



2023 Space Symposium
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Remarks as prepared for delivery

INTRODUCTION

Good morning. Thank you, Tom, for that introduction [*introduced by Tom Durame of Space Foundation*].

It's great to be back here at Space Symposium, great to be back in Colorado Springs.

I'm honored to represent the dedicated employees of the National Reconnaissance Office. As you saw in the opening video, we're an agency of big thinkers and big ideas. The men and women of the NRO are smart and creative and they're constantly finding new, innovative ways to make those big ideas happen.

Innovation is part of our DNA, part of our 62-year legacy. We've long talked about what the future could look like. In fact, it's already here. We're building the most proliferated and diversified overhead ISR architecture of the future today.

INVESTING IN THE FUTURE

At the NRO, we're advancing intelligence, surveillance, and reconnaissance beyond what was thought possible. We're putting new capabilities on orbit, on the ground, and everywhere in between. We're integrating automation and machine learning into everything we do.

We're making major investments that enable us to deliver critical information to the policymakers, the intelligence analysts, the warfighters, and other users who need this information when seconds count.

We're proliferating our architecture – building the largest and most capable, diverse, and resilient overhead constellation in our history. Within the next decade we expect to quadruple the number of satellites we currently have on orbit. These satellites – large and small, in multiple orbits – will deliver an order of magnitude more signals and images as we're getting now, and will be composed of a mix of government and commercial systems.

We're building resilience throughout our enterprise – in space, ground, cyber, our workforce, supply chains, even our launches.



Last year we launched five missions into orbit, each of them designed to meet our diverse needs – different launch partners, different locations – even different continents – different rocket types, and different on-orbit capabilities. And two took off in less than one month from New Zealand.

We're strengthening relationships with international partners as well as those within the Intelligence Community and the DoD – getting them the intelligence they need, when they need it. And we're coming up with more strategic and creative ways to work with industry so we can put more capability into space and deliver that intelligence even faster.

Today, I'm happy to announce the fourth focus area under our Strategic Commercial Enhancements Broad Agency Announcement program – innovative Commercial Electro-Optical Capabilities. The commercial EO market continues to expand with new capabilities and new providers, and we want to be able to assess and use these capabilities to support our mission. We expect the RFP this fall, and this acquisition will be open to both U.S. companies and foreign-owned companies with subsidiaries in the U.S.

These investments are already beginning to pay off and helping to expand our intelligence advantage. And we're taking steps to ensure our space systems and ground infrastructure are able to maintain operations through any contingency or threat.

At the NRO, we're building the future now.

CHINA AND RUSSIA SPACE THREATS

When I was last here in August 2021, I spoke about the increasing complexity of the space domain and the speed at which U.S. advantage from space is being challenged, particularly by China and Russia.

Our competitors are developing weapons to destroy or interfere with our satellites kinetically or via directed energy from locations on the ground and in space. This includes cyber intrusions and cyberattacks that will be a perennial threat to all of our systems.



We're seeing rapid investment and advancements in the space domain from our competitors in just about every area. As Director of National Intelligence Avril Haines noted during her Annual Threat Assessment testimony to Congress earlier this spring, China's commercial space sector is on pace to become a major global competitor to U.S. and allied space industries by 2030.

STAYING AHEAD OF COMPETITION

How we stay ahead of our competitors depends on how much we accelerate our development, how much we improve the capabilities we already have in space, and how much we innovate, embrace technology, get creative, and take risks.

To ensure we can continue to operate in a heightened threat environment, the NRO has continued to modernize our architecture in space and on the ground – to expand our capabilities and to become faster, more resilient, and more agile. This agility allows us to be more responsive, enabling us to quickly pivot and support crisis events such as the conflict in Ukraine while simultaneously supporting humanitarian efforts around the globe.

We're also increasing automation, multi-intelligence processes and machine learning capabilities so we can operate at the speed of machines, and deliver the right information at the right time to the right place ... whether it be to the warfighter in the field, a commander on the ops floor, or an analyst at the NGA or NSA.

Automation and machine learning can focus on the “what, where and when” of our intelligence questions, and allow humans to focus on what they do best – answering the “why.”

As we take full advantage of all of these new and exciting capabilities and collaborations, we're collectively thinking differently about other functions – for example, how we task, collect, and disseminate information. With hundreds of satellites and tens of millions of daily collections, we're increasing the quality, quantity, and diversity of the data we manage.

It's not enough to just deliver the data to the user. We've got to manage it efficiently and quickly turn it into actionable, usable, information – for our allies, for policymakers, for first responders and for warfighters. This way, we can continue to collect and deliver the timely ISR data necessary to ensure strategic advantage on Earth and in space for America and its allies.

I should add that this transformation of architecture and capabilities isn't just happening in space. Our ground systems and communications architecture are also evolving to



meet mission needs. We're continuing to invest in tools that greatly enhance analysts' ability to use and interpret collected information. And we're delivering significant new ground capabilities that will take better advantage of the collection platforms we're putting on orbit.

And just like any other critical infrastructure, space infrastructure requires a cyber defense. As agencies harness commercial and open-source innovation and automation, we're concerned about software supply chain attacks and any weak links. As a community, we need to invest more resources into protecting our space ecosystem. We must jointly focus efforts into real-time cyber monitoring and strengthening our systems and access controls.

As we all know, you can't get to outer space and back securely without navigating cyberspace securely.

PARTNERSHIPS AND INNOVATION

Turning to our partnerships – we know we can't solve today's challenges on our own. We depend on our relationships with other government agencies, other nations, academia, and the private sector to identify new opportunities to optimize our talents, tools, and effectiveness to serve the American people.

One of our most critical relationships is with the U.S. Space Force. When I was last here at Space Symposium in 2021, I highlighted all the ways that NRO and Space Force work together to protect and defend assets in space. Since then, our relationship with Space Force has only grown stronger.

Today the NRO and Space Force are working hand-in-hand to shape the future of the Ground Moving Target Indicators (GMTI), which will provide day, night, all-weather detection and tracking of ground and maritime targets for the warfighter.

Working with the Space Force and other military services, the NRO's flexible acquisition approaches will allow us to develop and acquire reliable and resilient GMTI systems at speed, delivering this critical capability to the warfighter in the very near future.

I'm also pleased to report that the NRO and Space Force have teamed up to improve space situational awareness capabilities, and we will be launching the SILENTBARKER vehicles later this summer. These joint efforts are just a few examples where we're leveraging the best of what the Space Force and NRO have to offer to accelerate U.S. advantage in space.



During the ongoing conflict in Ukraine, NRO systems have provided vital support to our allies and partners in Europe. We're strengthening ties and cooperation with traditional allies like the United Kingdom, Canada, and Australia, while we are also establishing relationships with new partners to advance our common interests.

Our industry partners continue to play a critical role in ISR. The marketplace is expanding, competition is growing, and companies are innovating at an incredible pace. We in the NRO are doing our part to integrate those innovative capabilities into the U.S. government architecture.

In 2021, we established our Strategic Commercial Enhancement Broad Agency Announcement program. Our announcement today of the upcoming fourth focus area is just the latest example of this flexible acquisition approach. It allows the NRO to evaluate and integrate new and emerging space-based technologies as they become available commercially. It's also purposely designed to have low barriers to entry so the NRO can cast the widest net possible and capture the best from the commercial industry.

Under this program, the NRO has awarded multiple contracts and on average they have been awarded less than three months from RFP release.

For those of you who have done business with the U.S. government, you know that three months is just about light speed.

Commercial satellites have continued to advance over the last five years. Today, we have contracts with three electro-optical providers, five commercial radar providers, six radio frequency remote sensing providers, and, as of last month, six hyperspectral imaging providers.

It demonstrates our commitment to innovation and a streamlined acquisition process. We have a reputation across the government for our ability to reduce those traditionally lengthy development cycles and we're proud of it.

Another program we're proud of is the Director's Innovation Initiative. The DII gives us access to nontraditional developers doing groundbreaking research or exploring cutting-edge technologies, all of which are relevant to our mission.

For the past 25 years, the DII has fielded thousands of proposals. We've awarded funding to academia, small and large businesses, and government agencies to – for example – study quantum technologies and advances in artificial intelligence and machine learning.



One small business with expertise in photonics was awarded funding to study unique interference mitigation systems. Another small business received money to develop a compact-robust laser system.

In fact, many of the technologies submitted to the DII are already at work in our systems – including novel infrared sensor technology.

We're hoping to meet some of those innovators at our upcoming NRO Tech Forum at the end of May. It will bring together scientists, technologists and visionaries from across government, academia, and industry to work on some of the NRO's hardest problems and figure out how to innovate faster.

So if you're interested in collaborating with some of the best minds in the country to help ensure we stay on the cutting edge of reconnaissance, please join us for our two-day tech forum at our Chantilly, Virginia headquarters.

At the NRO, we're keeping an eye out – looking beyond the horizon 10, 20, 30 years from now to find those truly disruptive technologies that are going to be game changers. We want to partner with those innovators, work together from design to execution, and get that technology into space.

Yet as we advance our space system architecture, engage new vendors and partners, collect and distribute more data, and employ new contracting mechanisms, all of us – government and industry alike – need to pay attention to detail.

What we do is hard and demanding. Small oversights can have major consequences – up to and including mission failure.

We've all got to be inquisitive and communicate every step of the way. Know your particular aspect of a program to the smallest detail so you can confidently say you did what was necessary to assure success.

This collective mindset will be necessary as we develop and deliver bold new capabilities and withstand threats.

RECRUITING PITCH

At the NRO, we're proud of our innovation, our increased capabilities, and our ability to evolve along with the challenges we face. One of the main ingredients of our success is our highly skilled, technical workforce.



We're investing heavily in recruiting and retaining a dynamic team that represents the diversity of our country. Diversity of thought and experience have been inherent in our agency since its founding, and will continue to be sources of strength, innovation, and resilience in the future.

Just seven years ago, we created the NRO Cadre, three years ago we began our intern program. In that short time, we have participated in about 50 recruiting events with more than half of those diversity-focused. We're reaching a wider talent pool through online recruitment tools and third-party job boards and have launched our [NRO.gov/Careers](https://www.nro.gov/Careers) website.

And we're especially proud of our growing NRO cadre summer internship program. We started with 10 cadre interns in 2020. This summer we expect to have 75 cadre interns. The Office of Human Resources received over 1,100 summer intern applications this year, more than double compared to last year.

To date, we've hired 21 of those interns.

If you or someone you know would be a great fit for the NRO, please send them our way. Joining the NRO is a mission like no other. Come join our team.

CONCLUSION

At the NRO, we have a long history of pushing boundaries, using innovation and imagination to bring the farthest reaches of our planet into focus.

With each new advancement in ISR technology, we've increased the amount of intelligence collected from space and decreased the amount of time needed to get that intelligence where it needs to be.

We have a clear example of this in the exhibit hall. I hope you've had a chance to stop by our booth, where we have a number of historical artifacts on display, including a model of our innovative Corona satellite – the world's first photoreconnaissance satellite, developed as a response to rising threats during the Cold War. It's some pretty fascinating stuff.

In 1960, when the first Corona imagery bucket was recovered from space, it included more imagery of the Soviet Union than all of the previous two dozen U-2 overflights of the Soviet Union combined. If you de-spoiled the film from that groundbreaking mission, it would reach from this conference center to about the lobby across the street in the Broadmoor hotel.



We continued this innovation and delivered even more intelligence when the Hexagon satellite replaced Corona in 1971. Hexagon's multiple recovery buckets carried nearly 250 times more film than the first successful Corona mission – enough linear feet of film to stretch from here to the outskirts of Denver.

That spirit of innovation is still our focus today – as we continue to push boundaries and develop new and better technology to make sure our leaders have the data and the intelligence they need ... to make real-time decisions, protect warfighters, and get our sons and daughters home safely from war zones. Today, instead of innovating to respond to world events, we're innovating to stay ahead of world events.

What was a vision for our agency just a few years ago is in view. The future is now. I am confident that the NRO, our people and our partners, are all committed not to just keep pace, but to accelerate our advantage in space. The safety and security of the world and our nation are counting on it. Thank you.

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