deployment phase. When a program determines that a separate SVR is required, the supplier should notify the acquirer when the collected test, analysis and verification results of all system element(s) are sufficient to support SVR.

b) For complex systems, an SVR may be conducted incrementally for each subsystem or CI, depending on the scope and complexity of the system. Each increment should address a specific system functional area and document any discrepancies that are found in the performance capabilities of that increment.

c) If incremental SVRs are held, it is important that all conflicts or other issues arising from the results of the incremental SVRs be resolved before conducting the system-level SVR.

d) The request for the SVR chair should occur at least 45 days prior to conduct of the technical review.

e) The SVR technical review criteria should be tailored to best support the program's technical scope and risk.

f) SVR requirements should be included in the work scope of the acquirer-supplier agreement.

g) The SVR should address system support elements (both hardware and software) like diagnostics, peculiar test equipment and software, and training equipment and software.

h) The SVR should address for the following items all changes or additions generated since completion of formal qualification testing and the FCA to help ensure the as-tested product baseline has incorporated all the updates:

   1) ECPs
   2) Specification change notices
   3) Specification revisions
   4) Interface control document changes
   5) Manufacturing or production process changes

i) In order to help ensure a comprehensive and balanced assessment of all SVR work products, SVR participants from both the acquirer and supplier should include the following, as applicable:

1) Program management
2) Configuration management
3) Systems engineering
4) Design engineering
5) Domain specialists and specialty engineers
6) Computer-aided design and manufacturing
7) Production
8) Test and evaluation
9) Logistics
10) All certification authorities
11) System users
12) Cost estimating team
13) Legal counsel, if required
14) Contracting officers
15) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

7.10 Production readiness review (PRR) application guidance

The following is a set of observed good practices for consideration:

a) For complex systems including software-intensive systems, a PRR may be conducted incrementally for each subsystem or CI, depending on the scope and complexity of the system. Each increment should address a specific system functional area and document any discrepancies that are found in the manufacturing readiness of that increment.

b) If incremental PRRs are held, it is important that all conflicts or other issues arising from the results of the incremental PRRs be resolved before conducting the system-level PRR.

c) The PRR technical review criteria should be tailored to best support the program's technical scope and risk, and should be documented in the program SEP.

d) PRR requirements should be included in the work scope of the acquirer-supplier agreement.

e) The PRR is designed as a system-level preparation tool and should be used for assessing risk as the system transitions from development to FRP. It should not be completely eliminated from the program development plan.

f) PRRs are often applied on large volume production contracts. Some low volume production contracts (e.g., single unit manufacturing builds) may utilize other terms or reviews, such as a manufacturing readiness review. If used, this may be addressed through tailoring of 6.10 of this standard.

g) Production readiness topics should be addressed throughout the program development phases prior to entering the P&D phase to be used as risk assessment items in other technical reviews such as SFR, PDR, and CDR.

h) PRRs are usually conducted in an incremental fashion prior to a system-level PRR which occurs before LRIP or FRP decisions. In its earlier stages, the PRR concerns itself with gross-level manufacturing concerns such as the need for identifying high-risk and low-yield manufacturing processes or materials, or the requirement for manufacturing development effort to satisfy design requirements. The reviews become more refined as the design matures, dealing with such concerns as adequate production planning, facilities allocation, incorporation of producibility-oriented

changes, identification and fabrication of tools and test equipment, long-lead item acquisitions, etc. Software PRRs should also be used to confirm compliance with applicable regulatory and legislative requirements such as the Clinger-Cohen Act.

i) A PRR for system software elements should be delayed until after final top-level system integration testing.

j) A follow-on PRR may be appropriate in the P&D phase for the supplier and/or major vendors if:

1) Changes in materials and/or manufacturing processes since CDR are required when entering or during the P&D phase.
2) Production start-up or re-start occurs after a significant shutdown period.
3) Production start-up is with a new supplier.
4) The manufacturing site is relocated.

k) In order to help ensure a comprehensive and balanced assessment of all PRR work products, PRR participants from both the acquirer and supplier should include the following, as applicable:

1) Program management
2) Configuration management
3) Systems engineering
4) Design engineering
5) Software engineering
6) Domain specialists and specialty engineers
7) Computer-aided design and manufacturing
8) Manufacturing and production
9) Parts, material, and process control
10) Test and evaluation
11) All certification authorities
12) System users
13) Cost estimating team
14) Legal counsel, if required
15) Contracting officers
16) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.

7.11 Physical configuration audit (PCA) application guidance

The following is a set of observed good practices for consideration:

a) For complex systems, a PCA may be conducted incrementally for each subsystem or CI, depending on the scope and complexity of the system. Each increment should address a specific system functional area and document any discrepancies that are found in the product baseline of that increment.

b) If incremental PCAs are held, it is important that all conflicts or other issues arising from the results of the incremental PCAs be resolved before conducting the system-level PCA.

c) PCA should be planned well in advance of the production delivery or full deployment schedule so as to allow sufficient time for correcting any deficiencies found during the PCA that could compromise the production delivery/full deployment schedule.

d) One of the major objectives of the PCA is to verify that the design documentation and other elements of the system technical data package match the element(s) being examined. For a hardware PCA, the as-built hardware system is examined and compared with its build-to design documentation. A software PCA is an examination of the as-coded total system software against its

design or deliverable documentation; for unique software the actual source code is compared with its associated design documentation; and, for COTS software, it involves verification of correct documentation to support use of the software versions actually being delivered on the applicable media.

e) Unless program requirements dictate otherwise, the selection of the subset of drawings and other system product baseline items for audit examination should be done using a valid sampling basis.

f) In addition to conducting the PCA on the first production article of the system element(s) to be audited, a PCA should also be conducted on the first production article produced by a new supplier.

g) PCA is normally conducted when the acquirer plans to take control of the product detail design or is acquiring the TDP. When the acquirer does not plan to control the detailed design or purchase the system TDP, the supplier should conduct an internal PCA to define the starting point for controlling the detailed design of the system and to establish the product baseline.

h) The PCA technical review criteria should be tailored to best support the program's technical scope and risk.

i) PCA requirements should be included in the work scope of the acquirer-supplier agreement.

j) If the PCA team determines that additional qualification or acceptance testing is required to provide an adequate basis for acceptance of production units of the system element(s) being audited, the PCA chair should ensure the testing requirements are contained in the applicable PCA corrective action plan(s) and the acquirer and supplier should negotiate the applicable changes to the acquirer-supplier agreement required to accomplish the additional testing.

k) A PCA for system software elements should be delayed until after final integration testing.

l) In order to help ensure a comprehensive and balanced assessment of all PCA work products, PCA participants from both the acquirer and supplier should include the following, as applicable:

1) Program management
2) Configuration management
3) Systems engineering
4) Design engineering
5) Domain specialists and specialty engineers
6) Computer-aided design and manufacturing
7) Production
8) Test and evaluation
9) All certification authorities
10) System users
11) Cost estimating team
12) Legal counsel, if required
13) Contracting officers
14) Recorder or secretary

NOTE—These roles do not dictate that a single individual is provided for each role. A single individual may perform more than one of these roles within the team. Depending on the complexity of the system, more than one individual may also be assigned to a specific role.