



# CYBERLEO CONFERENCE

*MAY 12, 2022*

A JOINT FORCE THAT IS LETHAL, RESILIENT,  
SUSTAINABLE, SURVIVABLE, AGILE AND  
RESPONSIVE (VIEWED FROM SPACE)

*COLONEL JENNIFER KROLIKOWSKI, CIO*

UNITED STATES SPACE FORCE | SPACE SYSTEMS COMMAND



**– SPACE SYSTEMS COMMAND –**

**Space Systems Command will be responsible for developing, acquiring, and fielding resilient space capabilities to enhance joint lethality.**

**-Gen. John W. "Jay" Raymond  
Chief of Space Operations**



## Fact Sheet: 2022 National Defense Strategy

Today, the Department of Defense transmitted to Congress the classified 2022 National Defense Strategy (NDS).

For the first time, the Department conducted its strategic reviews in a fully integrated way – incorporating the Nuclear Posture Review (NPR) and Missile Defense Review (MDR) in the NDS – ensuring tight linkages between our strategy and our resources. The unclassified NDS will be forthcoming.

Consistent with the President’s Interim National Security Strategic Guidance, the classified NDS sets out how the Department of Defense will contribute to advancing and safeguarding vital U.S. national interests – protecting the American people, expanding America’s prosperity, and realizing and defending our democratic values.

The Defense priorities are:

1. Defending the homeland, paced to the growing multi-domain threat posed by the PRC
2. Deterring strategic attacks against the United States, Allies, and partners
3. Deterring aggression, while being prepared to prevail in conflict when necessary, prioritizing the PRC challenge in the Indo-Pacific, then the Russia challenge in Europe
4. Building a resilient Joint Force and defense ecosystem.

The Department will act urgently to sustain and strengthen deterrence, with the People’s Republic of China (PRC) as our most consequential strategic competitor and the pacing challenge for the Department.

Russia poses acute threats, as illustrated by its brutal and unprovoked invasion of Ukraine. We will collaborate with our NATO Allies and partners to reinforce robust deterrence in the face of Russian aggression.



## BUSINESS

# Kendall details 'Seven Operational Imperatives' & how they forge the Future Force

by Charles Pope • March 7, 2022 1:05 pm



Secretary of the Air Force Frank Kendall, speaks at the 2022 AFA Warfare Symposium Mar. 3, 2022. Kendall spoke about his one team one fight mantra and his operational imperatives during the symposium. (U.S. Air Force photo by Tech. Sgt. Armando A. Schwier-Morales)

Secretary of the Air Force Frank Kendall outlined his increasingly urgent roadmap March 3, 2022, for successfully bringing about the new technologies, thinking, and cultures the Air and Space Forces must have to deter and, if necessary, defeat modern day adversaries.

The particulars of Kendall's 30-minute keynote to Air Force Association's [Warfare Symposium](#) weren't necessarily new since they echoed main themes he's voiced since becoming the Department's highest ranking civilian leader. But the circumstances surrounding his appearance before an influential crowd of Airmen, Guardians, and industry officials were dramatically different, coming days after Russia invaded Ukraine.

Kendall used the invasion to buttress his larger assertion that the Air and Space Forces must modernize to meet new and emerging threats and challenges. The path to achieving those goals are embodied in what Kendall has dubbed the Department of the Air Force's "seven operational imperatives."

"My highest personal goal as Secretary has been to instill a sense of urgency about our efforts to modernize and to ensure that we improve our operational posture relative to our pacing challenge; China, China, China," he said. "The most important thing we owe our Airmen and Guardians are the resources they need, and the systems and equipment they need, to perform their missions."

"To achieve this goal, I've commissioned work on seven operational imperatives. These imperatives are just that; if we don't get them right, we will have unacceptable operational risk," he said.

Kendall spent the balance of his address discussing each of the seven imperatives. But he also noted that, given recent events, the threats are not abstract.

"In my view President Putin made a very, very, serious miscalculation. He severely underestimated the global reaction the invasion of Ukraine would provoke, he severely underestimated the will and courage of the Ukrainian people, and he overestimated the capability of his own military," Kendall said.

"Perhaps most of all, he severely underestimated the reaction from both the U.S. and from our friends and allies," he said.



## Space Superiority Through Integrated Cyberspace Operations

- 2 **Vision:** *Employ a full range of cyberspace capabilities necessary to ensure cyberspace- and*
- 3 *intelligence-integrated space superiority in order to compete, deter, and win our Nation's wars.*

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*The United States considers unfettered access to and freedom to operate in space vital to advancing the security, economic prosperity, and scientific knowledge of the Nation.*

**National Cyber Strategy of the United States of America  
September 2018**

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**Strategic Threat Landscape:** In 2010, a cyber-worm demonstrated to the world the non-kinetic impacts cyberwarfare can have against an adversary's critical mission systems and why the United States must protect and actively defend our critical mission systems and warfighting platforms. This worm, Stuxnet, was created as a non-kinetic option to diminish Iran's ability to enrich uranium for weaponization purposes. It took Iran more than a year to discover the effects of this covert, precision strike against an "air-gapped or closed" network and underscores the art of the possible in this domain. In the decade since, cyberwarfare's non-kinetic impacts have resulted in financial losses, privacy breaches and leaks, degraded power grids, tampered elections, exploited stock market and monetary systems,

16 disrupted government administration, and shutdown oil pipelines. Enduring compromises in  
17 cybersecurity mechanisms and the Defense Industrial Base (DIB) validate continued effort is  
18 required to operate in the contested cyberspace domain enabling our national space mission  
19 systems.

20 **Impact to the Space Domain:** Our nation's potential adversaries view our mission systems  
21 and warfighting platforms as high-value targets that enable the execution of some of the most  
22 critical missions within the DOD. Although there is a perception that Space Force mission  
23 systems are less vulnerable to potential cyber-attacks because they are air-gapped or closed  
24 networks, space mission systems are vulnerable to insider threat and human factors similar to  
25 those exploited by Stuxnet. For these reasons, the USSF must protect and actively defend  
26 cyberspace within all three space segments (space, link, and terrestrial) plus launch/AATS &  
27 development environments / supply chains. This ensures presentation and use of space-based  
28 effects for Joint and Combined Forces, while enabling confidentiality, integrity, and availability  
29 of space capabilities for the US, our Allies, mission partners, commercial/industry partners, and  
30 research and development partners. Support from other DOD organizations is necessary for our  
31 success, but not sufficient. Therefore, the USSF must retain and operate our own cyber trained  
32 and equipped force with space expertise to meet unique challenges we will face today and in the  
33 future. Must design our computing and communications systems to ensure information  
34 dominance to maximize the flexibility for blue forces while frustrating efforts of adversaries to  
35 affect our operations.



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[jennifer.krolikowski@spaceforce.mil](mailto:jennifer.krolikowski@spaceforce.mil)

719-359-7346