

LCA Checklist

*** Warning ***

This checklist serves as a checkpoint to remind you of a few qualities each MBASE deliverable in your LCA package must have. It is NOT an exhaustive list and satisfaction of all the items listed does NOT indicate that your LCA package is complete and satisfies all the LCA milestone requirements.

OCD

By LCA your OCD should have:

1. Organization Goals are all clearly documented as M.R.
2. Project Goals are M.R.S. with respect to the Organization Goals and Organization Activities
3. Quality Goals are all clearly documented as M.R.S. with respect to System Responsibilities
4. All Organization Goals are referenced by something later such as Project Goals, System Responsibilities (or they should be excluded are documented as irrelevant)
5. All Organization Activities are referenced by something later such as System Responsibilities, Project and Quality Goals, however just about anything can reference (or they should be excluded are documented as irrelevant)
6. All Entities have specification templates filled out (possible Entities are not listed in LCA deliverables)
7. All Entities are referenced by something (usually Components or other Entities for which there are dependencies)
8. Project Goals, Quality Goals reference and are referenced by other model elements (Project Goals reference Organization Goals or Activities and are referenced by Project Requirements. Quality Goals usually reference System Responsibilities and sometimes Organization Goals or Activities and are referenced by Quality Attribute Requirements.)
9. All System Responsibilities reference and are referenced by other elements (Behaviors, Requirements, and Quality goals usually)
10. System Responsibilities are not behaviors or operations and are exactly the same as those used in the SSAD Behavior model.
11. Statement of Purpose indicates relation to Organization Background
12. CDL for uncommon undefined terms in the Domain Description
13. Operational Scenarios have specifications and reference System Responsibilities and goals.

SSRD

By LCA your SSRD should have:

1. System Definition refers to Statement of Purpose
2. A clear block diagram consistent with the SSAD design views
3. Project Requirements reference Project Goals and are M.A.R.S have specifications that are consistent with SSAD design
4. Quality Attribute Requirements reference Quality Goals and System Requirements and are M.A.R.S (and Requirements Satisfaction in FRD)
5. System Requirements reference System Responsibilities, Win Conditions, Project Goals, Quality Goals, and Project Requirements (and are referenced by Operations in SSAD and Requirements Satisfaction in FRD)
6. Both nominal and off-nominal requirements have clear implementation specifications
7. Each System Requirement can be implemented in a consistent manner with respect to the SSAD design has a testable Use-Case scenario
8. Interface Requirements have clear specifications based on OCD Scenarios.
9. All requirements are defined in such as way that they can be implemented tested (this includes Evolutionary Requirements and Interface Requirements)
10. All requirements have been prioritized and challenged as to their necessity

SSAD

By LCA your SSAD should have:

1. Components reference Entities
2. Objects reference Components
3. Each Component has a design in Objects (or is detailed as a Design-Component-Object such as COTS packages)

4. Components and Objects have specification templates filled out (no possible Components or Objects in LCA)
5. Behaviors start with System Responsibilities from OCD (an exact match, if they're not workable for behaviors then the architect should reconcile them with the OCD person), and reference Project Goals, Quality Goals where necessary
6. Each Operation references Behaviors and elaborate System Requirements and Quality Attribute Requirements
7. At least one Enterprise Class in the Enterprise Model for each Component
8. All components mapped into Logical Design View, System Layer View, and Deployment View
9. At least one Object Class in the Class Model for each Object (Class taxonomies separated into implementation types)
10. All Operations in Operation Model (Rose sequence diagrams) are assigned to Objects that are detailed in the Object Model
11. All Operations across objects have either an outlet relation specified in the object model or a dynamically created reference

LCP

By LCA your LCP should have:

1. Milestones and schedules covering all core development areas (especially 577b areas)
2. Process model elaborations per phase (what is done on Inception, Elaboration, Construction, transition)
3. Top-n risks and impacts on schedule and budget
4. Staff assignments to work breakdown structure
5. Detailed project deliverables covering all core development areas
6. Demonstrated quality assurance procedures
7. Demonstrated configuration management procedures
8. Detailed cost and effort estimates

FRD

By LCA your FRD should have:

1. Fleshed out business case (no TBD's) – all major costs accounted for and converted to comparable units (time, dollars, utilities, reputation, etc. as appropriate)
2. Value added relates to OCD project goals, organization goals, benefits realized, and results chain outcomes
3. Comparison of savings of ongoing or expected proposed system costs versus current system
4. Elaboration of return on investment (value minus initial and ongoing costs) over expected lifetime of system
5. Tracing of SSRD requirements to OCD capabilities and goals with rationale as to how they are related (usually a very straightforward mapping) to indicate operational concept satisfaction
6. Tracing of SSAD design elements to SSRD requirements with rationale as to how they are related to indicate requirements satisfaction
7. System priority sets with references to SSRD requirements or project development activities as appropriate that cover core development areas
8. Elaboration of how process choices in LCP are compatible with system priorities
9. Elaboration of how process choices will handle system priorities given the resources detailed in LCP
10. All outstanding risks referenced from LCP have risk assessments, mitigation procedures, and contingency plans with impacts

CTS

By LCA your CTS should have:

1. Initial Increment Plan implementing LCP schedules and milestones compatible with development process model choice
2. Initial Test Plan covering critical SSRD requirement areas
3. Initial Quality Management Plan implementing LCP quality assurance activities
4. Inspection Plan and Inspection Reports as indicated in LCP

Model Integrity

By LCA your models as a whole should have:

1. All risky items elaborated and explicitly risk managed
2. Removal of superfluous elements and unnecessary detail (as appropriate to model audience)
3. Specific references of all directly related elements within and between models (e.g. reference particular OCD Project Goals for particular SSRD Project Goals)
4. Consistency of documentation look and feel
5. Conformance to MBASE guidelines or rationale for departures or variations