

An abstract graphic consisting of several thick, colored lines (blue, orange, green, red, yellow) that intersect and branch out. The lines are connected by white circles of varying sizes, some of which have a textured, gear-like appearance. The lines generally trend from left to right, with some branching downwards or upwards.

# COMMERCIAL GEOINT STRATEGY

2018 Update

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY



*“Global Persistent GEOINT ... leverages the ... capabilities of the National Reconnaissance Office (NRO) through dynamic, model-driven collection that accelerates data to answers, increases NGA’s investments in the commercial sector, and integrates the capabilities of international partners to fill intelligence gaps and provide early warning needed for decision advantage.”*

— Robert Cardillo, NGA Director

Statement for the Record  
House Armed Services Committee Subcommittee on Strategic Forces  
Fiscal Year 2018 Priorities and Posture of the National Security Space Enterprise  
May 19, 2017

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# VISION

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

# PURPOSE and GOALS

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This strategy update will enable the National System for Geospatial Intelligence (NSG) to better understand the world by leveraging commercial GEOINT capabilities. We will embrace new suppliers and services by working with our intelligence community (IC), combatant commands, military services, and federal civil partners to employ the best mix of commercial and national sources in order to secure strategic competitive advantage and outpace our adversaries. Collaborating with our partners, NGA will take full advantage of commercial GEOINT to satisfy mission needs and maximize the efficiency of our integrated architecture.

### OUR GOALS ARE:

-  Expand data and service access through partnerships to feed analysis and production
-  Fortify GEOINT Assurance through diversity of commercial suppliers
-  Drive analytic and production capability by integrating commercial GEOINT, automation, and artificial intelligence

# PROGRESS

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Although the vision for commercial GEOINT has not changed from the 2015 Strategy, the operating environment advanced substantially. The landscape of commercial GEOINT providers increased in number and diversity. We gained valuable insight into the utility of commercial offerings. Organizations across the NSG created innovative on-ramps to more quickly and effectively leverage commercial services.

- *NGA and NRO, under Director of National Intelligence direction, established the **Commercial GEOINT Activity (CGA)**, a collective partnership to serve as the “front door” for commercial GEOINT vendors.*
- *The **GEOINT Assessment Community of Practice (GACoP)** became a focal point for the structured assessment of commercial GEOINT offerings and increasing awareness of assessment efforts.*
- *With the **Commercial Initiative to Buy Operational Responsive GEOINT (CIBORG)**, NGA and General Services Administration (GSA) collaborated to offer GEOINT on GSA schedules as a marketplace.*
- *The **GEOINT Pathfinder** generated important lessons learned by using unclassified data, commercial information technology, and open source methods to answer intelligence questions.*
- ***NGA’s In-Q-Tel Interface Center (QIC)** partnered with In-Q-Tel (IQT) to identify, adapt, and deliver innovative technology solutions from the commercial start-up sector.*
- *The **NGA Outposts** placed NGA at the forefront of innovation in recruiting, technology, and tradecraft by building relationships with industry, Federal Government partners, and academia.*
- *NGA entered into the **Planet Feed** and **Subscription Contracts** to obtain the first commercial offering of global coverage of the earth every two weeks, followed by a weekly subscription service.*
- *The **Janus Contracts** began enabling access to a wider array of commercial suppliers and dynamic content delivery of foundation GEOINT (FG) data for NGA by transitioning to open source and cloud services.*
- *NGA analysts formed the **Commercial Services Working Group (CSWG)** to share best practices and ideas about the commercial sector, informing technology and training solutions to improve analysis.*

Building upon this progress, we revised the implementation imperatives and activities. The focus of this effort explicitly adjusts to go beyond imagery and enable access to commercial geospatial analytics, services, products, algorithms, and geo-referenced datasets. Consider this update an evolution of the 2015 Strategy, a bridge built upon the progress to date and focused on the path to the future.

# SCOPE and INTENT

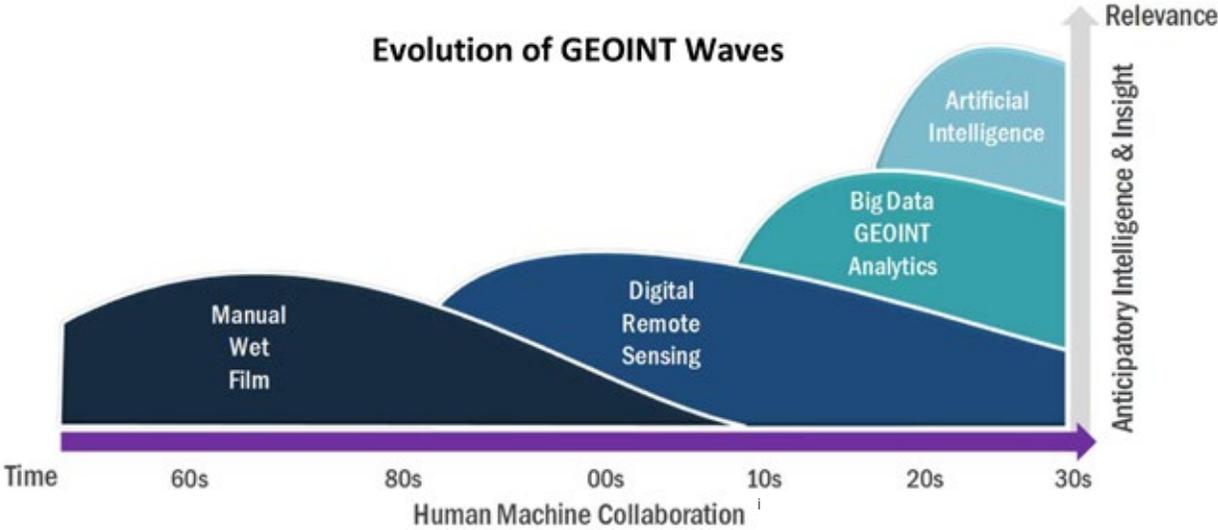
NGA's customers require a broad range of services, including the delivery of geo-referenced imagery and data, FG products and services, and intelligence analysis. Increasingly, many customers operate on dramatically reduced timelines, driving a need for persistence — collection at the speed of the observable — from multiple sources. The scope of commercial GEOINT for this strategy is geo-referenced analytics, services, products, imagery, and data of commercial providers derived from space, air, ground, sea, and online platforms.

The intent is to communicate with our workforce, IC, combatant commands, military services, federal civil agencies, foreign partners, academia, industry, and oversight. Working with commercial industry and collaborating with our partners is essential for the workforce and NSG leaders. Embracing commercial GEOINT, NGA and the NSG will better inform decision makers and address the demands of oversight and stakeholders.

# ENDURING THEMES

Consistent with the 2015 Commercial GEOINT Strategy, this strategy will foster a more diverse, resilient, and responsive GEOINT program that provides user access to the best mix of commercial GEOINT services (i.e. analytic products and services, contextual information and knowledge, and pixels) to fulfill NSG and Allied System for Geospatial Intelligence (ASG) mission needs. NGA requires this seamless integration of all GEOINT regardless of source or classification to enable anticipatory analysis, create online living knowledge, and reduce the time between questions and answers — thereby providing faster and more consequential impact.

The remote sensing industry continues to evolve global coverage, rapid revisit rates, diverse spectral content, aggregation from open source venues, and analytic capabilities with increasing dynamism. NGA must harness the rising bow wave of persistence from established and emerging commercial GEOINT providers to deliver an expanding spectrum of GEOINT offerings at the speed of decision making. As commercial GEOINT offerings evolve from pixels to imagery based analytics and geospatial statistics, most commonly delivered as services, NGA will capitalize on this commercial revolution to improve analytic insight and anticipatory intelligence over time. Geospatial analytics will fuel this transition from pixels to insight. This shift will allow the workforce to transform tradecraft from traditional imagery analysis to a practice of geospatial analysis applied to a fast flowing stream of big data from increasingly diverse commercial and national data sources. We must enable analysts and data scientists, with a full range of tools, services, and datasets to better exploit commercial GEOINT within the decision cycles of our IC, tactical, and FG customers.



We offer a roadmap for the community and workforce to adapt to new sources, instantiate more responsive acquisition models, and integrate commercial sources to improve user access and drive greater mission impact. This strategy enables NGA to move toward: greater unclassified operations; more production and publication of unclassified intelligence; and the augmentation, conflation, and integration of unclassified intelligence with classified sources.

# STRATEGY

This Commercial GEOINT Strategy expands on our implementation imperatives and associated activities to continue to show the way forward. The imperatives from the 2015 Strategy remain relevant. We added a new implementation imperative, **Influence + Invest**. It identifies new incentives, rewards, and investments to position NGA to ride the wave of commercial GEOINT.

## IMPLEMENTATION IMPERATIVES:

 **Learn + Understand** *the commercial GEOINT industry and status of capabilities through collaborative networks*

 **Explore + Evaluate** *commercial GEOINT analytics, algorithms, services, products, imagery, and data*

 **Influence + Invest** *across the industry to promote diversity and resilience in supplier base and capabilities \**

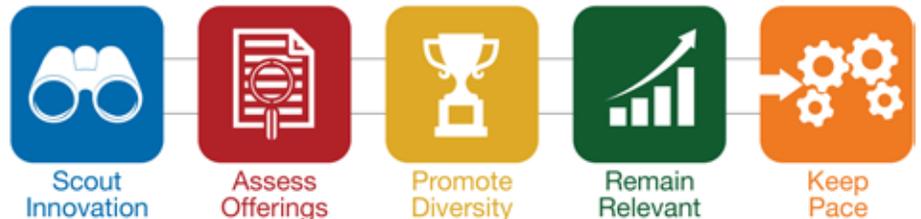
 **Accelerate + Acquire** *mission relevant commercial GEOINT capabilities that are sufficiently mature*

 **Adapt + Integrate** *commercially enabled operations to keep pace with mission requirements*

These implementation imperatives support all of NGA's intelligence, defense, and civil support missions. New to this strategy, we identify existing mechanisms, authorities, efforts, and processes to meet our goals. We also identify new partners, capabilities, incentives, tools, and tradecraft to support the strategy in coordination and collaboration with the National Geospatial Intelligence Committee (GEOCOM).

As an evolving strategy, we build upon progress to date and focus on the future by updating our implementation imperatives and activities. The new norm is the continuous evolution of the operating environment. Commercial GEOINT will pave the way for our mission, architecture, process, and tradecraft advances that rely on unclassified data and services.

## THE PATH



The United States Government (USG) must continue to evolve as the GEOINT industry emerges, grows, and matures. The pace of evolution in industry will continue to accelerate. Adaptation is vital to remain relevant. Together, the implementation imperatives offer a path forward as NGA continues to transform. Activities create connections across the imperatives. Common themes unite the activities of each imperative.

NGA's future commercial GEOINT acquisitions must accommodate two realities that are in dynamic tension: (1) competition and diversity fuel real innovation and (2) fiscal resources remain constrained. Prioritization by mission, to focus effort and resources, is critical to achieve greater impact within budget.

We need commercial GEOINT acquisition to become more responsive. NGA must remain flexible enough to divest less effective capabilities for more capable commercial services. We will capitalize on increasingly diverse commercial capabilities and leverage opportunities to mitigate risk with a greater number of sources.

The implementation imperatives in this strategy consist of five distinct and interweaving lanes of a roadmap. While activities in one lane may precede actions in another, all lanes continuously move forward. Several initiatives within the GEOINT community already drive action in these lanes. This strategy and new activities bridge the relationship between existing initiatives and the path forward to integrate commercial GEOINT into the Global GEOINT Enterprise.

\* *New implementation imperative*

## LEARN + UNDERSTAND



SCOUT INNOVATION

## EXPLORE + EVALUATE



ASSESS OFFERINGS

## INFLUENCE + INVEST



PROMOTE DIVERSITY

## ACCELERATE + ACQUIRE



REMAIN RELEVANT

## ADAPT + INTEGRATE



KEEP PACE



# ROADMAP

## COMMERCIAL GEOINT STRATEGY



**KEY**

					Implementation Imperatives	
	Existing Imperative					Existing Activity
	New Imperative					New Activity

# IMPLEMENTATION IMPERATIVES

## **Learn + Understand** *the commercial GEOINT industry and status of capabilities through collaborative networks*

NGA will expand our engagement with industry, foreign partners, and stakeholders to scout innovation and improve understanding of NGA's needs and interests. Industry will benefit from early understanding of NGA's missions and requirements to make better informed decisions and investments. We will draw upon the lessons learned by industry and our partners to adjust our position as industry evolves. Together, we will multiply our return on investments by sharing knowledge capital and opportunities to co-invest. Our partnerships will depend on mutual transparency, open communication, collaboration, feedback, and trust to unify our effort.

## **Leverage partnerships to enable innovation through data and knowledge exchange with trusted partners**

NGA plans to invest data in research and development using existing authorities, for public private partnerships (PPP) between the USG and our nation's best innovators, companies, and academic institutions.<sup>ii</sup>

The PPP initiative will "incentivize US commercial companies and academic institutions to co-develop technologies by sharing intellectual property (IP) rights."<sup>iii</sup>

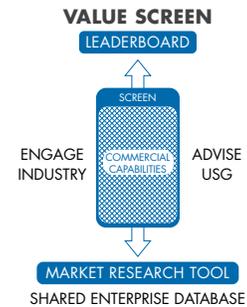
Expanding the US industrial base through partnerships, to automate NSG and commercial data as a force multiplier, will better position the US to maintain its national security and economic advantage.<sup>iv</sup>

## **Engage with industry innovators through outposts, tech / innovation scouts, and unsolicited online platforms**

NGA Outposts will continue to expand the NSG reach to a wider commercial base; and talent/innovation scouts, such as NGA QIC, will continue to identify new data and technology partners.

The NGA Explorer Program and eNGAge will offer geospatial exchange and immersive learning experiences; and the GEOCOM will seek feedback from NSG partners.

CGA will screen technical capabilities against high level mission needs and communicate value propositions of different commercial geospatial capabilities for the NSG to better understand the mission applications.



## **Create automated reports from structured data with natural language processors (NLP) to convey utility**

We will work with commercial vendors to manage automated and NLP reports to capture trends in organizational usage, geo-search areas, and keyword searches used to interact with commercial sources.

NGA will automate reports to understand utilization of diverse sources and identify opportunities.

## **Foster collaborative multinational relationships to co-invest in commercial and integrate allied capabilities**

NGA will fortify our multinational partnerships to co-invest in the commercial markets, as well as share in costs and benefits.

We will seize opportunities to collaborate on international programs which multiply the effects of commercial GEOINT, similar to the Multinational Geospatial Co-production Program (MGCP) for high resolution vector data.

We will rely on foreign partner assessments of commercial capabilities to speed mission application; and the NSG will integrate allied capabilities to fill intelligence gaps and provide early warning advantage.<sup>v</sup>

## **Explore + Evaluate** *commercial GEOINT analytics, algorithms, services, products, imagery, and data*

With pre-operational tests, evaluation of data, and trial accounts/services, NGA will assess operational utility, identify integration issues, and explore new tradecraft possibilities. Through participation in prototype demonstrations, assessments, challenges, and incubators, the NGA workforce will become agents for transformation. NGA will consolidate the experience and knowledge of analysts, community partners, and customers as they assess commercial GEOINT. NGA will collaborate with industry, academia, and partners to encourage the development and use of common standards, protocols, formats, metadata, and evaluation measures to facilitate ingest of new and non-traditional offerings.

### **Work out of incubators and unclassified USG sites to enable access to data for industry to develop capabilities**

NGA will create environments to stimulate operational experimentation with commercial industry, the community, and our partners by exposing our mission challenges; sharing what we do and what we need.

Working out of technology centers, NGA will accelerate data access, encourage development of new capabilities, and demonstrate prototypes where industry and academia incubate, from T-Rex to IQT Labs.<sup>vi</sup>

We will open USG facility doors to work with industry and foreign partners by enlarging unclassified space at NGA Campus East (NCE) and building out flexible unclassified spaces at Next NGA West (N2W).<sup>vii, viii</sup>

### **Activate experimental analysis units to push tech and tradecraft boundaries to fulfill mission requirements**

NGA will continue to activate operational and experimental analysis units with commercial GEOINT, such as Rapid Response Teams and Rapid Feedback Teams, to rapidly focus effort and innovation on missions.

We will employ combinations of experimentation and analysis with innovative technology and tradecraft solutions to spin off to industry, on to the government, and out to the NSG with NGA Support Teams.

### **Encourage industry trade associations and academia to verify fit for use through GEOINT Assurance**

NGA will share in the verification of commercial data with new and existing organizations to use de facto and generate new technical specifications/standards for analytics, algorithms, and services, as well as imagery.

We will create use cases, structured test data sets, and evaluation criteria to promote industry participation in quantitative validation of commercial capabilities.

NGA will build trust and confidence in use and mission application, by building GEOINT Assurance into the verification and validation of sources to confirm source, accuracy, reliability, and operational readiness.

### **Coordinate consistent structured assessment of capabilities through GEOINT assessment community**

The GACoP will capture, conduct, and synchronize assessments by reinforcing consistent procedures to help the NSG understand the value of GEOINT solutions, as described in the GEOINT Assessment Handbook.<sup>ix</sup>



CGA and GACoP will compile market research baselines to advise acquisition decisions, as required by the Federal Acquisition Regulation, with CGA Leaderboard assessments online.

NSG enterprise market research tools will capture user reviews to inform mission applicability and operational readiness levels; industry will be able to learn and respond creating feedback loops.

#### **SURFBOARD**

NGA QIC assessment process to evaluate start-ups and prototypes for application to NGA missions. Determines what technologies to share with NGA Directorates to consider for support to mission gaps or problem sets. Informed by IQT daily technology summaries.

#### **BOOGIE BOARD**

NGA strategic analysis approach to managing analysts work and interaction with the NGA QIC and IQT. Focused on top analysis technology needs to prioritize effort and evaluations of offerings against mission applications.

**Influence + Invest** across the industry to promote diversity and resilience in supplier base and capabilities

USG policies, processes, and operations will incentivize innovation in order for commercial GEOINT providers to be effective and responsive mission partners. Focusing on operational problems in challenges and incubators will lead to faster mission impact. NGA will promote diversity and spur innovation by using incentives in the form of data, resources, skill development, recognition, and achievement to keep pace with mission requirements. We will allocate requirements, resources, and investments to apply an appropriate mix of sources to balance opportunities and risks. NGA will influence innovation by aligning investments with mission priorities and reducing regulatory barriers to entry.

**Enable NGA Prize challenges to establish bold goals and reward industry upon achievement of those goals**

NGA Directorates will set and invest in NGA Prize challenges, offering financial incentives to compel and inspire investment/innovation, promote diversity, and drive solutions in automation and GEOINT Assurance.

Modeled after XPRIZE, IARPA, and DARPA challenges, NGA Prizes will leverage highly incentivized prize challenges to solve big GEOINT problems with prototypes enabled by Other Transactional Authorities (OTA).

We will create incremental goals, identify component targets, and build toward challenges; requiring clear, understandable, and achievable scope/rules with measureable finish lines in under two years.

**Employ analytic platforms to recognize and reward contributors with earned points for resolving mission needs**

NGA will use analytic platforms to recognize users who contribute to emerging missions, advance skills, and acquire points by using new tools for automation, USG crowd sourcing, and third party services.

We will build USG analytic capacity and structured observation datasets by recognizing analysts who stay up to date on skills and act quickly to be the first to resolve simple mission requirements and earn points.

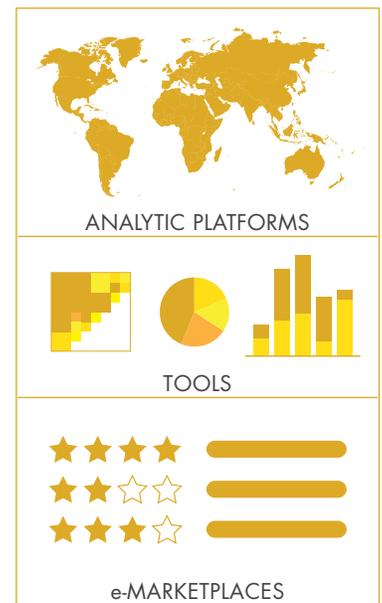
NGA will consider mission sets ripe for exposure including disaster response, combating illicit trafficking, and Arctic visualization; employ experience gained with GeoQ, NOME, H4D, and SpaceNet; and seek input from GEOINT Mission Managers.<sup>x, xi, xii, xiii</sup>

**Empower users and teams to combine earned points and nominate commercial offerings to meet mission needs**

NGA will stimulate innovation by enabling analysts to identify commercial capabilities via e-marketplaces to solve complex mission requirements, communicate needs to industry, and remain on the leading edge.

Users will dynamically communicate their needs through NGA engagement tools and teams to industry, and in turn, industry will more frequently update market offerings to meet current mission needs, ensuring capabilities acquired add value to missions.

**ECOSYSTEM FOR MISSION INFLUENCE**



**GeoQ** Open source, geospatial platform with crowdsourced workflow. It integrates numerous sources into a single operational picture, enabling analysts to choose their view to map features of crisis affected areas, and quickly disseminate updates to first responders.<sup>x</sup>

**NOME** NSG Open Mapping Enclave, volunteered geographic information operational prototype. It enables trusted users on multiple domains to easily create or modify foundation data and dynamically update content to support ongoing production for operations worldwide.<sup>xi</sup>

**H4D** Hacking for Defense™ lean framework to address Department of Defense (DoD) and IC challenges. Cross-disciplinary teams tackle high level problem statements to scope a problem for industry and academia to explore technology solutions through a real world scenario challenge.<sup>xii</sup>

**SpaceNet** Open data initiative with IQT Lab CosmiQ Works to foster innovation in automation of imagery analytic tasks. It brings a collaborative approach from machine learning analysis to commercial imagery and training data in order to develop algorithms to extract information.<sup>xiii</sup>



### Reward industry for resolving operational problems in incubators and technology hubs to develop capabilities

NGA will focus incubators and tech hubs on operationally relevant missions, by rewarding industry financially or with more work for developing solutions with direct application to USG missions.

By adjusting our goals at a higher tempo, NGA will influence the rate of innovation, embolden partners to fail fast, and cultivate the ability to adapt and learn; all driven by rewards for solving community requirements.

Rewards will range from assisting nascent partners to understand NSG needs, adding transparency to NSG acquisition routes, and connecting strategic partners and networks to be successful in the NSG.



### Diversify investments to take advantage of opportunities, mitigate risks, and fortify GEOINT Assurance

NGA will identify an allocation of integrated requirements across sources based on mission priorities, using mission management GEOINT plans, to maintain an appropriate mix of sources and suppliers.

We will make informed investments of both data and resources in order to influence diversity in commercial capabilities, where mission and market trends align.

NGA will invest and fund to sustain an appropriate mix of sources to balance opportunity and diminish risk through safety in numbers, based on CGA identification, GACoP assessments, and IQT investments.



### Streamline policy and regulatory environment for commercial operating licenses to reduce barriers to entry

Through policy forums, NGA will encourage the USG to reform the operating license environment to:

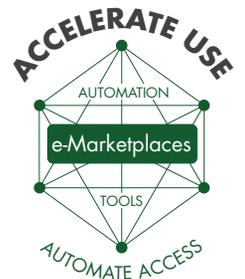
- (1) Exercise authority to resolve or elevate issues in a timely manner;
- (2) Add transparency and predictability to processes, as missions diversify and new unique sensors emerge;
- (3) Avoid redundant reviews, by all parties in the process, of less capable systems;
- (4) Encourage communication between policy forums and regulatory authorities.

NGA will embrace its strategic leadership role in the geospatial industry, for the US to maintain a security and economic advantage in the context of global competition.



### Accelerate + Acquire *mission relevant commercial GEOINT capabilities that are sufficiently mature*

NGA's acquisition approach will become more responsive. Where mission utility meets commercial maturity, NGA will expedite acquisitions. NGA will smartly employ automation to accelerate the use of commercial GEOINT in analysis and production, to multiply the force of big data, gain insight, and improve decision making. NGA will prepare analysts to remain current on the nuances of working with unclassified, open source methods and tools. Missions demand sharing with trusted partners and will drive flexibility in end user licenses, data protection plans, and IP rights in contracts. Customer needs, technical assessments, and capability maturity will demand diverse commercial acquisition options.



***“How do we actually begin to automate in a way that gives time back to analysts ... There are a thousand things we want to do with artificial intelligence, machine learning, deep learning, computer vision ... You have to go after a manageable problem, solve it, show early wins and then ... go after all of these other challenges...”***

— US Air Force Lt. Gen. John N.T. “Jack” Shanahan  
Director for Defense Intelligence (Warfighter Support), Office of the Under Secretary of Defense for Intelligence, May 14, 2017 <sup>xv</sup>



### **Elevate achievable efforts and mature solutions for mission application of commercial GEOINT**

In order to accelerate commercial GEOINT acquisitions, NGA will expedite achievable and mature solutions by identifying “low hanging fruit” and acting where mission readiness and industry maturity coincide.<sup>xiv</sup>

We will start with achievable efforts that won’t interfere with analysts’ work or distract from mission focus; we will avoid the desire to solve the hardest problems or improve exquisite analysis with initial capabilities.

As a Combat Support Agency, NGA will embrace rapid acquisition policies, processes, and authorities institutionalized by DoD and accelerate commercial acquisitions to address DoD operational needs.



### **Leverage commercial automation to augment conventional analysis and buy back time for higher end analysis**

NGA will augment analysis to seek efficiency gains and time/resource savings by automating time intensive tasks and repetitive observations, starting with change detection, feature extraction, and data conflation.<sup>xv</sup>

Artificial Intelligence, Automation, and Augmentation (AAA) will focus this effort for NGA to address full motion video (FMV), structured observation management (SOM), and broad area search.

We will use Wayfarer with USG, academic, and industry partners and mobilize high performance computing power necessary to apply analytic models to massive collections of big data for deep learning.<sup>xvi</sup>

***“The expected computational load from significant analytical investments in structured observation management, full-motion video, and foundation GEOINT is a major driver for accelerating NGA’s higher computing capabilities...”***

— Peter Highnam, Ph.D., NGA Research Director, August 21, 2017 <sup>xvi</sup>



### **Prepare the workforce for commercial GEOINT by training early in unclassified open source methods**

Industry must offer training as a service and standard offering, by being prepared to train the workforce on capabilities and use cases tied to missions that encourage adoption of commercial GEOINT.

NGA will train the workforce by updating existing courses to address analytic standards, techniques, OPSEC, licenses, marking, and classification with tradecraft examples of what can be done in commercial and open source locations.



### **Contract simply with broadest possible license framework to share with partners and strengthen relationships**

NGA will standardize how commercial GEOINT is licensed, building on the flexible base of USG end user licenses and government purpose rights to support USG mission sharing.

We will maintain an ability to support coordinated public release, limited public release for disaster support, and license uplifts of large amounts of data to drive innovation in technology challenges and hackathons.

NGA will reinforce foreign partner relationships that embrace broad user licenses in contracts to promote sharing, as MGCP builds bonds of partnership in peacetime to enable greater support to warfighters.



### **Embrace dynamic e-marketplaces with diverse contract alternatives integrated into the platforms**

NGA will embrace responsiveness in contracting to reduce acquisition timelines and overcome bureaucratic processes, by capitalizing on multiple options from a variety of contracts.<sup>xvii</sup>

USG e-marketplaces will permit wide internal audiences, while aligning organizational procurement authorities to appropriate officials to better inform acquisitions.

NGA and industry will adopt “fly before buy” trial practices to understand capabilities prior to acquisition.<sup>xviii</sup>

## **→🔗 Adapt + Integrate** *commercially enabled operations to keep pace with mission requirements*



The rapid pace of commercial GEOINT innovation demands a posture of flexibility and adaptation. Conducting information technology (IT) development for commercial GEOINT at an unclassified level with a development operations (DevOps) approach is beneficial for the replication of capabilities on different networks. By establishing direct access to commercial providers' processing environments, NGA will enable our analysts to interact with data at its storage source, where security risks are acceptable. Ease of discovery, access, and delivery are critical to use and adaptation, through mainstream exposure of commercial GEOINT in existing workflows.

### **○ Enable a DevOps environment, when industry offers 60% solution procure services with industry expertise**

In order to remain on the leading edge of GEOINT capabilities, the NSG will enable a DevOps approach to environments and processes to improve access to and interaction between data, people, and knowledge.

GEOINT Services leads the way with support from Dev Corps, Data Corps, and Agency Data Professionals.

NGA will encourage analysts to embrace this approach by enabling application programming interface (API) calls to data stacks and data at rest, offering “plug and play” tools, and running algorithms in the background.

### **○ Protect systems with accreditation and authorization of commercial delivery to uphold GEOINT Assurance**

We will ensure system security by vigorously embracing automated accreditation and authorization, data integrity, validation, and OPSEC methods including steganography and anti-spoofing.

NGA will pursue OPSEC and anonymity of access, working with trusted partners to protect the NSG.

### **○ Expose commercial GEOINT to the workforce through existing analytic workflows**

We will change corporate culture, surrounding commercial GEOINT use, by requiring mainstream exposure through integration into existing analytic and production workflows, including Cedralion and FG Modernization.

NGA will promote discovery and use by enabling commercial services on multiple networks via caching or connectivity, automating cross domain, and offering familiar exploitation tools in unclassified domains.

Standardizing commercial service flows and sharing data feeds in structured ingestible formats will foster use by saving time, resources, and effort to add value with commercial GEOINT and not disrupt workflows.

### **○ Develop adaptive processes and architecture to readily integrate commercial sources into operational baseline**

NGA will adapt its architecture, acquisition, and governance processes for the NSG to improve on the integration and delivery of commercial GEOINT; we will prioritize integration by mission.

By urging industry and the NSG to geospatially tag and condition commercial GEOINT data, NGA will accelerate data ingest, automated discovery, and integration of commercial GEOINT in order to enable analytic functions.

We will expand dynamic and flexible content management services to support FG and analytic production with FG Modernization and SOM; updating content in the cloud offers flexibility for suppliers and producers.

***“Achieving the necessary interoperability demands all sources adhere to appropriate standards and also that the resulting information be geospatially tagged to allow for automated discovery as metadata can describe its own structure to the entity seeking to use it.”***

— Collaboration and Commercialization of the GEOINT Business, The State and Future of GEOINT 2017, USGIF <sup>xix</sup>

# SUMMARY

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This Commercial GEOINT Strategy provides a roadmap for the community to ride the wave of commercial GEOINT, delivering a range of commercial products and services to improve decision making.

**We will** establish transparency with customers and industry through communication, collaboration, and feedback to **unify our effort**

**We will** leverage GEOINT Assurance by verifying commercial GEOINT offerings and workflows to **build trust and confidence** in integration for mission application

**We will** use informed investments and incentives with industry, our workforce, and the community to **promote diversity, innovate, and remain relevant** as the operating environment transforms

**We will** augment analysis by automating repetitive observations and integrating secure commercial alerting to **build toward anticipatory intelligence** with geospatial analytic models

**We will** secure strategic competitive advantage from commercial GEOINT by working with trusted partners to **outpace our adversaries**

As an evolving strategy, no specific end state exists. Imperatives, activities, and feedback will guide the path forward. Stakeholder collaboration across the community is essential to create the adaptive, constantly improving environment we seek. Mission informs and prioritizes everything we do.

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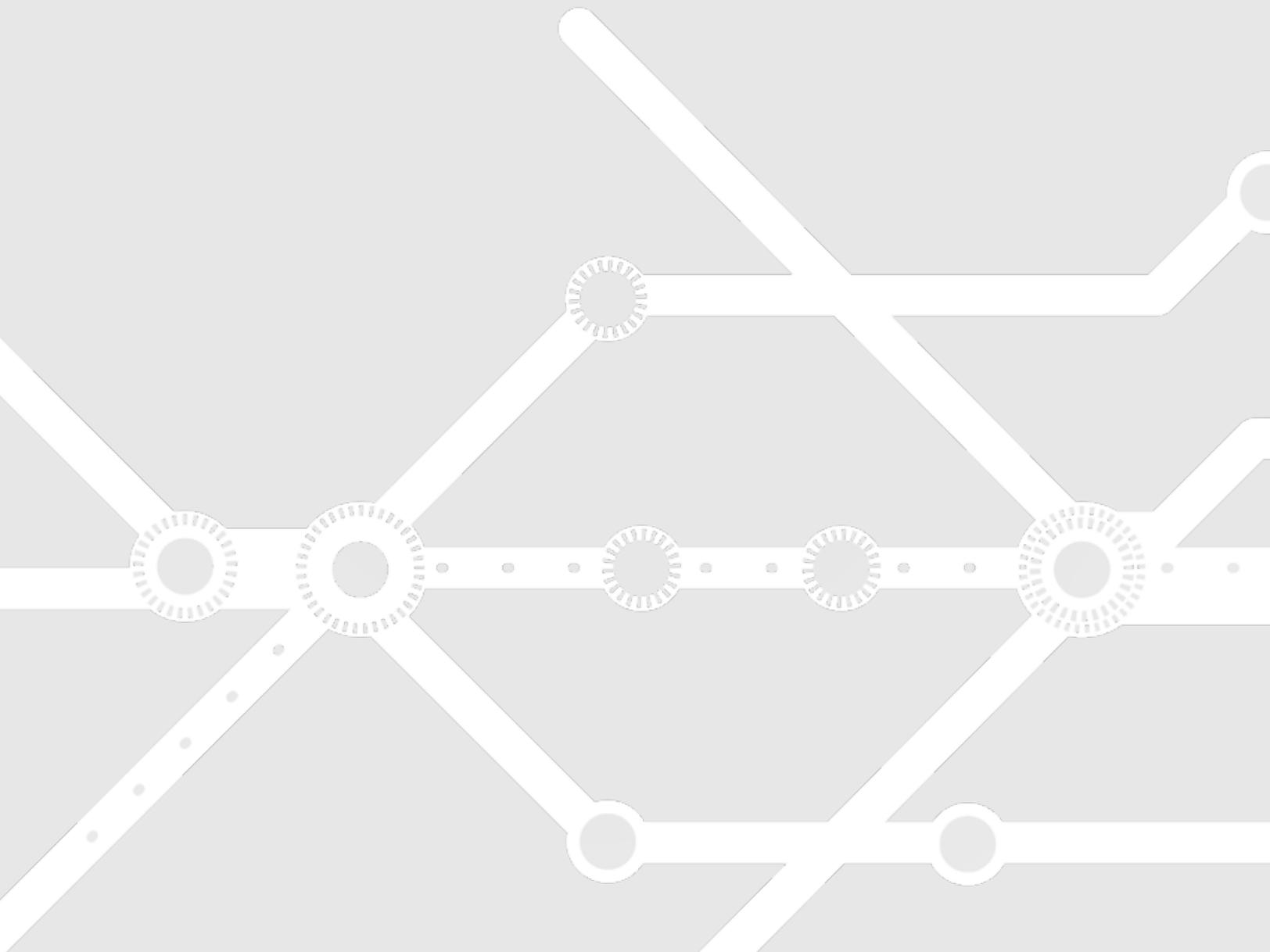
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## END NOTES

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