

MDR = Mission Definition Review

The primary objective of this review is to release the mission statement and assess the preliminary technical requirements specification and programmatic aspects.

The MDR examines the proposed requirements, the mission architecture, and the flow down to all functional elements of the mission to ensure that the overall concept is complete, feasible, and consistent with available resources

PRR = preliminary requirements review

Release of preliminary management, engineering and product assurance plans.

Release of the technical requirements specification.

Confirmation of the technical and programmatic feasibility of the system concept(s).

Selection of system and operations concept(s) and technical solutions, including model philosophy and verification approach, to be carried forward into Phase B.

SRR = System Requirements Review

Release of updated technical requirements specifications.

Assessment of the preliminary design definition.

Assessment of the preliminary verification program.

The SRR examines the functional requirements and performance requirements defined for the system and the preliminary program or project plan and ensures that the requirements and the selected concept will satisfy the mission

PDR = Preliminary Design Review

Verification of the preliminary design of the selected concept and technical solutions against project and system requirements.

Release of final management, engineering and product assurance plans.

Release of product tree, work breakdown structure and specification tree.

Release of the verification plan (including model philosophy).

The PDR demonstrates that the preliminary design meets all system requirements with acceptable risk and within the cost and schedule constraints and establishes the basis for proceeding with detailed design. It will show that the correct design options have been selected, interfaces have been identified, and verification methods have been described

CDR = Critical Design Review

Assess the qualification and validation status of the critical processes and their readiness for deployment for phase D.

Confirm compatibility with external interfaces.

Release the final design.

Release assembly, integration and test planning.

Release flight hardware/software manufacturing, assembly and testing.

Release of user manual.

The CDR demonstrates that the maturity of the design is appropriate to support proceeding with full-scale fabrication, assembly, integration, and test. CDR determines that the technical effort is on track to complete the flight and ground system development and mission operations, meeting mission performance requirements within the identified cost and schedule constraints

QR = qualification review

To confirm that the verification process has demonstrated that the design, including margins, meets the applicable requirements.

To verify that the verification record is complete at this and all lower levels in the customer - supplier chain.

To verify the acceptability of all waivers and deviations.

AR = acceptance review

To confirm that the verification process has demonstrated that the product is free of workmanship errors and is ready for subsequent operational use.

To verify that the acceptance verification record is complete at this and all lower levels in the customer - supplier chain.

To verify that all deliverable products are available per the approved deliverable items list.

To verify the “as - built” product and its constituent components against the required “as designed” product and its constituent components.

To verify the acceptability of all waivers and deviations.

To verify that the Acceptance Data Package is complete.

To authorize delivery of the product.

To release the certificate of acceptance.

ORR = operational readiness review

To verify readiness of the operational procedures and their compatibility with the flight system.

To verify readiness of the operations teams.

To accept and release the ground segment for operations.

FRR = Flight Readiness Review

The flight readiness review is conducted prior to launch. The objective of this review is to verify that the flight and ground segments including all supporting systems such as tracking systems, communication systems and safety systems are ready for launch.

The FRR examines tests, demonstrations, analyses, and audits that determine the system's readiness for a safe and successful flight or launch and for subsequent flight operations. It also ensures that all flight and ground hardware, software, personnel, and procedures are operationally ready

LRR = launch readiness review

The launch readiness review is conducted just prior to launch. The objective of this review is to declare readiness for launch of the launch vehicle, the space and ground segments including all supporting systems such as tracking systems, communication systems and safety systems and to provide the authorization to proceed for launch.

CRR = commissioning result review

The commissioning result review is held at the end of the commissioning as part of the in - orbit stage verification. It allows declaring readiness for routine operations/utilization.

This Review is conducted following completion of a series of on-orbit tests designed to verify that all elements of the system are performing within the specified performance parameters.

Successful completion of this review is typically used to mark the formal handover of the system to the project initiator or to the system operator.

ELR = end-of-life review

To verify that the mission has completed its useful operation or service.

To ensure that all on-orbit elements are configured to allow safe disposal.

The life cycle of space projects is typically divided into 7 phases, as follows:

Phase 0 - Mission analysis/needs identification

Phase A - Feasibility

Phase B - Preliminary Definition

Phase C - Detailed Definition

Phase D - Qualification and Production

Phase E –Utilization

Phase F – Disposal