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COMMERCIAL GEOINT STRATEGY



NGA
NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

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VISION

COMMERCIAL GEOINT: DELIVERED AT THE SPEED OF DECISION MAKING. BUILT INTO OUR BUSINESS.

NGA's customers require a broad range of services, including the delivery of geo-referenced imagery and data, Foundation GEOINT products and services, and intelligence analysis. Increasingly, many customers operate on dramatically reduced timelines, driving a need for persistence—collection at the speed of the observable—from multiple sources. Accordingly, some customers are now willing to consider a trade of confidence level for speed, in order to support both operational and policy decision cycles. NGA needs to meet these new customer desires as well as the traditional requirement for high-confidence analysis.

To meet these new customer needs and the continually increasing level of traditional ones, NGA is adopting a new **Commercial GEOINT Strategy**. This strategy will foster a more diverse, resilient, agile, and responsive GEOINT program that provides seamless user access to the best mix of commercial GEOINT (including imagery, analytic products and services, and contextual information and knowledge) to fulfill National System for Geospatial-Intelligence (NSG) and Allied System for Geospatial-Intelligence (ASG) mission needs. The remote-sensing industry's evolving global coverage, rapid revisit rates, diverse spectral content, aggregation of open source venues, and growing analytic capabilities will allow NGA to “embrace emergent commercial capabilities with the same dynamism that we embraced National Technical Means (NTM) decades ago.”¹

Director Cardillo's **2015 NGA Strategy** addresses increased customer demand for actionable GEOINT services and new opportunities for using geospatial big data analytics to answer our hardest questions. Flowing from the NGA strategy, a forthcoming NGA GEOINT Concept of Operations (CONOPS) will highlight NGA's commitment to harnessing unclassified sources of GEOINT as the foundation for global awareness and persistence. The explosion and diversity of unclassified sources provides exploitation opportunities that can deliver greater background and context to enhance the focus of our national assets against hard problems and knowledge gaps. NGA requires a seamless integration of all GEOINT, regardless of source or classification, to enable anticipatory analysis and to create online, living knowledge that reduces the time between questions and answers—thereby providing faster and more consequential impact. NGA's plan for harnessing unclassified GEOINT spans all domains—space, air, surface, subsurface, and cyber²—and relies heavily upon commercial providers bringing their unique data, services, and rapid innovation together to strengthen the value of GEOINT.

Today, commercial sources are critical to NGA's mission success, and their importance will only increase into the future. The increased global coverage these sources provide is a key enabler for persistent GEOINT and the sheer numbers of commercial satellites and satellite operators will increase the collective resiliency of overhead architectures. Furthermore, multiple companies, operating independently, with geographically dispersed downlink and ground architectures will significantly increase collective commercial diversity, providing resiliency on the ground as well. Many of the emerging commercial providers are also planning extensive contextual and analytic capabilities, integrating information from remote sensing, social, economic, and other sources into new product classes. These multiple approaches using varying sources to provide analysis against specific problem sets also contributes to overall resiliency.

This **Commercial GEOINT Strategy** establishes a roadmap for preparing the community and workforce for new sources, instantiates new, more agile acquisition models, and integrates the commercial sources to provide easy customer access. This strategy will enable NGA to move toward: greater unclassified operations; more production and publication of unclassified intelligence; and the augmentation of unclassified intelligence with classified sources when required.

¹ D/NGA Spark Blog post: “Raising the bar together.” 3 April 2015.

² Persistent GEOINT Concept of Operations (CONOPS) for the 2022 Era

“The questions that arise from the persistence of geospatial data streaming from hundreds of overhead platforms covering the earth multiple times a day are staggering. The challenges of taking advantage of all that data are daunting.”

– Director Cardillo to the House Armed Services Committee on Strategic Forces on 25 March 2015

NGA must harness the rising bow wave of persistence from established and emerging commercial GEOINT providers to deliver an expanding spectrum of GEOINT offerings (imagery, open source, analytic products, and other services) at the speed of decision making. As commercial GEOINT offerings evolve from just pixels to imagery-based analytics, most commonly delivered as services, NGA will capitalize on this commercial revolution (see Figure 1). This will allow its workforce to transform their tradecraft from traditional reconnaissance imagery analysis, which is becoming increasingly commoditized, to a practice of geospatial analysis applied to a fast-flowing stream of big and increasingly diverse commercial and national data sources. By exploiting a continually expanding suite of commercial data extraction, processing and reporting services, NGA analysts will increase their ability to exploit commercial GEOINT within the decision cycles of our intelligence, tactical, and Foundation GEOINT customers.

Domestic and foreign companies are using lower cost development approaches to deliver unprecedented revisit rates through constellations of satellites that, collectively, number in the hundreds. NGA will achieve a dramatic transformation by harnessing this ongoing increase in persistence, and the growing demand for business intelligence built on that persistence, by using commercial GEOINT in ways that have never before been possible.

This Commercial GEOINT Strategy deliberately establishes an environment that allows us to discover and answer these questions, it helps us identify and meet these challenges and it ensures we continually improve our consequence to our customers.

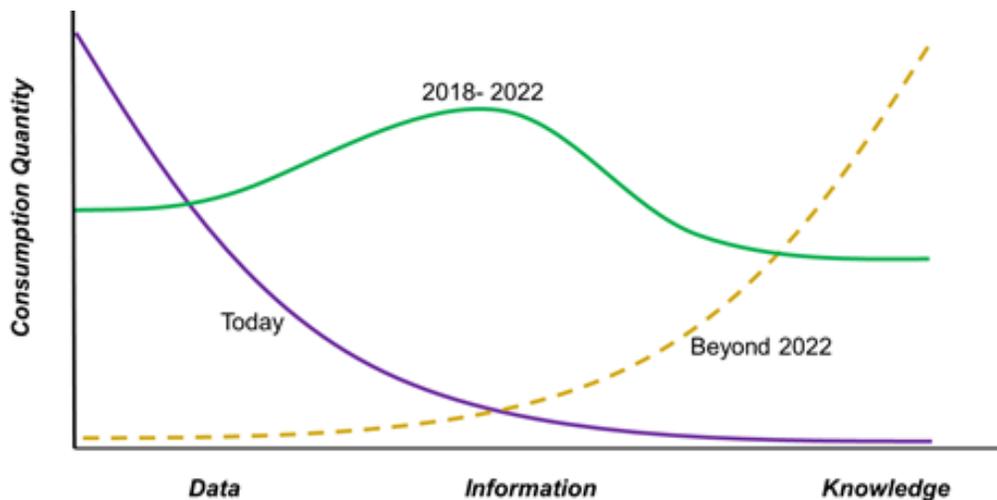


Figure 1: NGA commercial GEOINT strategy supports the migration from acquisition of just raw data such as pixels and imagery to analytic and contextual products.

STRATEGY

NGA's Commercial GEOINT Strategy articulates both customer-focused objectives and a set of implementation imperatives that guide the actions necessary to achieve these objectives.

Customer Consequence Objectives:

- Enable our intelligence customers to make informed decisions in operationally relevant timelines by supplying increasingly diverse imagery, intelligence products and services.
- Minimize uncertainty, reduce loss of life and improve mission success for our tactical customers by providing timely and relevant commercial data, information and knowledge—provided where they need it, in a form and in domains where they can readily consume and share it.
- Improve awareness, insight, and understanding for our many Foundation GEOINT customers by supplying increasingly persistent and diverse commercial data streams, Foundation products, and services that enable Map of the World's feature-rich GEOINT on demand, as well as other vectors of Foundation GEOINT.

The following implementation imperatives establish an adaptive framework that moves smoothly with, and profits from, what Mr. Cardillo has characterized as the “Seismic Shift” that will continue in the GEOINT industry. Focusing our implementation of this Strategy on the ever-evolving needs of our customers is essential to NGA's success.

Implementation Imperatives:

- Learn and understand the evolution of the commercial GEOINT industry as it occurs through a collaborative relationship network that: engages and informs our industry partners; become a force multiplier for our government partners; and ensures we satisfy the evolving needs of our customers in a timely manner.
- Explore, experiment, and evaluate commercial GEOINT data and products, analytic services, and knowledge building methodologies as they evolve, to discover the art of the possible, the reality of their potential, and the feasibility of integrating them into the NSG and ASG.
- Acquire and deliver mission relevant commercial GEOINT capabilities that are sufficiently mature and can be efficiently integrated—always with the goal of improving mission success for NGA's customers and adapting to their evolving needs.
- Adopt and institutionalize commercial GEOINT capabilities as a core component of our mission-driven operations.

These implementation imperatives support all of NGA's intelligence, defense, and civil support missions. Inherent in these objectives and initiatives is the assurance that NGA's information technology infrastructure will be prepared and able to integrate these evolving GEOINT sources and data streams. Exploration, experiments, and evaluation of commercial GEOINT sources will provide not just assessments of the utility of the sources, but will also provide technical requirements for integration: volumetrics, throughputs, metadata definitions, and other related specifications necessary to prepare for efficient and easy customer access.

Importantly, this Commercial GEOINT Strategy also ensures that NGA continues to support ongoing Foundation GEOINT and intelligence commercial GEOINT needs during a period of both rapid industry change and the transformation of NGA. Commercial GEOINT will pave the way for our architecture, processes, and tradecraft to rely predominately on unclassified data and services.

THE PATH

IMPLEMENTING GREATER CONSEQUENCE

All of the implementation imperatives below inform and shape the future acquisition approaches for Commercial GEOINT. These acquisition approaches—what NGA buys and how it buys it – must deliberately evolve as the new Commercial GEOINT industry evolves, grows, and matures.

NGA's future acquisitions must accommodate two realities that are in dynamic tension: (1) real innovation is fueled by diversity, and (2) fiscal resources have become more constrained and will remain so. In addition, Commercial GEOINT acquisition must be agile. Agility ensures that our acquisitions keep pace with the rate of industry innovation and can change course—as warranted—as the industry evolves. In order to procure emerging commercial GEOINT capabilities that better meet our mission needs, we must also remain agile enough to readily divest ourselves of less effective capabilities. Likewise, as we capitalize on increasingly diverse commercial capabilities, we must also leverage opportunities to increase resilience.

The implementation imperatives in this strategy consist of four distinct, but interweaving “lanes” of action. While actions in one lane may necessarily precede actions in another, all of these lanes are continuously moving forward. In fact, NGA is already engaged in several initiatives across the Agency and the GEOINT community that fit into these lanes. This Commercial GEOINT Strategy, along with defining new actions, establishes the interrelationship between those existing initiatives and the path forward for the systematic integration of new commercial capabilities into the GEOINT enterprise.

The “seismic shift” will not subside; rather the pace of evolution in the commercial GEOINT industry will likely accelerate. Keeping pace with this evolution, living with continuous change, and adapting or adopting those emerging capabilities that can best improve consequence for GEOINT customers will remain the core of NGA's normal operations.

Implementation Imperative 1:

Learn and understand the evolution of the commercial GEOINT industry as it occurs, through a network of collaborative efforts that engage and inform our industry partners, becomes a force multiplier for our government partners, and ensures NGA satisfies the evolving needs of our customers in a timely manner.

NGA must adopt and maintain a proactive, but not prescriptive posture regarding advances in the commercial GEOINT industry and with technology advances in general. We will expand our current engagement with industry to improve their understanding of NGA's needs, and influence them as appropriate in order to shape the GEOINT future. NGA's messaging to industry will be spearheaded by the Agency's senior Industry Innovation Advocate. In addition, the execution of the commercial GEOINT strategy will remain closely aligned with the goals and direction of senior leadership (e.g., the GEOINT Solutions Marketplace initiative).

We will engage with our NSG/ASG stakeholders and customers continuously. We will actively collaborate with those partners and customers who are currently developing their own strategies for understanding and capitalizing on emerging commercial GEOINT capabilities. We will draw on their lessons learned, as well as our own, to inform our commercial GEOINT acquisition approach - which must necessarily evolve as the industry itself evolves and matures. Doing so provides many bilateral benefits. We multiply the return on our respective investments in developing knowledge capital, and NGA benefits from direct insight into our customers' perspectives. Open, early communication and honest exploration of issues—including fiscal constraints—provides a transparency that instills in our customers a sense of confidence, knowing that NGA hears and is responsive to their voices.

Our engagement with industry, hand-in-hand with our mission partners, will be just as open and transparent. We will gain deep understanding of emerging providers' business models, capability and deployment schedules, and targeted markets. Our engagements with industry will vary widely, because each company is unique and continuously evolving. We will collaboratively explore opportunities to partner with these emerging providers, seeking to discover the best alignment between our mission needs and their business objectives. Honest and early exchanges

will ensure NGA develops sufficient understanding of the emerging provider to assess the value of their continued engagement. Commercial GEOINT providers will similarly benefit from an early understanding of NGA's mission needs, interest, and contractual boundaries. Armed with this insight, companies can make better informed decisions whether or not to align their own capital investments with NGA's needs. It is inevitable that, in some cases, there will be insufficient business incentives for continued engagement with NGA.

Importantly, NGA must also inform and collaborate with oversight and policy makers. The ability of commercial GEOINT providers—especially satellite operators—to be effective and responsive mission partners requires governmental policies that do not hamper innovation. Equally important is a common understanding that our budgetary decisions also drive how well industry perceives NGA as a partner.

These engagements, coupled with the technical evaluation approaches outlined in Implementation Imperative 2 below, underpin the NGA Director's objective to develop successful partnerships. The success of the partnerships between NGA and the emerging commercial GEOINT companies will depend on mutual transparency and openness to all sources that add insight. This will ensure that we are able to excel in the open.

Implementation Imperative 2:

Explore, experiment, and evaluate commercial GEOINT data sources, analytic services, and knowledge building methodologies as they evolve, to discover the art of the possible, the reality of their potential, and the feasibility of integrating them into the NSG and ASG.

A critically important first step in identifying important waypoints in the commercial GEOINT Strategy roadmap is to review the quickly evolving commercial/open GEOINT landscape and determine the best ways to operationally integrate the capabilities of multiple companies in this industry. We will develop a deep understanding of their technical capabilities, products, and services, and build an early, well-informed assessment of their applicability to NGA's mission needs and compatibility with our CONOPS. Developing this knowledge requires that we acquire pre-operational test and evaluation data and services, which NGA will use to assess operational utility, identify integration issues, and explore new tradecraft possibilities.

NGA will not execute these assessments independently. Rather, we will collaborate with other community initiatives to develop a cohesive cross-community understanding of needs, capabilities, and possibilities. In addition, NGA will launch a series of “NGA Director Challenges” that engage the NGA workforce to explore a broader scope of foundation and intelligence mission requirements to discover “what questions to even ask.” Through participation in these challenges, the NGA workforce will become an agent and advocate for transformation.

NGA will consolidate the experience and knowledge our analysts, community partners, and customers gain as they work with pre-operational products and services, and use this knowledge to better shape future operational commercial GEOINT acquisitions. Figure 2 depicts the force multiplying effect of such collaboration between several current unclassified initiatives.

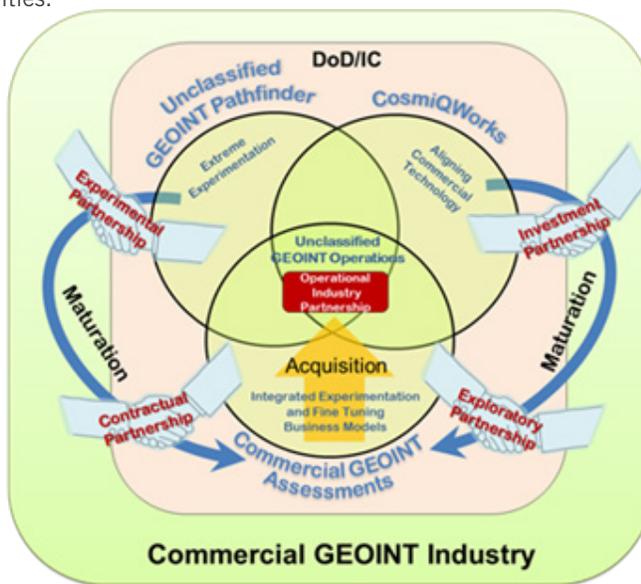


Figure 2: Collaboration between unclassified initiatives, the assessment of commercial GEOINT capabilities, and the industry shape future operational GEOINT acquisition.

NGA will also collaborate with similar assessment teams in the classified environment who are investing in research and development, like the Advanced Campaign Cell and the Washington Innovation Center.

Importantly, these assessments will be iterative because the commercial GEOINT industry is evolving rapidly and will continue to do so for the foreseeable future. The assessments are designed as short term (~90 day) investigations into the capabilities of the most mature of Commercial GEOINT providers. These technical assessments, along with the deep, honest dialogues outlined in Implementation Imperative 1, will establish and maintain forward momentum on the D/NGA's priority for industry interaction:

“We must embrace emergent capabilities with the same dynamism that we embraced NTM decades ago. We have to engage the private sector as partners, not serial providers. And we have to think about what the GEOINT enterprise can provide, not just what NGA can provide.”⁴

Implementation Imperative 3:

Acquire and deliver mission relevant commercial GEOINT capabilities that are sufficiently mature and can be efficiently integrated—always with the goal of improving mission success for NGA's customers and adapting to their evolving needs.

The continuing technological evolution and increasing diversity of the industry over the next decade require that NGA's acquisition approach remain both agile and adaptable. Our contractual relationships with providers will vary depending on their product/service offerings, business models, evolving customer requirements, and the analytic tradecraft analysts develop and implement using Commercial GEOINT.

The actions executed in both Implementation Imperatives 1 and 2 will contribute substantively to the evolution of NGA's acquisition approach to Commercial GEOINT during the coming decade. Customer needs, technical assessments, and maturing capabilities will drive our Commercial GEOINT acquisition priorities. Mission relevance, volumetric need, form of delivery (product or service), business model, and NSG/ASG integration requirements will all drive Commercial GEOINT contractual approaches.

NGA will use a structured, evolutionary approach in adopting and adapting Commercial GEOINT capabilities as they evolve. Our pre-operational assessments (both business and technical) and customer engagements will identify those capabilities that will be targeted for initial operational acquisition. As industry's capabilities mature and NGA learns from early operational use, acquisition plans will be changed to acquire new capabilities and to better align our acquisitions with our customers' requirements. Ultimately, this will result in a cohesive commercial GEOINT acquisition approach that establishes resilient and enduring partnerships between NGA and industry.

Implementation Imperative 4:

Adopt and institutionalize commercial GEOINT capabilities as a core component of NGA's mission-driven operations.

Most of the actions to achieve this imperative require participation across NGA directorates and offices. Representative activities include modifying architectures, codifying tradecraft and processes that use new forms of commercial GEOINT, developing the training programs that enable the transformation of NGA's workforce, and implementing successful change management efforts. We will ensure that these organizations' leadership: are members of our stakeholder coalition; participate in pre-operational assessments; and embrace the transformation principles that NGA's Director has articulated.

⁴ D/NGA Spark Blog post: “Raising the bar together.” 3 April 2015.

THE END GAME

GREATER CUSTOMER
CONSEQUENCE

Customer Objective 1:

Enable our intelligence customers to make informed decisions in operationally relevant timelines by supplying increasingly diverse imagery, intelligence products, and services.

Traditionally, the NGA workforce exploited raw imagery data (e.g. pixels) by performing analytic processes to extract information, supply context, and provide consequence through the production of intelligence reporting and Foundation GEOINT products. Today, rapidly emerging commercial providers are building significant capability to distill raw data for themselves from multiple sources into first order imagery analytics. The Commercial GEOINT strategy capitalizes on this rapidly growing, commercially available capability, so that the NGA workforce can focus on creating coherence from chaos, by developing tradecraft that can “detect patterns of activity, interpret behaviors, create insight and understanding from the tsunami of data, and enable decision advantage for our customers.”³

This strategy enables a workforce and work role transformation by establishing an enduring NGA engagement with commercial GEOINT providers. This will ensure that we quickly identify and validate the most mission relevant industry capabilities, readily adapt to their use, and forge resilient industry partnerships. Doing so delivers the following outcomes:

- NGA analysts will continuously evolve and apply models of our national security problems and apply deep contextual analytics to massive collections of geo-referenced observations that we obtain from a multitude of traditional, open and commercial sources.
- The NGA workforce will maintain and continuously evolve their expertise and tradecraft to apply exquisite NTM capabilities against the hardest intelligence problems.
- NGA and its IC GEOINT partners will achieve an allocation of requirements between NTM and commercial capabilities that maintains an appropriate balance of those sources.
- NGA will work collaboratively across industry to encourage a common set of standards, protocols, and formats that facilitates the ingest of imagery/products from multiple commercial providers. We will maintain insight into emerging commercial capabilities using an institutionalized, but agile assessment framework that addresses utility and integration issues proactively.
- The NGA Image Quality and Utility (NIQU) assessment team will employ agile, flexible, and efficient procedures to certify that commercial imagery and products are sufficiently “fit for purpose.” NGA will be able to respond to and integrate new products that address our customer needs rather than having to be compliant with rigorous government specifications.
- In those instances where security risks are acceptable, NGA will establish direct access to commercial providers’ storage and processing environments, enabling our analysts to interact with data at its storage source (“data at rest”), reducing the storage and processing burden on the NSG and ASG architectures. For those commercial capabilities that do not flow directly through our architecture, NGA will provide governance for internal users and guidance for direct customer interaction.

³ D/NGA Speech to 31st Annual Space Symposium, Colorado Springs, CO. 14 April 2015

Customer Objective 2:

Minimize uncertainty, reduce loss of life and improve mission success for our tactical customers by providing timely and relevant commercial imagery, information, and knowledge – provided where they need it, in a form they can readily consume.

This strategy ensures that NGA provides responsive services to our customers by working outside the bounds of the traditional TCPED cycle. For our tactical customers, this will include provisioning commercial imagery, image-derived analytics and context-based products through non-government internet-based services, commercial relay, or direct downlink. As global space-based commercial communications networks evolve (e.g., small satellite-based internet constellations), NGA will seek opportunities to capitalize on emerging high bandwidth service to traditionally disadvantaged locations to deliver an even broader complement of Foundation GEOINT and intelligence products.

Implementing these responsive GEOINT services ensures the following outcomes:

- Warfighters, first responders, and humanitarian aid providers consider NGA's provision of timely and relevant unclassified GEOINT indispensable to their missions.
- NGA will increase its impact as a force multiplier to these many customers, especially those who need shareable and up-to-date imagery.
- Our customers in harm's way will have unparalleled situational awareness that is enabled by NGA's continuous efforts to improve delivery of the best GEOINT available.

Customer Objective 3:

Improve awareness, insight, and understanding for our many Foundation GEOINT customers by supplying increasingly persistent and diverse commercial data streams, foundation products, and services that enable Map of the World's feature-rich GEOINT on-demand, as well as other vectors of Foundation GEOINT.

Emerging commercial GEOINT capabilities include diverse phenomenologies, rapid revisit imagery collection, and higher-order downstream GEOINT products and services. NGA will leverage opportunities these commercial capabilities provide to continuously improve capability, cost, and efficiency of Foundation GEOINT production and provisioning.

Ensuring that NGA looks increasingly to the commercial sector to provide higher order Foundation GEOINT will result in the following outcomes:

- NGA will reduce mission costs by divesting from internal and directed Foundation GEOINT production, leveraging these emerging commercial providers.
- In those instances where NGA continues to directly execute Foundation GEOINT production, commercial GEOINT will be used to tip and cue change-based foundation imagery collection and GEOINT production in a way that provides Foundation GEOINT that is: more relevant; high quality; quickly delivered; and cost effective.

KEY MILESTONES

- **Phase 1**
 - Round 1 imagery/products/APIs available to multiple assessment teams, including the Unclassified GEOINT Pathfinder
 - Stakeholder “nucleus” identified, enrolled and fully engaged
 - First “Director’s Challenge” initiated
 - NextGen CI RFI released and responses received
 - NIQU Round 1 Image Quality Assessment
- **Phase 2**
 - First “Director’s Challenge” Completed
 - First “Director’s Challenge” Showcase
 - Round 2 imagery/product/APIs available to multiple assessment teams, incl. UGP
 - Second “Director’s Challenge” initiated
 - Initial operational acquisition contract content/scope identified (NextGen CI)
 - FY18 POM input submitted (~Jan 16)
 - NIQU Round 2 Image Quality Assessment
- **Phase 3**
 - Second “Director’s Challenge” Completed
 - Second “Director’s Challenge” Showcase
 - Round 3 imagery/product/APIs available to multiple assessment teams, incl. UGP
 - Third “Director’s Challenge” initiated
 - “Commercial GEOINT 2021” CI way ahead identified
 - “Commercial GEOINT 2021” Acquisition plan finalized
 - Initial NextGen CI awards (if FY16 funds available)
 - NIQU Round 3 Image Quality Assessment
- **Phase 4**
 - Initial NextGen CI awards (if FY16 funds NOT available)
 - “Commercial GEOINT 2021” RFI released and responses received
 - FY19 POM input submitted (~Jan 17)
 - NIQU Round 4 Image Quality Assessment

CONCLUSION

This Commercial GEOINT Strategy provides the roadmap for NGA to harness the unprecedented bow wave of persistence from commercial GEOINT providers and deliver the full spectrum of commercial imagery products and services at the speed of decision making.

By pursuing this strategy, in collaboration with our NSG/ASG, Federal civilian, and industry partners, NGA will establish transparency and trust with our customers and providers. Our end state will be a collaborative coalition of intelligence and defense stakeholders who, collectively, are agilely responsive, adaptive to future change, and resilient to threats both in space and on the ground.

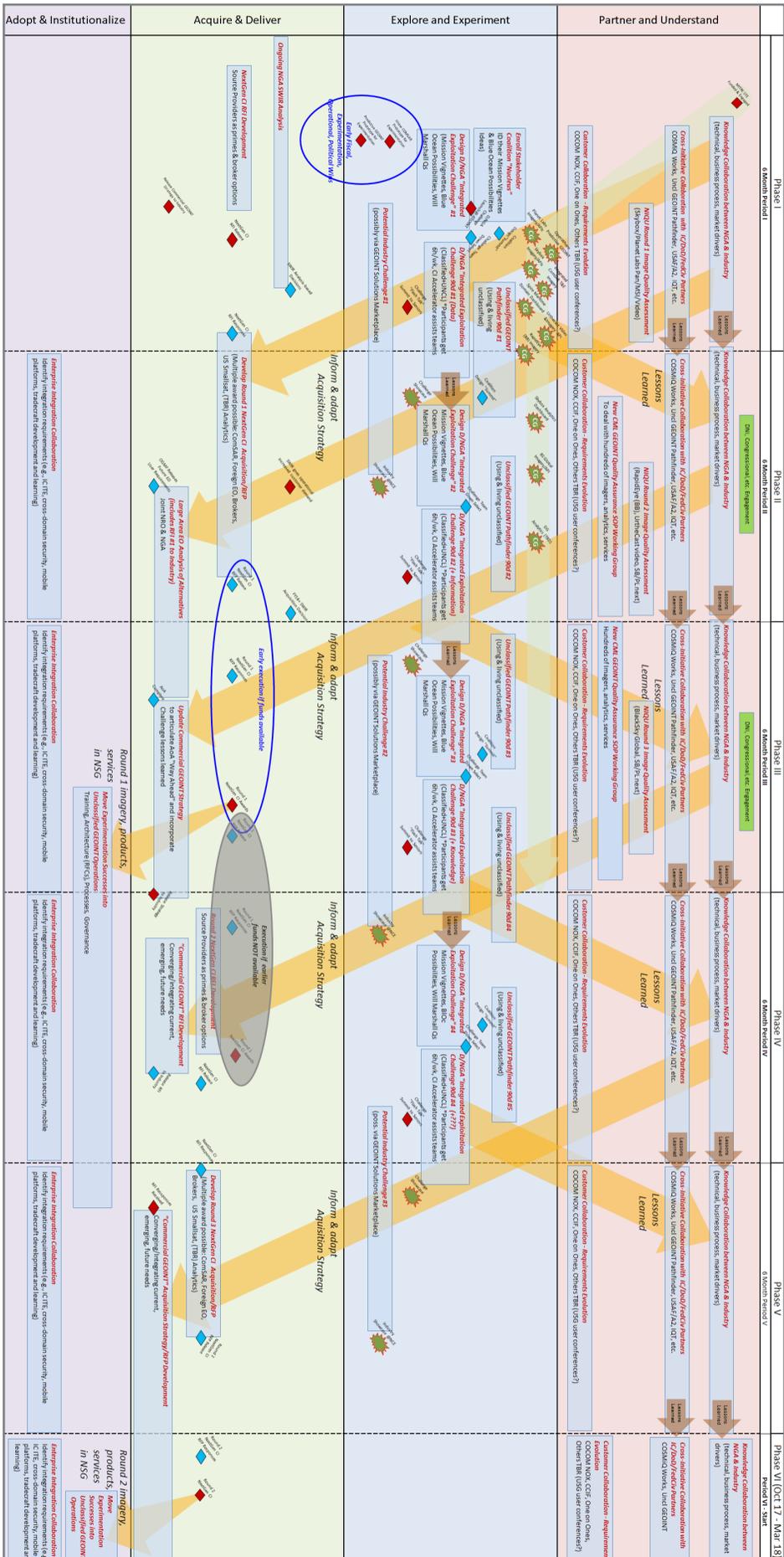


Figure 3: Commercial GEOINT Strategy Roadmap

APPENDIX

DEPENDENCIES AND RISKS

A number of dependencies have been identified, requiring leadership attention in order to fully implement the vision of this strategy. A description of these dependencies and the associated risks to successful implementation follows.

NGA Leadership:

NGA Leadership will be critical to driving the desired changes. Driving toward a future that predominately exploits a broad spectrum of unclassified commercial GEOINT (including imagery, analytic products and services, and contextual information and knowledge) to satisfy intelligence problems will be a large leap from the current blended dependence on dedicated national and commercial systems. Furthermore, NGA will also need to exercise this leadership as the GEOINT Functional Manager to drive acceptance by the wider NSG and ASG communities. Just as importantly, Agency leaders must embrace the D/NGA Challenges that nurture the growth of leaders from the workforce, which in turn establishes a supply chain of future Agency leaders that embrace transformation principles.

Risk: If NGA is unable to form and maintain an aligned and sufficiently powerful leadership coalition, it will not be able to acquire capabilities at the speed of commercial innovation or establish a culture of transformation in its workforce.

Contracting Processes:

NGA must establish agile and non-traditional contracting processes and vehicles that will enable rapid establishment of new contractual relationships that enable the USG to keep pace with the commercial rate of innovation.

Risk: If NGA does not establish a responsive contracting process, it will be unable to acquire capabilities at the speed of commercial innovation.

Culture:

The NGA workforce at all levels and across all Key Components must embrace a dramatic paradigm shift. The additional information mined and the efficiencies driven by this information will likely be from new and publicly available sources. Without a change in the workforce's mindset, the strategy will not succeed. Early, consequential success answering Key Intelligence Questions by leveraging commercial GEOINT information and knowledge will be an important milestone to fostering workforce confidence. Importantly, Agency leaders must encourage and support workforce participation in initiatives such as the Director's Challenges, which empower the workforce to become both agents and advocates of transformation.

Risk: If the workforce resists the transformation to greater integration of commercial data, information, and knowledge into their daily workflow, NGA will cede its position as the premier provider of GEOINT services.

Institutionalizing Commercial GEOINT:

NGA's technical architecture, training, tradecraft, and processes have been honed over many decades to make the most of classified sources. Unclassified GEOINT is used today, but it is an adjunct to our classified sources, and workflows which use unclassified GEOINT are often more cumbersome. It is not enough to gain access to these data, products and services. In order to achieve the transformation possible with the emergence of commoditized unclassified GEOINT, NGA must embrace commercial GEOINT into our core workflows and processes, and make the necessary upgrades to our technical architecture, training and tradecraft.

Risk: If NGA does not institutionalize the emerging commercial GEOINT capabilities we will not be able to achieve the transformation necessary to deliver the consequence needed by our customers.

Resources:

In general, the strategy cannot be implemented within the existing commercial imagery program. Improving our intellectual capital regarding industry developments, as well as committing USG people resources and the time necessary to mature transformative process, will be required while we maintain our currently required capabilities.

Risk: If NGA does not make the required near-term investments, we will not be able to realize future overhead GEOINT program efficiencies.

Integrated Overhead Architecture:

In a fully integrated overhead architecture, national collection capabilities will both drive and be influenced by commercial capabilities. If commercial GEOINT opportunities are fully leveraged, development of national capabilities may be targeted to better complement those available from commercial providers. Commercial capabilities may provide the necessary trade-space to implement architectural solutions that address the hard problem sets and improve cost, schedule, performance, and resilience of the integrated national/commercial architecture.

Risk: Unless the USG leverages capabilities offered by commercial providers, the national overhead architecture will have to make costly investments to support both “commodity” and hard problem sets.

Commercial Market Forces:

In the absence of appropriate USG engagement driving solutions, market forces will drive commercial offerings without regard for intelligence or defense value. While global markets will drive the commercial solutions and innovation, the USG should influence commercial offerings through strategic partnering where warranted.

Risk: Without active engagement with industry the commercial markets may deliver products and services which are incompatible or not effective for intelligence or defense use.

National Commercial Remote Sensing Policy and Restrictions:

National Security Presidential Directive-27 sets forth a national policy to maintain “the nation’s leadership in remote sensing space activities” by “sustaining and enhancing the U.S. remote sensing industry.” To accomplish this goal, the policy directs the USG to rely to the maximum practical extent on U.S. commercial remote sensing space capabilities for national security purposes and civil mission needs. Commercial providers will not invest in and develop what they cannot sell. As these products become more ubiquitous, there is a natural tendency for the intelligence and defense communities to advocate for more restrictions on the availability of the products to the public. National policy restrictions (current and under consideration) could greatly influence and limit the degree to which the industry innovates and invests in advanced geospatial intelligence capabilities.

Risk: Overly restrictive licensing and policy could prohibit NSG and ASG access to world-class commercial imagery and imagery-derived, and analytic and contextual products, ceding development of those capabilities to competing foreign providers.



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