THE STATE OF MILITARY COMMUNICATIONS TECHNOLOGIES

PURPOSE

The digital information age has changed the nature of war. Mission success increasingly depends on real-time information exchange and comprehensive battlefield awareness, but this is only possible so long as the Department of Defense (DoD) prioritizes communications for the warfighter.

The Pentagon is working to leverage modern communications technologies to better manage information, conduct operations, manage assets, move people and supplies, and support service personnel, but are these modernization efforts effectively propelling the U.S. military above its near-peer adversaries? In order to understand the state of military communications technologies across the DoD, Government Business Council (GBC) deployed the following survey to military decision-makers between August and September of 2019.

METHODOLOGY

330 U.S. active military and DoD civilians from across the nation participated in this study, 50% of whom hold positions at the GS/GM-13 level or above (including Senior Executive Service). Respondents represent all branches of the military, as well as a range of agencies within the Office of the Secretary of Defense, and span each of the organizational designators (Manpower and Personnel, Intelligence and Security, Operations, Logistics, Planning and Strategy, Communications and Information Systems, Installations and Training, and Finance and Contracts).

EXECUTIVE SUMMARY

Warfighters Do Not Have the Levels of Connectivity They Need

The complexity of future operating environments, as well as the threats faced by both near-peer and insurgent organizations demands a tactical communications architecture with the flexibility, mobility, simplicity, versatility, and reliability that warfighters have become accustomed to in the civilian world. Though this is what 68% of respondents expect, it's not what they're getting, with 98% of respondents saying they have experienced disruptions in their communications technology to a point where they've been left with a complete loss of connectivity.

This reality is reflected in respondents' opinions on the U.S. military's position of strength relative to its adversaries, with only 37% believing its defense communications technologies rank ahead of those of rival nations. As the pace of innovation continues to accelerate and technologies become more sophisticated and easy to access, the U.S. will become more vulnerable to falling behind its near-peer adversaries.

Resiliency is The Most Critical Priority for New Communications Technologies

When evaluating new communications technologies, respondents overwhelmingly value resiliency in contested environments most. Similarly, 60% of respondents say that improvements in defense communications technology are most needed to strengthen the military's ability to maintain secure connectivity in the face of digital threats.

Securing Connectivity Increasingly Requires Successful Implementation of Cloud Technologies

62% of respondents believe that cloud-enabled technologies will play an increasingly significant role in enhancing the military's decision-making capabilities. Taking this a step further, 81% say that, in order to fully leverage these technologies and ensure ubiquitous, secure, resilient, and high-speed connectivity, U.S. military forces must have access to a modernized, end-to-end satellite and terrestrial network.

EXPECTATIONS VERSUS REALITY

"

Effective and timely communication has always been a force multiplier, so we must continue to innovate new communications systems and integrate new technology to stay ahead of our adversaries."[1]

- Brig. Gen. Richard R. Coffman, Director of the Next Generation Combat Vehicle, Army Futures Command

68% of respondents expect the same level of connectivity and access to trusted and timely information on the battlefield as they get in the civilian world

46% feel they have the level of connectivity needed to successfully execute their mission objectives

How often is your communications technology disrupted to a point where you're left with a complete loss of connectivity?

Category	Percentage
Frequently	9%
Often	25%
Sometimes	43%
Rarely	21%
Never	2%
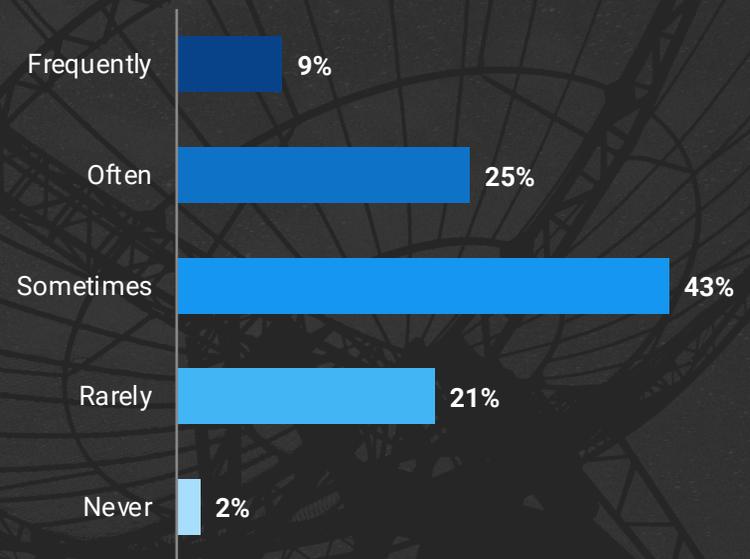
Percentage of respondents, n=290
Note: Percentages may not add up to 100% due to rounding

98% say they are disrupted to a point where they're left with a complete loss of connectivity on the battlefield

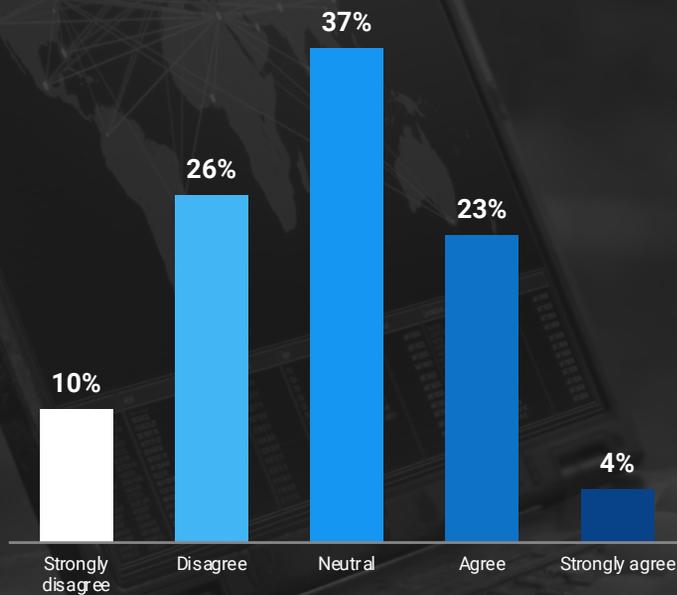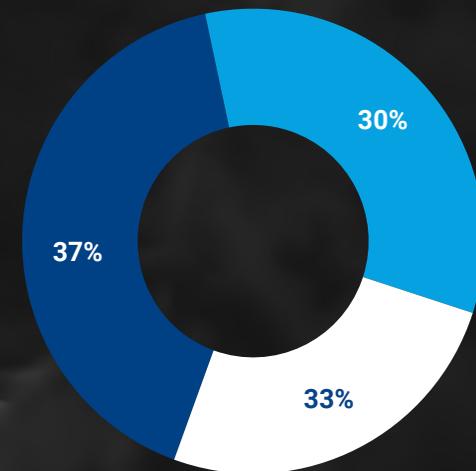# HOW THE U.S. RANKS AGAINST ITS ADVERSARIES

The global diffusion of technology has led to the loss of the monopoly position U.S. forces once enjoyed

"The DoD's budget priorities for communications technology allow my organization to effectively keep pace with escalating geopolitical threats."

How would you say U.S. defense communications technologies rank relative to its adversaries?

37%

26%

23%

10%

4%

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Percentage of respondents, n=252
Note: Percentages may not add up to 100% due to rounding

30%

37%

33%

■ Far ahead of / ahead of
■ On par with
□ Far behind / behind

Percentage of respondents, n=252
Note: Percentages may not add up to 100% due to rounding

27% believe the DoD's budget priorities for communications technology allow their organization to effectively keep pace with escalating geopolitical threats.
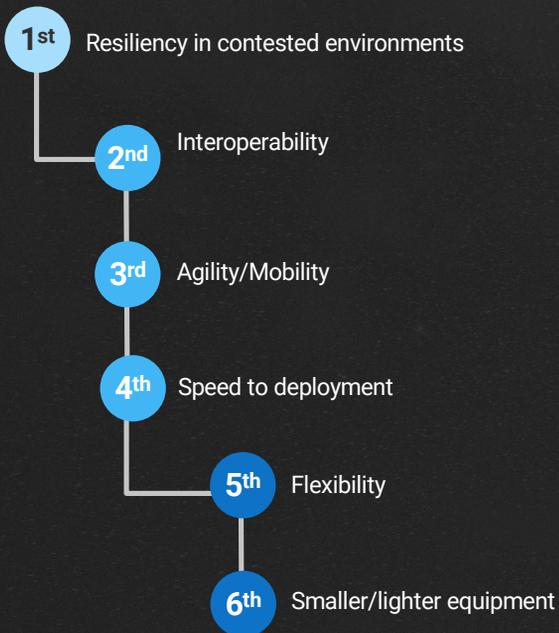
63% of respondents believe U.S. defense communications technologies are either on par with or falling behind its adversaries.
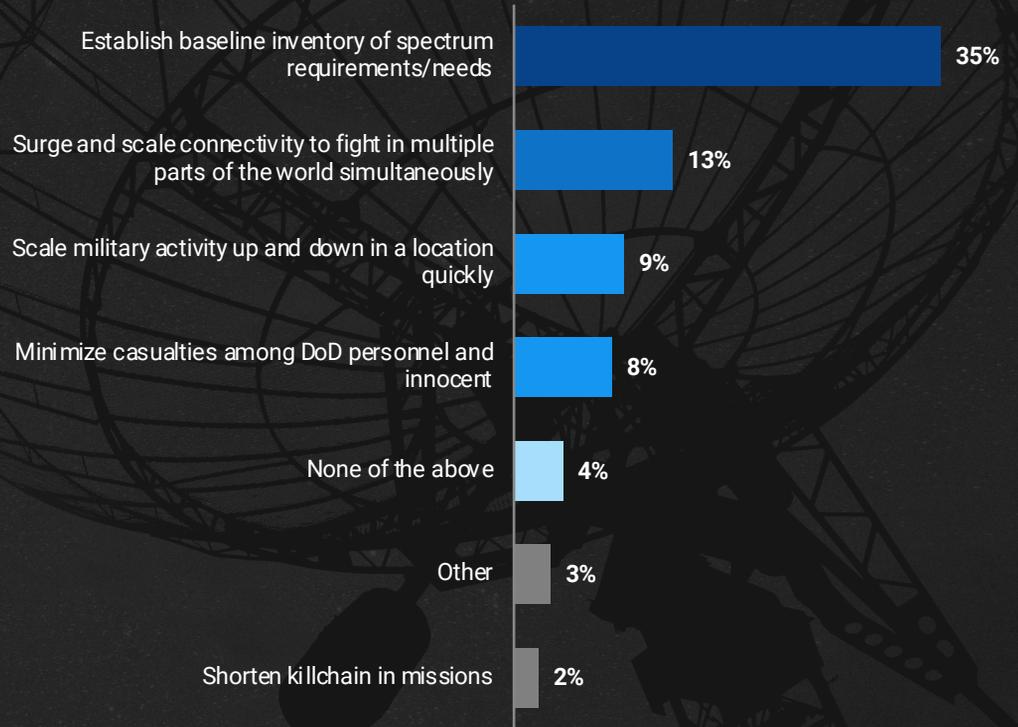
IMPROVING BATTLEFIELD CONNECTIVITY

Technology

When evaluating new communications technologies, which factors do you value most?

Improvements in defense communications technology most need to strengthen the DoD's ability to do which of the following?

1st Resiliency in contested environments

2nd Interoperability

3rd Agility/Mobility

4th Speed to deployment

5th Flexibility

6th Smaller/lighter equipment

Percentage of respondents, n=226
Note: Percentages may not add up to 100% due to rounding

Category	Percentage
Establish baseline inventory of spectrum requirements/needs	35%
Surge and scale connectivity to fight in multiple parts of the world simultaneously	13%
Scale military activity up and down in a location quickly	9%
Minimize casualties among DoD personnel and innocent	8%
None of the above	4%
Other	3%
Shorten killchain in missions	2%

Percentage of respondents, n=205
Note: Percentages may not add up to 100% due to rounding

60% of respondents say that improvements in defense communications technology are most needed to strengthen the military's ability to maintain secure connectivity in the face of digital threats.

IMPROVING BATTLEFIELD CONNECTIVITY

Process

"Today, our country is engaged in a long-term strategic competition with determined adversaries. Within this is a protracted struggle among militaries to out-innovate one another during a period of rapid technological change. Our military capabilities relative to those of our adversaries will depend on the relative responsiveness, effectiveness, and efficiency of our force modernization enterprise." [2]
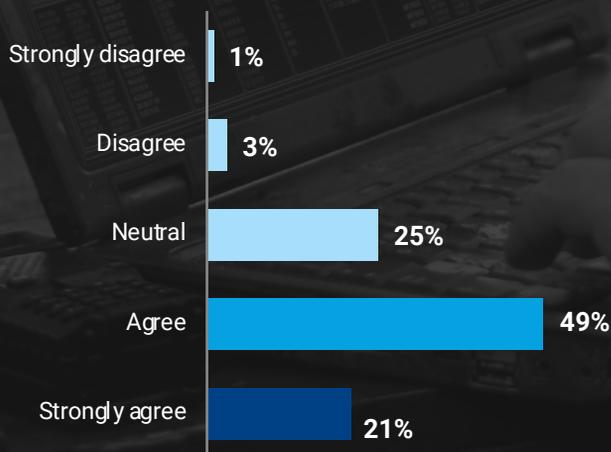
- *Gen. John Murray, Commanding General, Army Futures Command*

59%

of respondents believe that increasing use of commercial solutions would speed up the current pace of defense acquisitions.

Respondents say the three biggest challenges facing their organizations' network modernization efforts are an **inability to keep pace with commercial technology**, **procurement inefficiencies** and **limited funding**.

"Adopting new acquisition processes would allow my organization to update its communications technologies at the speed of relevance."

Strongly disagree	1%
Disagree	3%
Neutral	25%
Agree	49%
Strongly agree	21%

Percentage of respondents, n=183
Note: Percentages may not add up to 100% due to rounding

"Increasing use of commercial solutions would speed up the current pace of defense acquisitions."

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1%	9%	30%	43%	16%
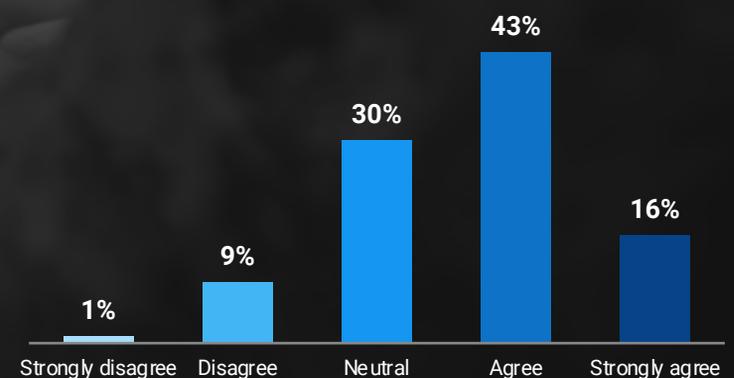
Percentage of respondents, n=182
Note: Percentages may not add up to 100% due to rounding

THE FUTURE OF MILITARY COMMUNICATIONS

"To power these cloud-enabled technologies and make the IoBT a reality, it's critical for U.S. military forces to have access to a modernized end to end satellite and terrestrial network that will enable ubiquitous, secure, resilient, and high speed connectivity."

Strongly disagree — 1%
Disagree — 1%
Neutral — 17%
Agree — 36%
Strongly agree — 45%
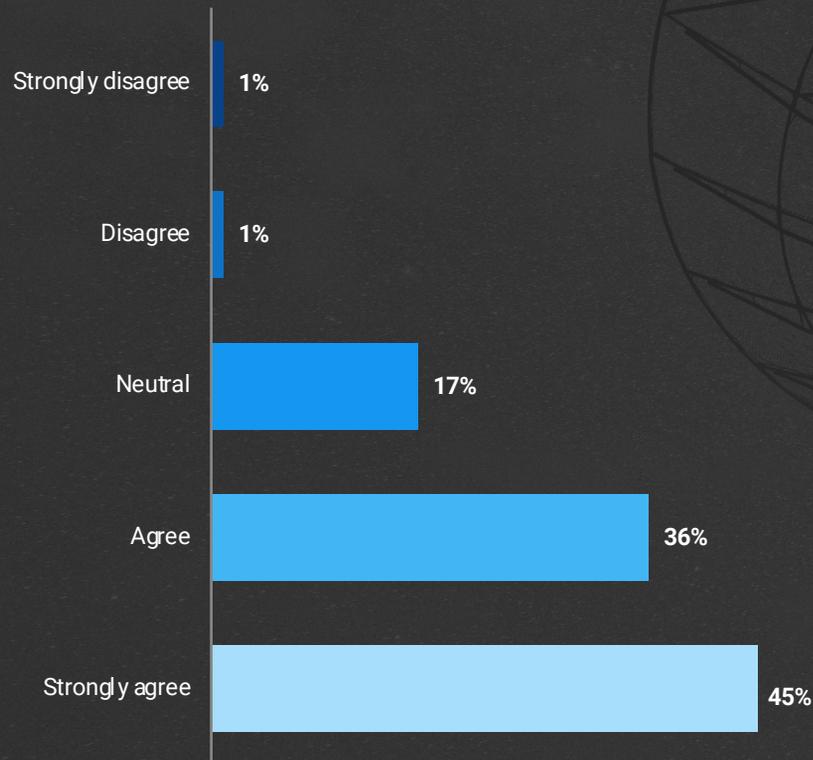
Percentage of respondents, n=205
Note: Percentages may not add up to 100% due to rounding

62% of respondents agree cloud-enabled technologies will play an increasingly significant role in enhancing the U.S. military's decision-making capabilities.

81% of respondents agree it's critical for U.S. military forces to have access to a modernized end-to-end satellite and terrestrial network to make cloud-enabled technologies and the Internet of Battlefield Things a reality across the battlespace.

ABOUT VIASAT

VIASAT INC.

Viasat is a global communications company that believes everyone and everything in the world can be connected. For more than 30 years, Viasat has helped shape how consumers, businesses, governments and militaries around the world communicate. Today, the Company is developing the ultimate global communications network to power high-quality, secure, affordable, fast connections to impact people's lives anywhere they are—on the ground, in the air or at sea.

VIASAT GOVERNMENT SYSTEMS

Viasat believes it is our responsibility to help ensure U.S. and coalition military forces are equipped with the latest capabilities that will help our military forces be successful across the technology driven battlespace of today and tomorrow. With deep roots in defense, Viasat is a national asset - helping to foster a new era of defense technology that helps save lives, protects the integrity of information and delivers the connectivity-driven clarity needed to maintain a tactical advantage.

ABOUT GOVERNMENT BUSINESS COUNCIL

As Government Executive Media Group's research division, Government Business Council (GBC) is dedicated to advancing the business of government through analysis, insight, and analytical independence. An extension of Government Executive's 40 years of exemplary editorial standards and commitment to the highest ethical values, GBC studies influential decision makers from across government to produce intelligence-based research and analysis.

Report Author: Lucy Bierer

CONTACT

Daniel Thomas
Associate Director, Government Business Council
Government Executive Media Group
Tel: 202.266.7905
Email: dthomas@govexec.com

govexec.com/insights
@GovExecInsights.