Milestone Payments and Acceptance Criteria

Payment milestones are subject to Government acceptance of the required deliverables and satisfaction of the applicable acceptance criteria. The Government may request clarifying information, supporting data, or corrective action before accepting a milestone.

CLIN 1

Payment Milestone 1: Verification &Validation Compliance Assessment

Delivery and Government acceptance of NEXUS-DRD-011, Verification &Validation Compliance Report.

Acceptance Criteria:

- Requirement traceability has been established from NEXUS requirements to allocated architecture elements and planned verification activities
- Proposed verification methods for each NEXUS SRD requirement are appropriate, achievable, and consistent with the intent of the requirement
- Proposed verification and validation strategy is executable and supports demonstration of required service capabilities
- Requirements requiring on-orbit verification or operational validation have been clearly identified and justified
- Open verification gaps, TBDs, TBRs, assumptions, and deferred closures are identified with planned resolution approaches
- Validation approach supports assessment of end-to-end service execution, operational workflows, interoperability, and readiness for transition to full operational service
- The Contractor has identified requirements or interfaces presenting elevated technical, interoperability, cybersecurity, operational, or schedule risk with acceptable mitigation plans

Payment 1 Amount: 30% of CLIN 1 value

Payment Milestone 2: CLIN 1 Design Outbrief

Delivery and Government acceptance of NEXUS-DRD-012, CLIN 1 Design Outbrief Package

Acceptance Criteria:

- The proposed end-to-end system architecture is technically credible, internally consistent, and traceable to applicable NEXUS requirements, including any updates to link margin analysis.

- The Concept of Operations demonstrates a credible approach for execution of Ka-band relay services across the space, ground, network, scheduling, cybersecurity, and user interface segments of the proposed NEXUS architecture.
- The Requirements Compliance Posture identifies compliant, partially compliant, and planned compliance areas, includes major compliance risks, and provides explicit linkage to the Service Requirements Compliance Matrix (SRCM).
- The Verification and Validation Approach defines planned verification methods, identifies key validation scenarios, and demonstrates a credible path toward verification closure during CLIN 2 execution.
- The technical maturity assessment identifies critical technologies, remaining maturation activities, associated technical risks, and planned mitigation approaches supporting the proposed NEXUS architecture.
- Technical, schedule, cost, regulatory, security, interface, and operational risks are clearly identified, assessed, and supported by credible mitigation strategies.
- The launch services and regulatory compliance approach identifies required approvals, licensing dependencies, coordination activities, and major schedule drivers associated with demonstration and operational readiness.
- The security compliance approach demonstrates a credible plan for cybersecurity compliance, protection of Government data, and generation of supporting security evidence.
- External ICD maturity and interoperability status demonstrate credible interface definitions, interoperability planning, and identification of open interface risks and planned closure actions.
- The ground infrastructure and operational support approach demonstrates a credible path for service execution, monitoring, scheduling, cybersecurity, resiliency, and operational scalability.
- The resiliency and continuity approaches identify credible recovery concepts, continuity strategies, and major resiliency risks associated with the proposed service architecture.
- The proposed CLIN 2 schedule includes major milestones, integration and test activities, regulatory milestones, demonstration activities, and critical path awareness sufficient to support execution planning.
- The assembly, integration, and ground test approach demonstrates a credible strategy for end-to-end integration, verification, validation, and operational readiness testing.
- The transition-to-service, mission assurance, and data rights approaches identify no major issue that would materially undermine operational transition, Government insight, interoperability, or future service continuity objectives.

Payment 2: 65% of CLIN 1 value

Payment Milestone 3: CLIN 1 Completion.

Acceptance Criteria:

- The Government will make the remaining 5% payment of the CLIN 0001 value after the Government approves that all CLIN 0001 requirements are acceptably completed by the Contractor.

Payment 3: 5% of CLIN 1 value

CLIN 2

Milestone 1: Initial DRD Deliveries

Delivery and Government acceptance of the following DRDs:

- NEXUS-DRD-001, Service Requirements Compliance Matrix (SRCM)
- NEXUS-DRD-002, Service Demonstration & Validation Plan (SDVP)
- NEXUS-DRD-003, Verification Closure Notices (VCNs)
- NEXUS-DRD-004, External Interface Control Documents (ICDs)
- NEXUS-DRD-005, Security Architecture Definition (SAD)
- NEXUS-DRD-006, Service Transition Plan (STP)
- NEXUS-DRD-007, Intellectual Property & Data Rights Management Plan (IPDRMP)
- NEXUS-DRD-008, Service Financial & Service Pricing Structure Definition (SFPSD)
- NEXUS-DRD-009, Training Emulator
- NEXUS-DRD-010, Continuity of Service Operations Plan (CSOP)
- NEXUS-DRD-011, Verification & Validation Compliance Report (VVCR)
- NEXUS-DRD-020, Radio Frequency Link Margin and Dynamic Link Budget Analysis Report (RF-LMDBAR)

Acceptance Criteria:

- The Contractor has established credible initial baselines for the major technical, operational, interface, verification, security, and transition planning products
- Delivered baselines are internally consistent and aligned with the proposed architecture and operational concept
- Initial baselines provide sufficient maturity to support continued design, integration, verification, and demonstration planning activities

- Delivered DRDs are under configuration control and suitable for use as initial programmatic and technical baselines
- TBRs, TBDs, TBCs, identified with acceptable burn-down plans
- Major risks clearly identified with acceptable mitigation plans

Payment 1: 5% of CLIN 2 value.

Milestone 2: Demonstration & Integration Maturity Checkpoint

Delivery and Government acceptance of the following DRDs:

- NEXUS-DRD-001, Service Requirements Compliance Matrix (SRCM)
- NEXUS-DRD-002, Service Demonstration & Validation Plan (SDVP)
- NEXUS-DRD-003, Verification Closure Notices (VCNs)
- NEXUS-DRD-004, External Interface Control Documents (ICDs)
- NEXUS-DRD-005, Security Architecture Definition (SAD)
- NEXUS-DRD-006, Service Transition Plan (STP)
- NEXUS-DRD-007, Intellectual Property & Data Rights Management Plan (IPDRMP)
- NEXUS-DRD-008, Service Financial & Service Pricing Structure Definition (SFPSD)
- NEXUS-DRD-009, Training Emulator
- NEXUS-DRD-010, Continuity of Service Operations Plan (CSOP)
- NEXUS-DRD-011, Verification & Validation Compliance Report (VVCR)
- NEXUS-DRD-018 Demonstration & Integration Maturity Presentation Package
- NEXUS-DRD-020, Radio Frequency Link Margin and Dynamic Link Budget Analysis Report (RF-LMDBAR)

Acceptance Criteria:

- Completion of design, procurement, assembly, integration, and ground verification activities required to produce a flight-ready demonstration system including acceptable link margin results.
- Execution of long-lead procurements and resolution of supply chain constraints sufficient to meet integration and launch schedule.
- Development and verification of ground system infrastructure and support elements shows sufficient maturity.
- System-level verification of all applicable requirements, including ground testing and RF compatibility testing is complete or, if not, quantify the risk being accepted for non-completion.

- Significant reduction or elimination of remaining technical, schedule, integration, and regulatory risks.
- Securing of all necessary licensing, regulatory approvals, and launch services required to support the on-orbit demonstration, including orbital debris/disposal.
- Satisfactory execution of the integrated schedule and price plan through assembly, integration, and ground testing.
- Spacecraft launch details, to include transportation, launch processing, and launch vehicle integration is sufficient to meet NEXUS demonstration needs.
- Acceptance of final demonstration approach and full validation plan.
- Final transition-to-service approach and supporting business case meets NEXUS objectives.
- Final External ICD maturity and interoperability status demonstrate credible interface definitions, interoperability planning, and identification of any open interface risks and planned closure actions.
- The Demonstration Concept of Operations for both on-orbit and ground operations, to include facilities, staffing and procedures, has sufficient maturity to support the DRR schedule.
- The Training Emulator, with documentation, is sufficient to support DRR.

Payment 2: 25% of CLIN 2 value

Milestone 3: Demonstration Readiness Review (DRR)

Delivery and Government acceptance of the following DRDs prior to Spacecraft integration with the launch vehicle:

- NEXUS-DRD-001, Service Requirements Compliance Matrix (SRCM)
- NEXUS-DRD-002, Service Demonstration & Validation Plan (SDVP)
- NEXUS-DRD-003, Verification Closure Notices (VCNs)
- NEXUS-DRD-004, External Interface Control Documents (ICDs)
- NEXUS-DRD-005, Security Architecture Definition (SAD)
- NEXUS-DRD-006, Service Transition Plan (STP)
- NEXUS-DRD-007, Intellectual Property & Data Rights Management Plan (IPDRMP)
- NEXUS-DRD-013, Demonstration Readiness Review
- NEXUS-DRD-020, Radio Frequency Link Margin and Dynamic Link Budget Analysis Report (RF-LMDBAR)

Acceptance Criteria:

- Completion of design, procurement, assembly, integration, and ground verification activities required to produce a deployment ready demonstration service system.

- Development and verification of ground system infrastructure and support elements finalized to support demonstration service deployment.
- System-level verification of all applicable requirements is complete and approved by the Government, or planning is in place to close verification prior to Authority to Connect (ATC) milestone.
- Summary of all requested, approved, and pending deviations and waivers
- Significant reduction or elimination of remaining technical, schedule, integration, and regulatory risks.
- Securing all necessary licensing, regulatory approvals, and launch services required to support the on-orbit demonstration, including orbital debris/disposal.
- Final security posture, including implemented controls, compliance status, cybersecurity readiness, and protection of Government data and interfaces are in place.
- Satisfactory execution of the integrated schedule and price plan through assembly, integration, and ground testing.
- Spacecraft launch details finalized, to include transportation, launch processing, and launch vehicle integration for NEXUS demonstration.
- Acceptance of final demonstration approach and full validation plan.
- Final transition-to-service approach and supporting business case meets NEXUS objectives.
- Final External ICD maturity and interoperability status demonstrate credible interface definitions, interoperability planning, and identification of any open interface risks and planned closure actions.
- The demonstration Concept of Operations for both on-orbit and ground operations, to include facilities, staffing and procedures, in final state to support the demonstration service system deployment schedule.
- The Training Emulator, with documentation, is sufficient to support DRR.
- Final description of intellectual property, data rights, proprietary elements, and Government access consistent with contract requirement

Payment 3: 35% of CLIN 2 value

Milestone 4: Demonstration Performance Validation Review

Delivery and Government acceptance of the following DRDs:

- NEXUS-DRD-001, Service Requirements Compliance Matrix (SRCM)
- NEXUS-DRD-002, Service Demonstration & Validation Plan (SDVP)
- NEXUS-DRD-003, Verification Closure Notices (VCNs)

- NEXUS-DRD-004, External Interface Control Documents (ICDs)
- NEXUS-DRD-005, Security Architecture Definition (SAD)
- NEXUS-DRD-006, Service Transition Plan (STP)
- NEXUS-DRD-007, Intellectual Property & Data Rights Management Plan (IPDRMP)
- NEXUS-DRD-008, Service Financial & Service Pricing Structure Definition (SFPSD)
- NEXUS-DRD-009, Training Emulator
- NEXUS-DRD-010, Continuity of Service Operations Plan (CSOP)
- NEXUS-DRD-011, Verification & Validation Compliance Report (VVCR)
- NEXUS-DRD-015, Demonstration Performance Validation Package
- NEXUS-DRD-020, Radio Frequency Link Margin and Dynamic Link Budget Analysis Report (RF-LMDBAR)

Acceptance Criteria:

- Verified compliance with all applicable performance requirements in Attachment A.2 SRD through delivered and approved verification data and demonstration activities.
- Validated system function and performance through on-orbit execution and ground infrastructure.
- Completed a minimum 30-calendar-day on-orbit performance measurement period after ATC and provided sufficient data, performance results, and operational evidence for NASA to evaluate the applicable demonstration success criteria and applicable SRD thresholds.
- Demonstrated viability of the relay services while operating on-orbit through successful execution of end-to-end concurrent forward and return relay services between the customer vehicle and the Ground Service Interface.
- Successfully supported heritage TDRS customer vehicle communications without requiring customer vehicle modifications, proving backward compatibility.
- Reduced technical and integration risks to enable confident transition to sustained service.
- Produced measurable performance, availability, operational, schedule, cost, user-integration, and service-assurance data to inform future sustained-service planning.
- Complete documentation of all demonstration results with all anomalies resolved or properly dispositioned.

Payment 4: 30% of CLIN 2 value

Milestone 5: CLIN 2 Completion.

Acceptance Criteria:

- The Government will make the remaining 5% payment of the CLIN 0001 value after the Government approves that all CLIN 0001 requirements are acceptably completed by the Contractor.

Payment 5: 5% of CLIN 2 value

CLIN 3

There are no payment milestones for CLIN 3. The Government will make 100% payment of the CLIN 0003 value after the Government approves that all CLIN 0003 requirements are acceptably completed by the Contractor.