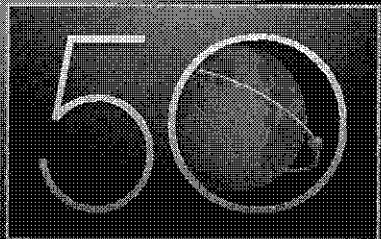
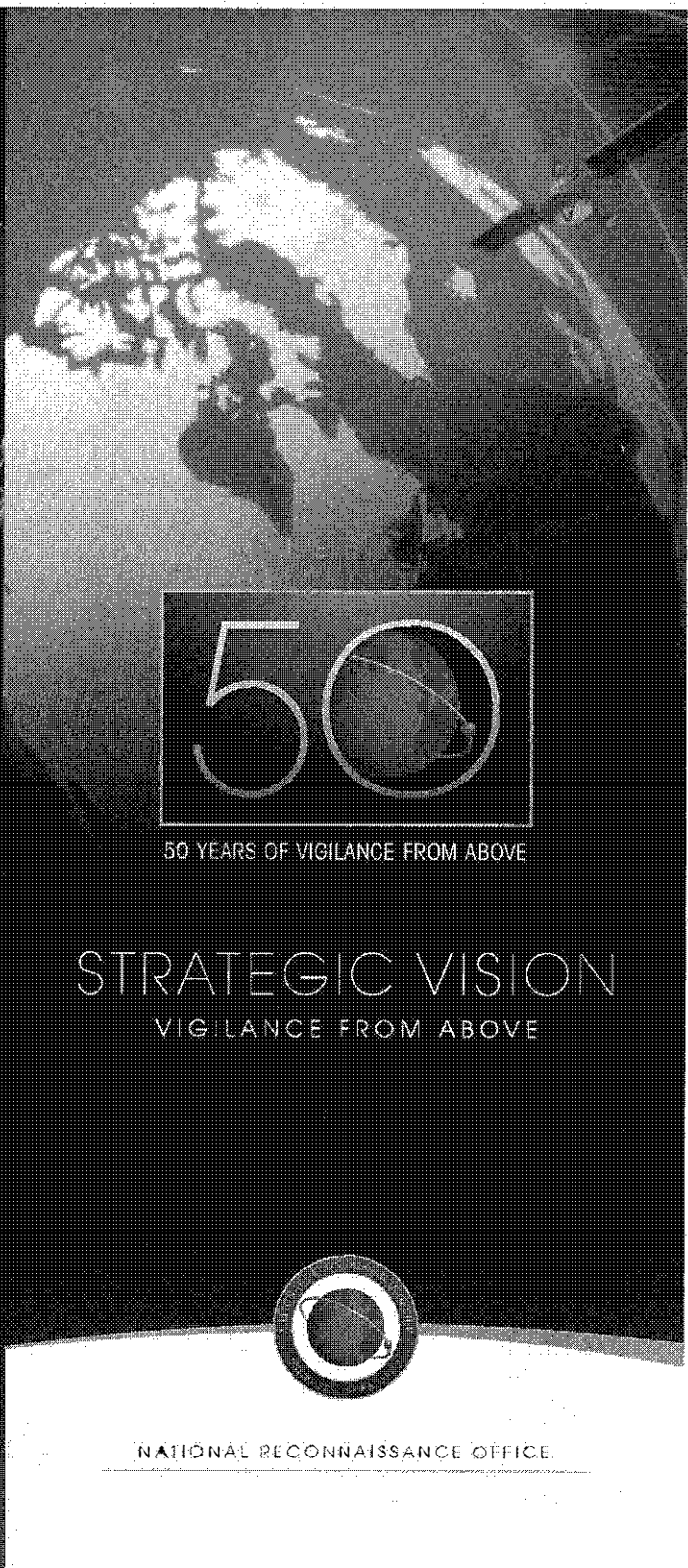
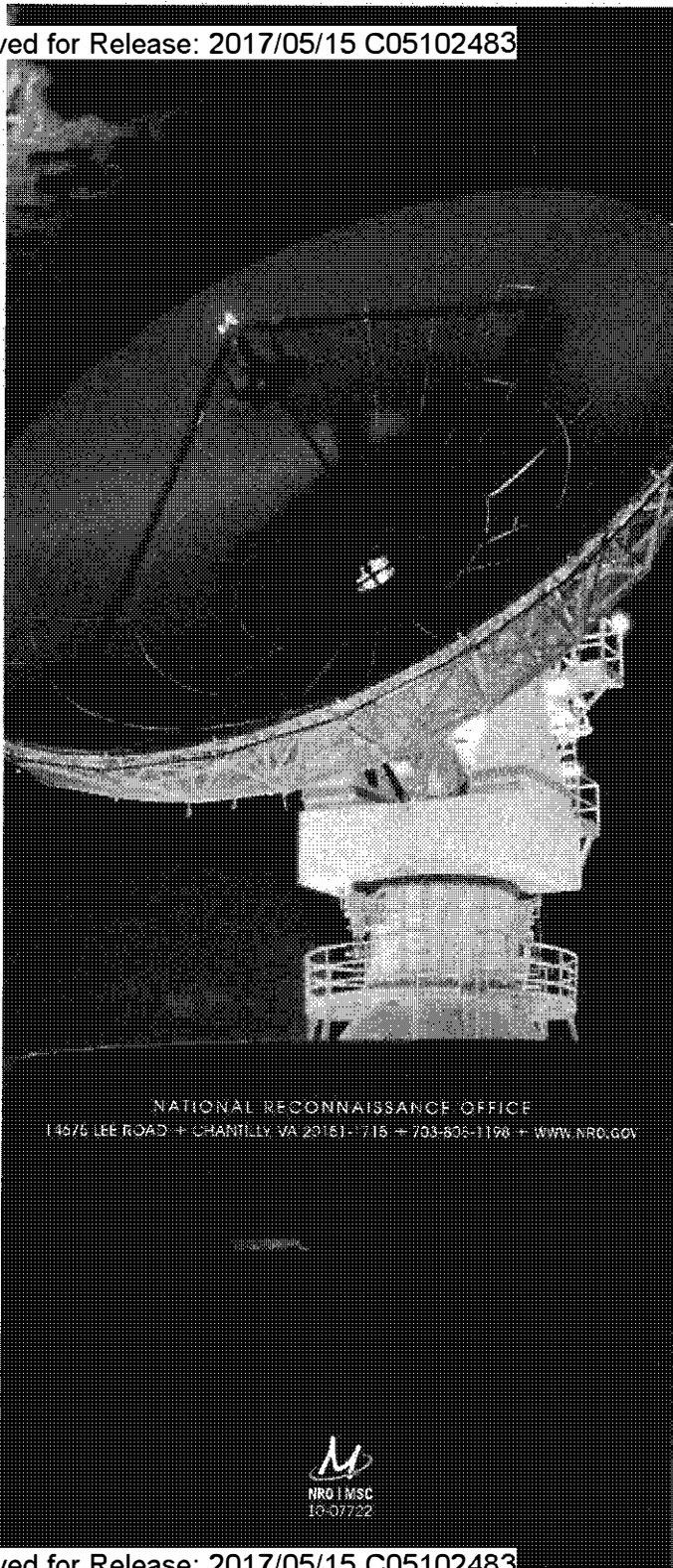


INNOVATIVE OVERHEAD INTELLIGENCE SYSTEMS FOR NATIONAL SECURITY



CORE VALUES

- + Integrity and Accountability
- + Mission Excellence
- + Teamwork Built on Respect and Diversity



50 YEARS OF VIGILANCE FROM ABOVE

STRATEGIC VISION

VIGILANCE FROM ABOVE

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NATIONAL RECONNAISSANCE OFFICE



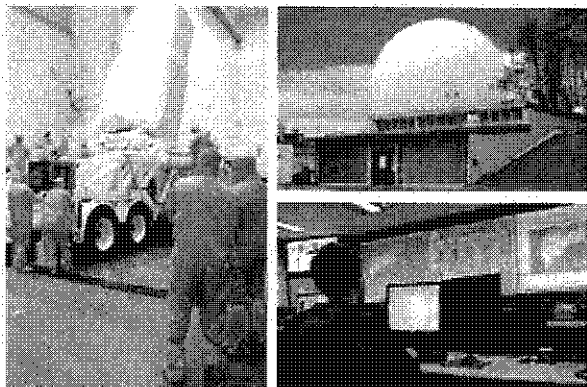
VIGILANCE FROM ABOVE

The NRO will continue to deliver innovative overhead intelligence systems for national security. The course of our second 50 years, like our first, will be guided by our core values of *Integrity and accountability, mission excellence, and teamwork built on respect and diversity*. Our focus will be squarely centered on the strategic goals detailed herein, critical to realizing our vision of *Vigilance From Above*.

Since its founding in 1961, the NRO has consistently answered the call to develop and operate state-of-the-art overhead capabilities. NRO systems provide the foundation for global situational awareness, and address the nation's toughest intelligence challenges. NRO systems are frequently the only collectors with access to critical areas of interest, and data from overhead sensors provides unique information and perspectives not available from other sources. Intelligence collected by NRO systems has provided advance warning of potential military aggression, identified weapons of mass destruction programs, supported traditional military and counterinsurgency operations, and located and tracked targets of highest interest. NRO systems have also been critical to enforcing arms control and environmental treaties, and supporting humanitarian relief efforts.

We can do even more.

The people we serve, from our forces in the field to the President of the United States, are counting on us to develop the capabilities necessary to meet both the collection and the threat challenges of the 21st Century. Doing so will require us to have a clear vision for the future of overhead reconnaissance, and the means to achieve it. We must enhance our own systems and processes through new technologies and innovative techniques, and form even closer relationships with partners across the Intelligence Community (IC), Department of Defense (DoD), and allied nations.



STRATEGIC GOALS

Improve foundational capabilities vital to the National Intelligence mission and integral to DoD operations

- + Ensure the health, availability, and security of the current overhead constellation and associated communications networks and ground stations
- + Leverage commercial information technology whenever possible to reduce operating and infrastructure costs, allowing additional investment in the innovative and the revolutionary
- + Apply our engineering expertise and ingenuity to extend and expand the mission utility of our on-orbit assets
- + Restore rigor and discipline to acquisition management to ensure new systems are available when needed and when promised

Collaborate to deliver intelligence capabilities possible only through multi-INT, multi-platform, and multi-domain solutions

- + Apply systems engineering excellence to integrate NRO systems across the enterprise, improving the ease, efficiency, and effectiveness of delivering new capabilities
- + Improve the connectivity and integration of the NRO enterprise to other IC, DoD, and allied systems to allow a "total force" approach to solving intelligence problems

Develop the cutting-edge systems and the innovative techniques necessary to overcome the toughest intelligence challenges and stay ahead of the threat

- + Advance promising, revolutionary technologies and demonstrate their potential to deliver capabilities others think impossible
- + Insert innovative space collection technologies and develop new techniques for NRO acquisition programs to close known collection gaps or vulnerabilities
- + Deliver the rapid reaction capabilities necessary to respond to critical user needs, and ensure customers know how to use NRO capabilities to maximum advantage

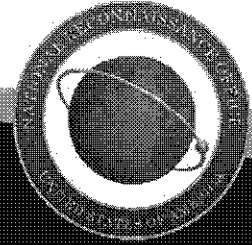
Strengthen, and stabilize our workforce

- + Develop and maintain a stable cadre of experienced and highly qualified engineering and acquisition professionals to ensure NRO can deliver on its commitments to achieve mission success
- + Leverage the diversity of the NRO's multiple career services to ensure NRO enterprise needs are effectively met
- + Develop the next generation of leaders and experts

Take the lead for the Intelligence Community in Space

- + Partner with others in the Space community to ensure an industrial base capable of delivering the overhead capabilities necessary to meet Community needs
- + Ensure a policy environment that provides the flexibility necessary to sustain and extend overhead intelligence collection capabilities
- + Proactively support all NRO and IC satellite programs in gaining timely, affordable, and successful access to space

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(U) FY15 NRO Enterprise Plan:

Enabling the Strategic Vision

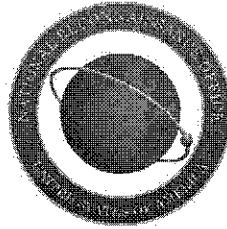
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National Reconnaissance Office



(U) FY15 NRO Enterprise Plan: Enabling the Strategic Vision

19 April 2013

(U) Prepared by: Office of Chief Architect,
Systems Engineering Directorate

CLASS ID:
DECL ON: 25X1, 20630128, NRO RRG 2012
DRV FROM: NRO INCG 1.0, 13 Feb 2012

When used herein, REL means REL TO USA, FVEY

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(U) Enabling the Strategic Vision

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1. (U) INTRODUCTION

(U) The National Reconnaissance Office (NRO) faces a complex and rapidly changing national security environment in which nation-states, highly capable non-state actors, and other transnational forces will continue to compete, challenge, and counter U.S. overhead intelligence collection. To deliver innovative Multi-INT, Multi-platform, and Multi-domain solutions, the NRO continues its transformation to an integrated enterprise architecture focused on performance, affordability and resiliency initiatives.

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» (U//FOUO) Improve affordability by lowering total cost of ownership of NRO systems through application of evolutionary acquisition and commercial-based acquisition processes, and transition to a single Infrastructure Support Provider (ISP) for the NRO.

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(U) Document Purpose

(U) A key part of the NRO's annual planning and programming cycle, the NRO Enterprise Plan (NEP) serves the following functions:

- » (U) **Communication vehicle to align strategic plans and priorities:** The NEP provides details supporting the NRO Strategy and Vision. It describes the NRO enterprise architecture strategic priorities and drivers in the context of Intelligence Community (IC) needs, challenges, and operating environments (Section 2); defines the NRO architecture vision and describes the NRO's FY14-18 implementation plan (Section 3).

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- » (U) Corporate reference to guide development of Intelligence Program Budget Submission (IPBS) initiatives and annual Program Planning and Budget Execution (PPBE) process; The NEP establishes the technical foundation for the NRO Planning Guidance (NPG) and defines the strategy and implementation plan for evolving towards an integrated NRO enterprise architecture.

(U) Specifically, this release of the NEP:

- » (U) Defines and documents the NRO future architecture introduced with the FY14 IPBS submission; and,
- » (U) Influences the development of FY15 IPBS initiatives.

2. (U) NRO ENTERPRISE ARCHITECTURE STRATEGY AND DRIVERS

~~(S//REL)~~ The NRO supports U.S National Security objectives by providing innovative overhead intelligence systems that provide global oversight, timely response to strategic surprises, and critical unique support to areas / problems of interest. The growing complexity and contested environment of current and future intelligence problems present a significant challenge to the NRO to continued delivery of these capabilities. As current and new targets evolve, the NRO architecture must remain flexible to develop new capabilities by responsively adapting existing means and efficiently incorporating new developments to ensure effective support to intelligence tasks. The NRO continues its transformation to an integrated enterprise architecture, encompassing both mission and business systems. The integrated enterprise architecture will take full advantage of existing capabilities, current and emerging technology, commercially available capabilities and investment, and IC-wide IT investment. Transformation of the architecture will be guided by the following principles.

(U) ENHANCE ARCHITECTURE PERFORMANCE

~~(S//REL)~~ The NRO will continue investments in Multi-INT, Multi-platform, and Multi-domain solutions to satisfy current and future intelligence needs. The NRO will

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(U) Enabling the Strategic Vision

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The NRO will continue to improve mission interoperability with its partners. The NRO will make

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In addition, the NRO will explore new methods and solutions to address the emerging

(U) Provide Problem-Driven, Multi-INT Management

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(U) Conduct Target-Driven Collection

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~~(U) Provide Innovative Multi-INT~~

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(U) Enabling the Strategic Vision

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(U) Integrate Mission Processing

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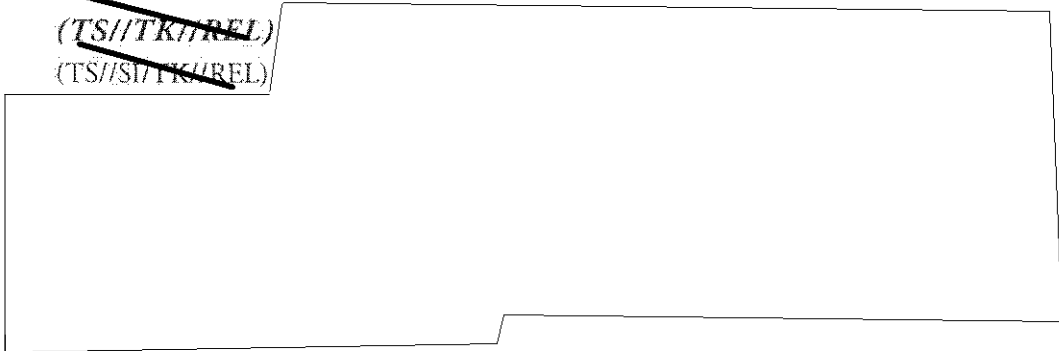
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(U) DELIVER ARCHITECTURE AFFORDABILITY

~~(U//FOUO)~~ The NRO will focus on lowering the total cost of ownership of future major system acquisitions (MSAs) and enterprise-wide operations to cost-effectively shorten delivery timelines, reduce life cycle costs, and maintain a balanced portfolio risk posture.

(U) Employ Evolutionary Acquisition Processes

~~(U//FOUO)~~ The NRO will employ Evolutionary Acquisition (EA) processes to evolve and insert new capabilities into the integrated future architecture (e.g. future collection platforms, mission applications, processing). Evolutionary Acquisition is an "incremental capability" block approach in which Milestone Decision Authority approval for authorization to proceed is sought for the initial increment to develop and deliver a core overhead capability. Capability improvements to address dynamic and uncertain futures are addressed as Technology Development Major System Acquisition (MS-T) initiatives for technology insertion in subsequent increments of the core program. If sufficient capability improvement technology readiness level is not attained by the scheduled technology insertion point, the core overhead capability proceeds as planned rather than

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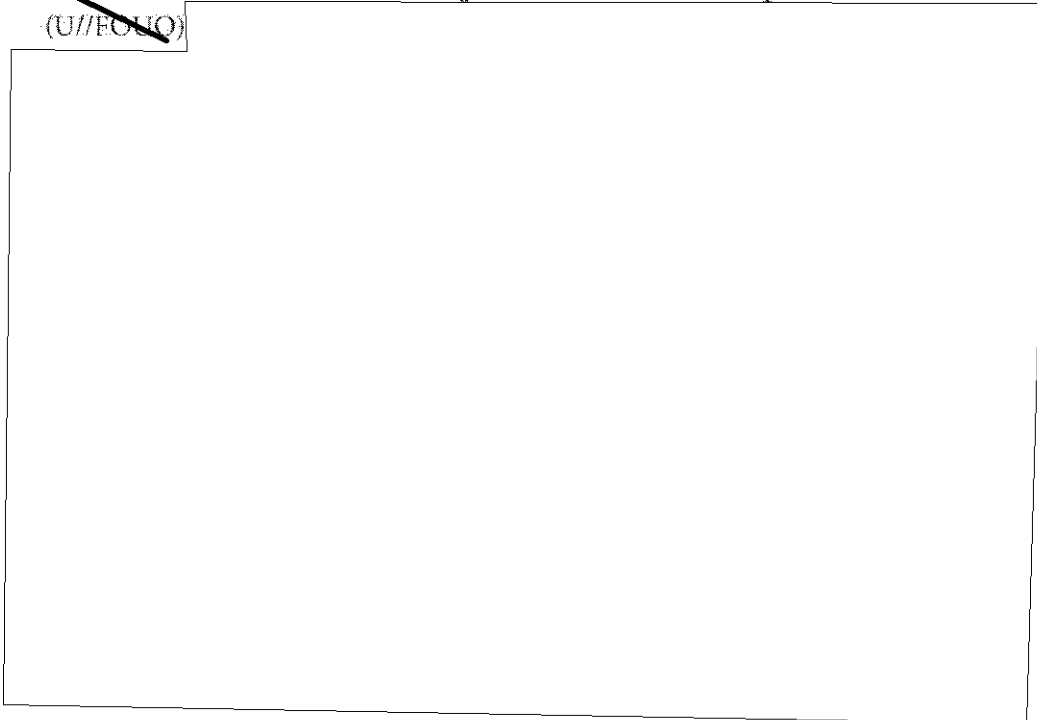
be delayed and incur additional cost and risk. This modified EA approach will help stabilize the industrial base by establishing consistent development intervals or cycles based on a reliable core program and preservation of selected U.S. industrial capabilities.¹

(U) Employ Commercial-Based Acquisition Processes

~~(U//FOUO)~~ When appropriate, the NRO will use commercial-based acquisitions to control both acquisition and operations costs for those capabilities / systems where future needs are more stable and predictive and/or where a significant similar commercial market exists, e.g., space and terrestrial communications, infrastructure, etc.

(U) Transition to a Common Infrastructure and Enterprise Services

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(U) PROVIDE ARCHITECTURE RESILIENCE

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¹ NRO Director Policy Note 2011-06, *Preserving Critical Space Technology Resources*, 12 April 2011.

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(U) Mitigate Attempts to Deny NRO Enterprise Operations

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(U) Contribute to U.S. Government Space Situational Awareness (SSA)

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3. (U) ARCHITECTURE VISION AND IMPLEMENTATION PLAN

(U) INTEGRATED NRO FUTURE ARCHITECTURE

~~(S//TK//REL)~~ To achieve its vision, the NRO will implement an **Integrated NRO**

Future Architecture; focused on

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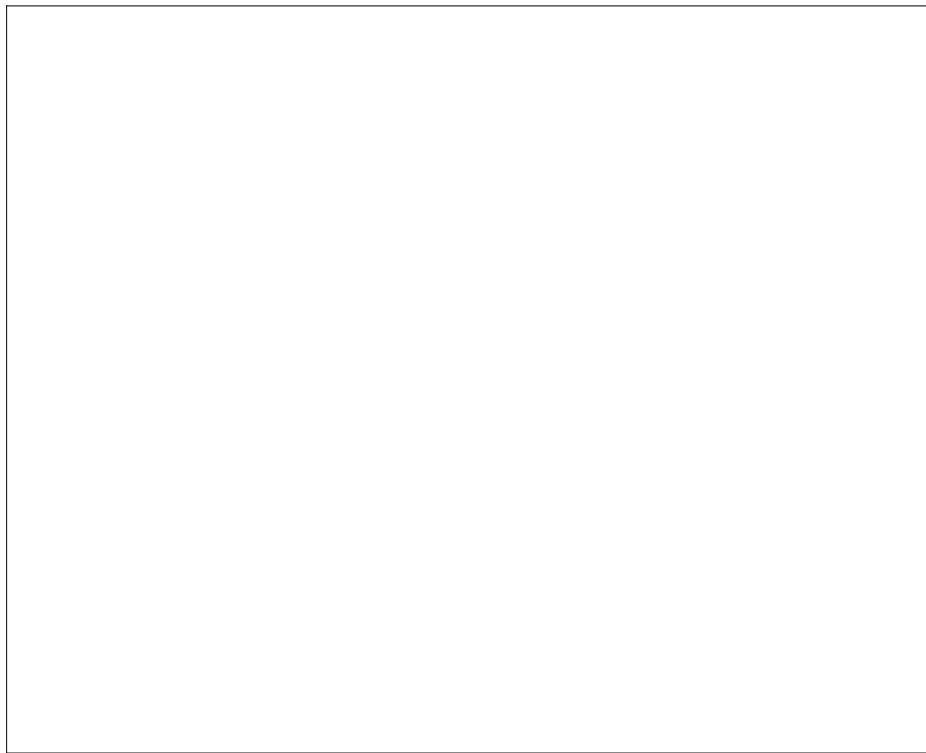
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(U) The **Integrated NRO Future Architecture** is described as an integration of Ground, Collection, and Transport layers (See Figure 3-1).

Figure 3-1: (U) Top-level NRO Mission Architecture Operational View

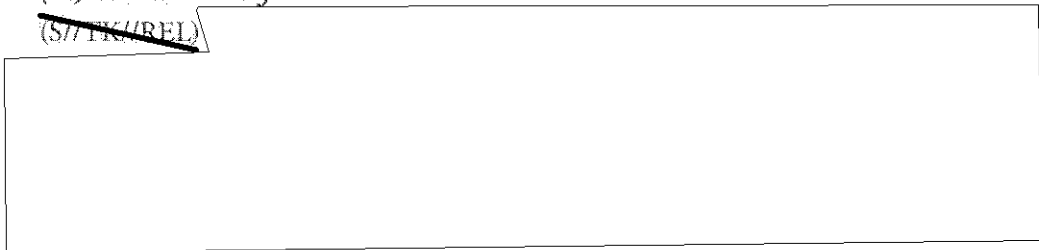


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(U) Ground Layer

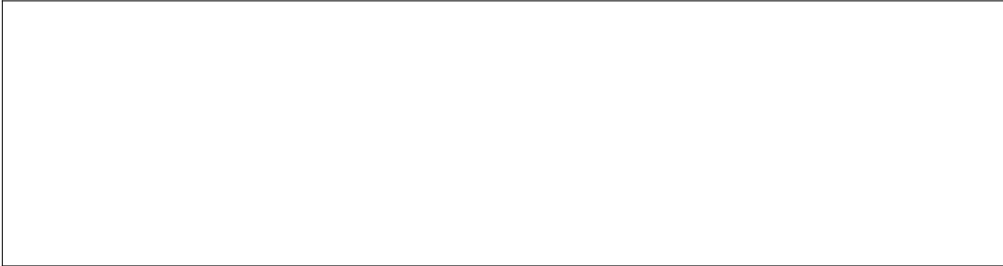
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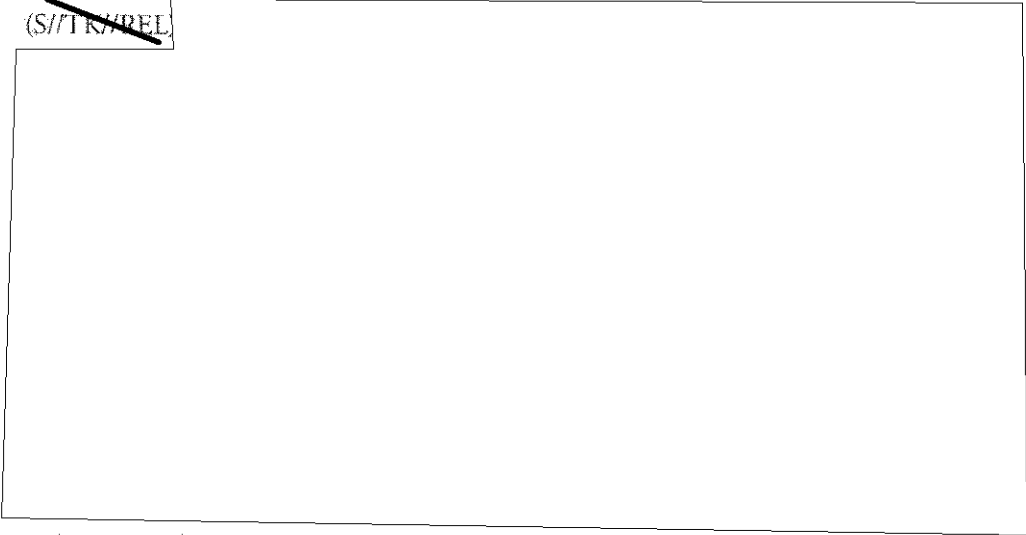


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~~(U//FOUO)~~ A single NRO Infrastructure Service Provider (NISP) will be responsible for the acquisition, availability, and performance of all NRO infrastructure and common services to include compute, storage, networks, and enabling commercial software. The NISP will deliver a common infrastructure to enable an integrated multi-INT Community environment (operations, maintenance, collection, products) across all mission ground sites. The NISP provides standardized infrastructure and common enterprise services to enable site-agnostic integrated ground operations through instantiation of mission applications at any site. All NRO systems and applications will migrate to this common infrastructure and leverage the enterprise services.

(U) Collection Layer

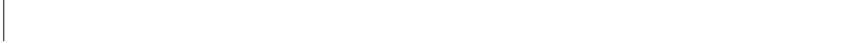
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(U) GEO Collection Regime

» ~~(S//TK//NF)~~ The Geosynchronous (GEO) Collection Segment consists



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(U) LEO Collection Regime

» ~~(S//TK//REL)~~ The Low Earth Orbit (LEO) Collection Segment consists

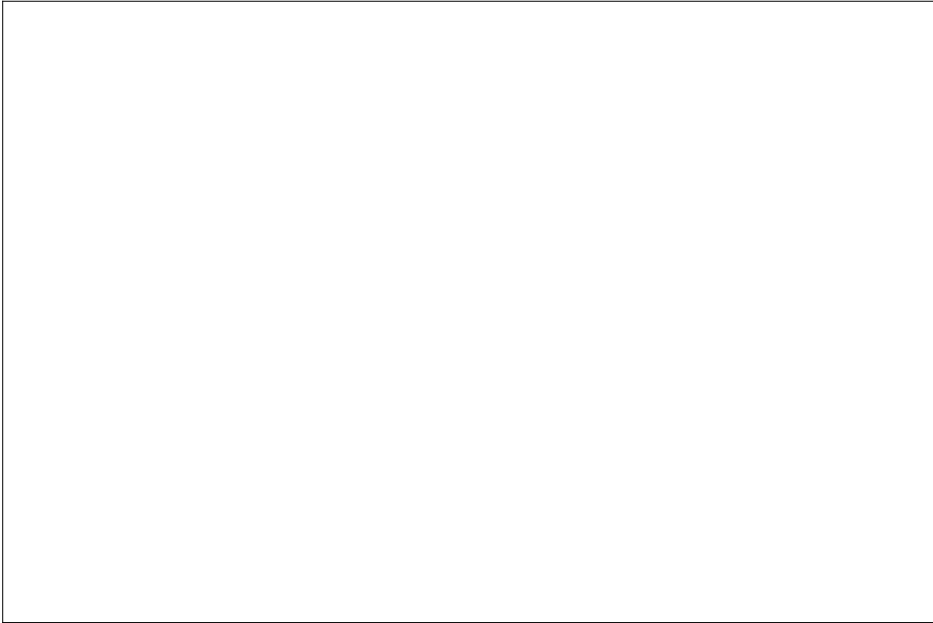
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(U) Enabling the Strategic Vision

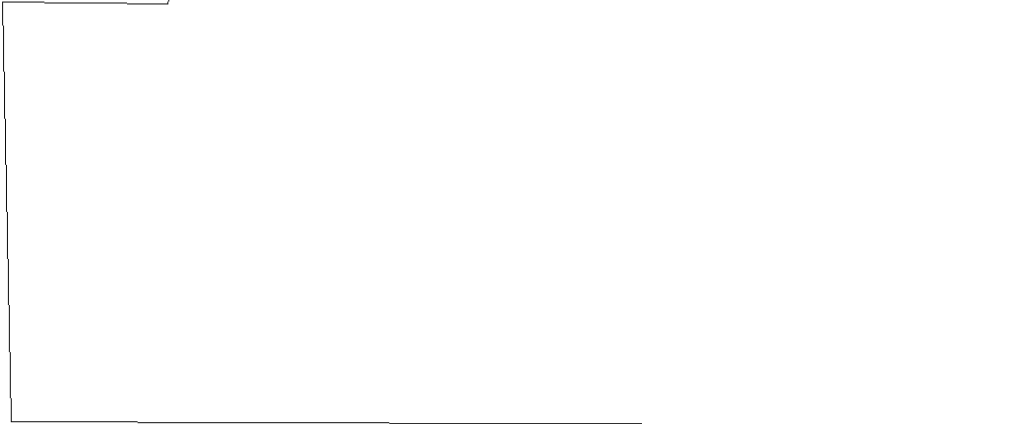
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(U) Transport Layer

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In addition to supporting normal NRO operations,
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(U) Terrestrial Communications

- » ~~(U//FOUO)~~ Terrestrial Communications (TCOMM) provides reliable, secure wideband communications and services between NRO operating locations, and connectivity to external networks.

(U) Technology Investments

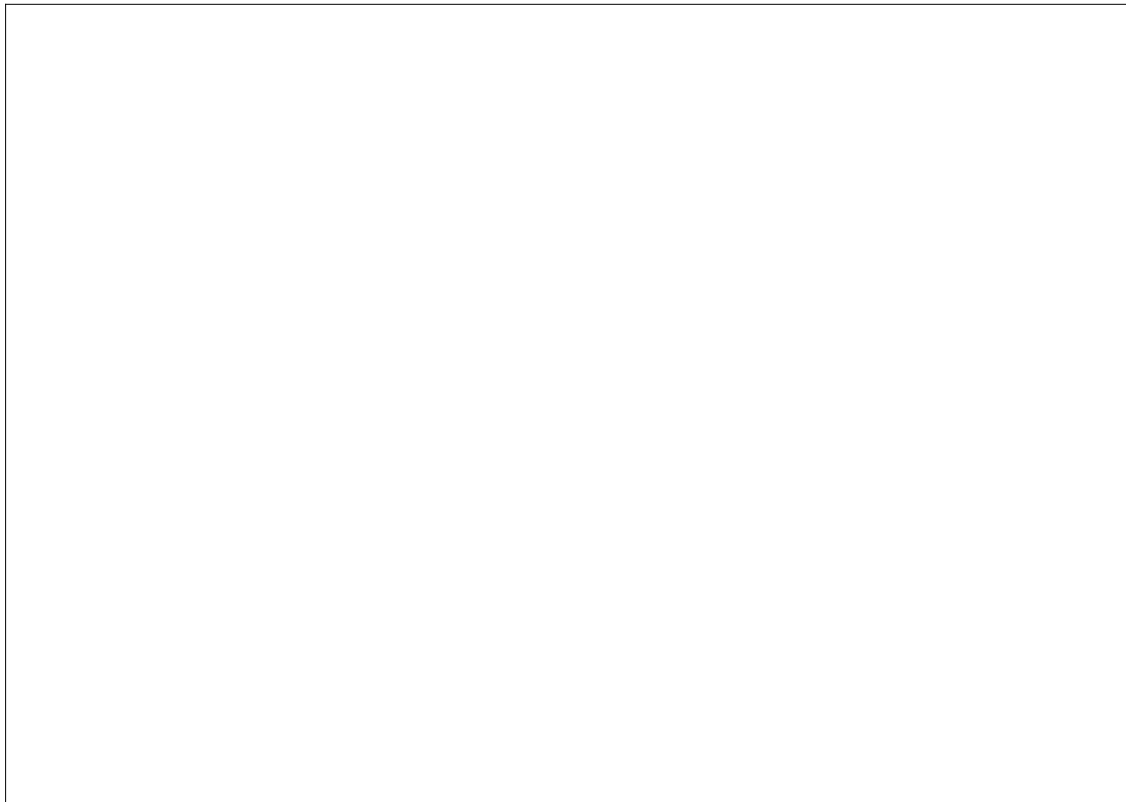
~~(U//FOUO)~~ The NRO will continue research and development of solutions necessary for new and affordable capabilities critical to keeping pace with changing threats and targets. The NRO will integrate these new capabilities (e.g., spacecraft components, sensors, mission management, collection, processing) with existing activities to provide effective multi-INT mission support to address hard intelligence problems, leverage NRO enterprise infrastructure and services, and effectively transition into the NRO future architecture.

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(U) IMPLEMENTATION PLAN

Figure 3-2: (U) FY14 CBJB NRO Future Architecture Roadmap



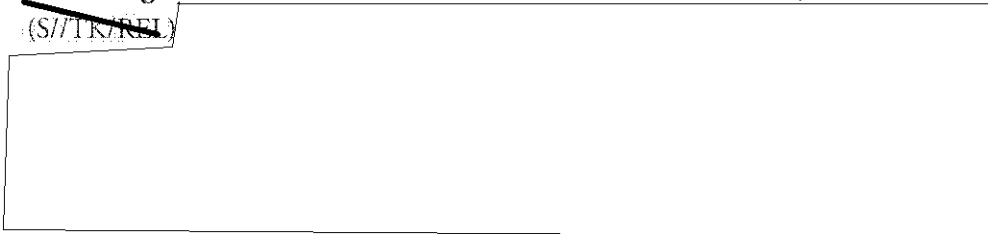
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(U) The above figure provides the FY14 CBJB NRO plan towards implementing the future architecture vision. The plan to transition from current to future NRO systems is described below.

(U) Integrated Overhead SIGINT Architecture (IOSA)

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(U) Electro-Optical

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(U) Synthetic Aperture Radar (SAR)

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(U) Mission Transport Service (MTS)

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(U) Ground Enterprise

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