

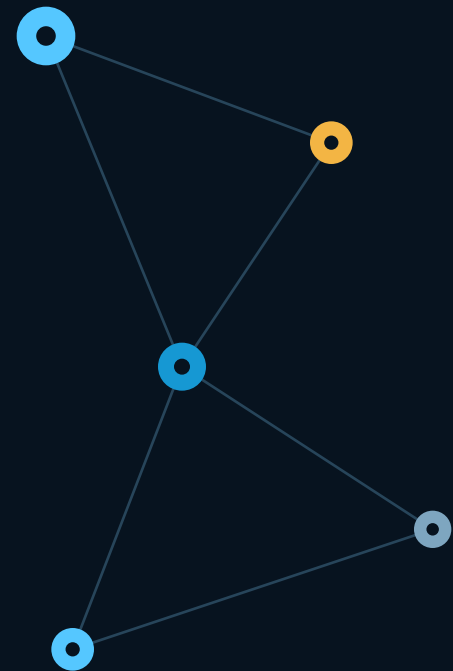
FREE PROGRAM DIAGNOSTIC

INTEGRATION READINESS CHECKLIST

Fifteen evidence-based questions for aerospace and software-intensive mission programs approaching integrated test, formal review, delivery, or operational acceptance.

THE POINT

Subsystem status is not system evidence. Use this checklist to find the assumptions, interfaces, and evidence gaps most likely to become expensive later.



15 QUESTIONS

5 EVIDENCE LEVELS

1 ACTION PLAN

Find integration risk before integration finds it.

ASSESSMENT CONTEXT

PROGRAM / TEAM

ASSESSMENT DATE

ASSESSOR / WORKING GROUP

ASSESSMENT BOUNDARY

CRITICAL MISSION OUTCOME IN SCOPE

USE IT IN FOUR MOVES

1 SET THE BOUNDARY

Name the mission outcome, configuration, event, and decision this review must support.

2 CHOOSE ONE LEVEL

Rate each question using the strongest evidence that exists today - not the evidence expected next week.

3 RECORD THE BASIS

Capture the evidence, accountable owner, open decision, and next action for every weak or consequential item.

4 ACT ON THE PROFILE

Do not average away a critical seam. Prioritize by mission consequence, uncertainty, and time to learn.

EVIDENCE MATURITY SCALE

0 UNKNOWN Not examined, or ownership is unclear.

1 CLAIMED Believed true; evidence is absent or anecdotal.

2 DEFINED The requirement, interface, method, owner, or decision is documented.

3 DEMONSTRATED Objective evidence shows it works in a representative context.

4 ACCEPTED Evidence and limits were reviewed; accountable leadership accepted residual risk.

BOUNDARY

This is a directional diagnostic, not certification, approval, or a prediction of mission success. Do not enter classified, export-controlled, customer-proprietary, or employer-derived information into copies used outside authorized systems.

MISSION OUTCOMES & THREADS

01

Can the team state the mission outcome, success criteria, and assessment boundary in the same language?

LOOK FOR

Measurable outcome; scenario or mode; start and end conditions; exclusions; accountable decision authority.

SELECT ONE EVIDENCE LEVEL


0 Unknown


1 Claimed


2 Defined


3 Demonstrated


4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

02

Has at least one critical end-to-end mission thread been walked across hardware, software, data, people, and operations?

LOOK FOR

Ordered steps; handoffs; timing; modes; failure paths; external dependencies; human actions.

SELECT ONE EVIDENCE LEVEL


0 Unknown


1 Claimed


2 Defined


3 Demonstrated


4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

03

Do subsystem claims connect to observable system behavior and mission consequence?

LOOK FOR

Trace from local evidence to mission outcome; stated limitations; no component-only confidence substituted for system evidence.

SELECT ONE EVIDENCE LEVEL


0 Unknown


1 Claimed


2 Defined


3 Demonstrated


4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

INTERFACES & OWNERSHIP

04

Does every critical interface have named owners on both sides and one authority for resolving cross-boundary decisions?

LOOK FOR

Accountable people, not only organizations; decision rights; escalation path; response timing.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

05

Are interfaces defined behaviorally - not just by document completion?

LOOK FOR

Semantics; units; timing; states and modes; error handling; tolerances; versioning; constraints.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

06

Have critical interface assumptions been exercised in a representative environment with current configurations?

LOOK FOR

Objective evidence; known fidelity gaps; versions and builds identified; anomalies dispositioned.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

REQUIREMENTS, CONFIGURATION & DECISIONS

07

Are critical requirements clear, allocated, traceable, and tied to verification methods and mission outcomes?

LOOK FOR

Unambiguous pass conditions; parent-child logic; owner; verification level and environment.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

08

Are high-consequence assumptions and open technical decisions explicit, owned, and time-bounded?

LOOK FOR

Assumption and decision records; evidence needed; retirement date; consequence of delay.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

09

Can the team identify the exact hardware, software, data, models, procedures, and documents in the integration baseline?

LOOK FOR

Configuration identifiers; compatibility matrix; change history; approved deviations and waivers.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

VERIFICATION & EVIDENCE

10

Does each critical claim have current objective evidence - not only a plan, prediction, or prior-version result?

LOOK FOR

Test, analysis, inspection, or demonstration artifacts; acceptance criteria; dates; traceability; versions.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

11

Are verification environments and system representations fit for the claims being made?

LOOK FOR

Fidelity limits; stimulators and emulators; model validation; missing behaviors; quantified uncertainty.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

12

Have nominal, off-nominal, degraded, recovery, and boundary conditions been exercised end-to-end?

LOOK FOR

Failure injection; timing and resource margins; safe-state and recovery; operator actions; anomaly closure.

SELECT ONE EVIDENCE LEVEL

 0 Unknown

 1 Claimed

 2 Defined

 3 Demonstrated

 4 Accepted

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

OPERATIONS, TRANSITION & RESIDUAL RISK

13

Are operations, training, procedures, support, and sustainment aligned to current system behavior and configuration?

LOOK FOR

Trained roles; approved procedures; ground and support readiness; logistics and data; change incorporation.

SELECT ONE EVIDENCE LEVEL

 **0 Unknown**

 **1 Claimed**

 **2 Defined**

 **3 Demonstrated**

 **4 Accepted**

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

14

Does the integration plan define sequence, entry and exit criteria, dependencies, observability, rollback, and decision points?

LOOK FOR

Test order; instrumentation; stop-go authority; rollback path; contingency resources; schedule logic.

SELECT ONE EVIDENCE LEVEL

 **0 Unknown**

 **1 Claimed**

 **2 Defined**

 **3 Demonstrated**

 **4 Accepted**

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

15

Are unresolved gaps prioritized by mission consequence, uncertainty, and time to retire - with residual risk accepted by the right authority?

LOOK FOR

Risk owner; trigger; needed evidence; due date; acceptance rationale; follow-up path.

SELECT ONE EVIDENCE LEVEL

 **0 Unknown**

 **1 Claimed**

 **2 Defined**

 **3 Demonstrated**

 **4 Accepted**

EVIDENCE / OWNER / OPEN DECISION / NEXT ACTION

READINESS PROFILE

TURN THE PROFILE INTO ACTION

The profile is a decision aid, not a grade. Start with the items that combine high mission consequence, weak evidence, cross-boundary ownership, and little time left to learn.

CRITICAL SEAM

Any 0 or 1 tied to mission loss, safety, delivery, contractual acceptance, or an irreversible schedule decision.

PROOF GAP

A 2 at a near-term interface means documentation is ahead of demonstration. That is useful knowledge, not readiness.

CONTEXT GAP

A 3 supported by the wrong configuration or a non-representative environment may be evidence for a different claim.

ACCEPTANCE GAP

A 4 requires limits to be understood and residual risk accepted by an accountable authority - not absorbed by silence.

THE THREE GAPS TO WORK FIRST

#	GAP / SEAM	MISSION CONSEQUENCE	EVIDENCE OR DECISION NEEDED	OWNER / DATE
1				
2				
3				

DECISION THAT BECOMES HARDER OR MORE EXPENSIVE IF WE WAIT

WHAT IS YOUR PROGRAM ACTING AS THOUGH IS ALREADY TRUE?

Use the checklist as a first diagnostic, or schedule a focused conversation about the assumptions and interfaces most likely to become expensive later.

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