

# STRENGTH THROUGH CONNECTIVITY

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A SURVEY ON THE STATE OF MILITARY COMMUNICATIONS TECHNOLOGY

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Underwritten by



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# OVERVIEW

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## Purpose

Protecting a nation's defense interests is becoming increasingly challenging with the growing sophistication of war and intelligence. And with military communications as a crux of mission success, warfighters need resilient and advanced communications technology to share and receive information for real-time decision making on the battlefield.

Since 2019, Government Business Council (GBC), in partnership with Viasat, has fielded annual surveys to capture year-over-year trends on the state of military communications. Are U.S. defense communications able to outcompete that of U.S. adversaries? How has the pace of modernization been trending over the last few years? In its third annual study, GBC will help answer these questions and more.

## Methodology

From August 2021 to January 2022, GBC deployed a survey to a random sample of military government employees to measure change over time in the state of military communications technology. This year's survey is the latest of two previous iterations of the surveys deployed August-September 2019 and September-October 2020. Responses of 312 defense employees were captured after quality control and screening, including 43% ranked GS-14 and above. Respondents represent all branches of the military, with the greatest input from the Army and Air Force.

# EXECUTIVE SUMMARY

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## Comms are improving, but are not on pace to outcompete that of adversaries

Year over year, the percentage of respondents that had experienced a communications blackout has decreased, particularly from 2020 to 2021. From 2019 to 2020, there was a 1 percentage point (pp) decrease in reported communications disruptions, and from 2020 to 2021, there was a 12pp decrease, suggesting growth in communications reliability. Despite signs of improved reliability, there are also concerns about keeping pace with nearly three-quarters (73%) of respondents in 2021 saying U.S. defense communication technologies are on par or behind those of adversaries, a 13pp increase from from 2020. Additionally, more than two-thirds of respondents (68%) say they believe near-peer adversaries will either match or surpass U.S. military communications capabilities within the next five years.

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## Defense personnel take 'Do as I say, not as I do' approach to communications improvements and commercial capabilities.

A majority (8 in 10) respondents report that improvements to defense communications should be a high or top priority, and more than half (55%) agree commercial communication capabilities have the same or better performance compared to DoD purpose-built solutions. However, despite this sentiment, just 7% say their agency is extremely likely to adopt commercial defense capabilities in the next year.

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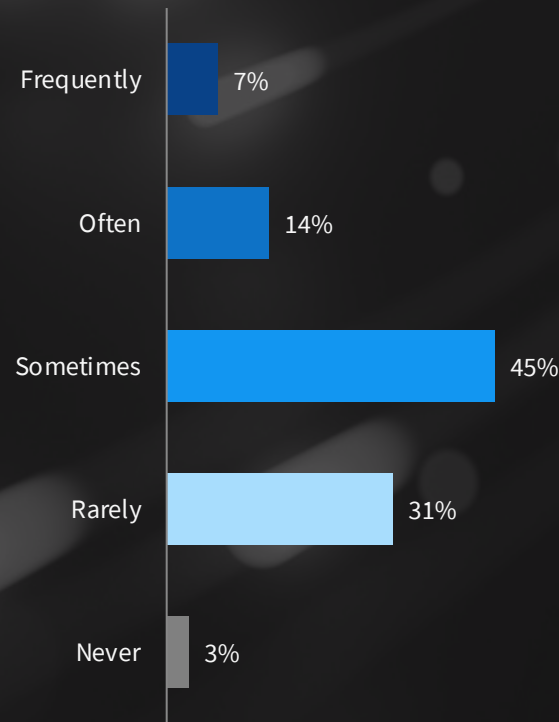
## Space and next-gen technology investments are needed for the future fight

A large majority (77%) of respondents agree advanced space-based networking capabilities are needed to meet DoD mission needs in every domain. Yet, just 19% of respondents say their agency is investing in advanced satellite communications. Similarly, while 49% of respondents think Artificial Intelligence (AI) must be leveraged to advance military communications capabilities, only 27% of respondents say their agency is actively investing in AI to support warfighters' needs.

# THE COMMUNICATIONS STATUS QUO

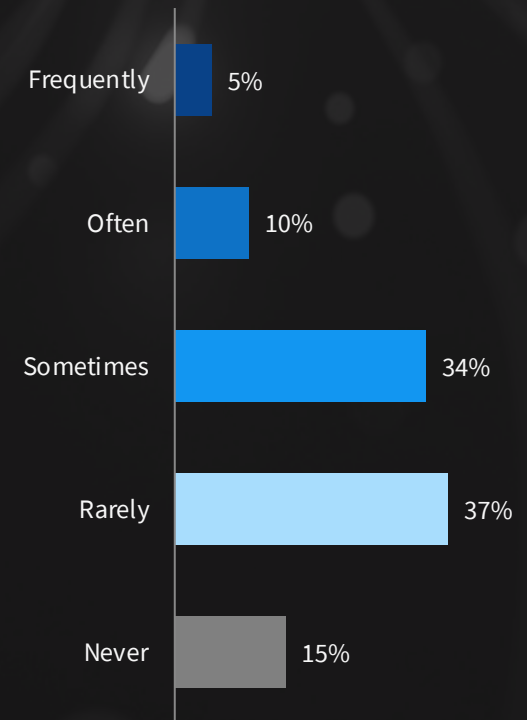
In the past 12 months, how often has your defense communications technology disrupted to a point where you're left with a complete loss of connectivity?

## 2020 Data



Percentage of respondents, n=176  
 Note: 2020 data. Percentages may not add up to 100% due to rounding  
 Question: How often is your defense communications technology disrupted to a point where you're left with a complete loss of connectivity?

## 2021 Data



Percentage of respondents, n=264  
 Note: 2021 data. Percentages may not add up to 100% due to rounding



When you connect your phone to different networks, it's seamless as you transition between different cell towers. That's really what we need in our networking capabilities across the fleet."

— Kelly McCool,  
 Director of the Digital Warfare Office

1pp

fewer respondents have experienced a disruption in communications technology in 2020 than in 2019.

69%

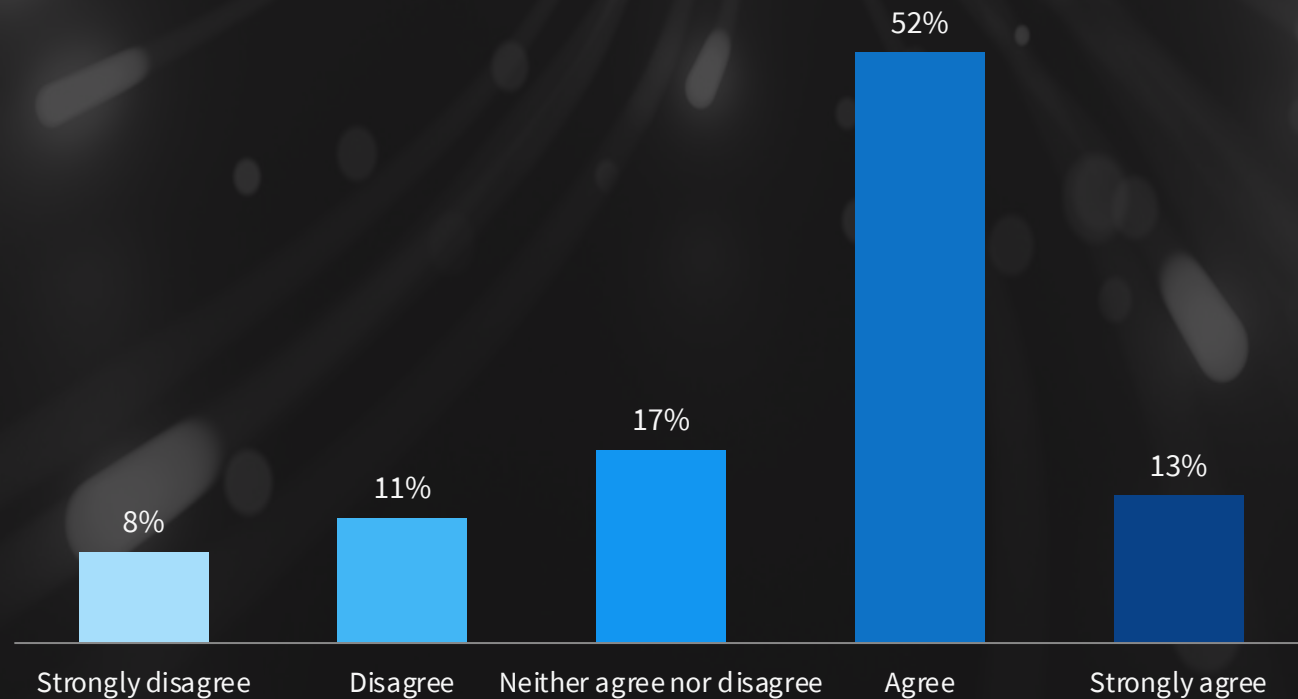
of respondents in 2021 expect the same level of connectivity on the battlefield that they get in the civilian world, similar to the 2019 and 2020 GBC survey studies.

“I have an adequate level of connectivity needed to successfully execute my mission objectives.”

“

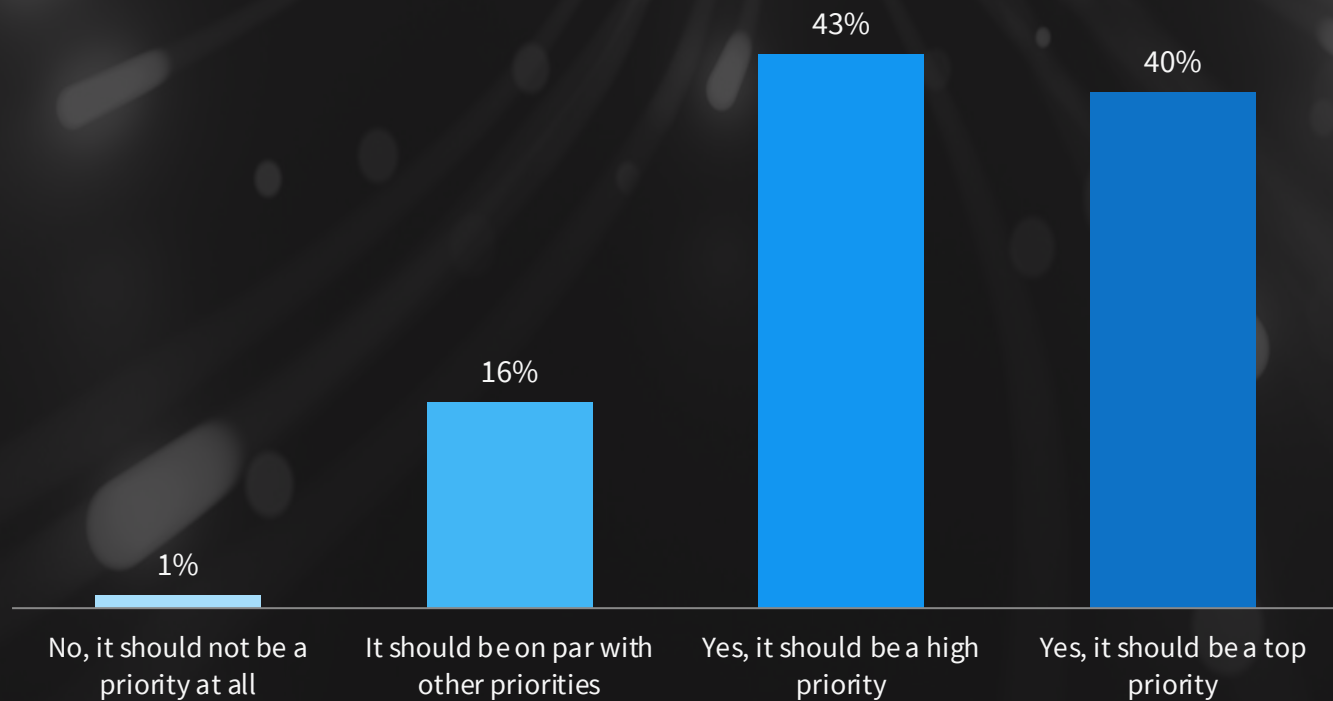
We’ve got to work in a contested, congested, disconnected, intermittent, limited-bandwidth environment, and we have got to do it in an expeditionary nature.”

— Brig. Gen. Robert Collins, Program Executive Officer for Army tactical networks



Percentage of respondents, n=272  
Note: 2021 data. Percentages may not add up to 100% due to rounding

Do you believe improvements to defense communications should be a priority for your agency?



Percentage of respondents, n=263  
Note: 2021 data. Percentages may not add up to 100% due to rounding

**83%**

of respondents think that improvements to defense communications should be a higher priority than other agency priorities.

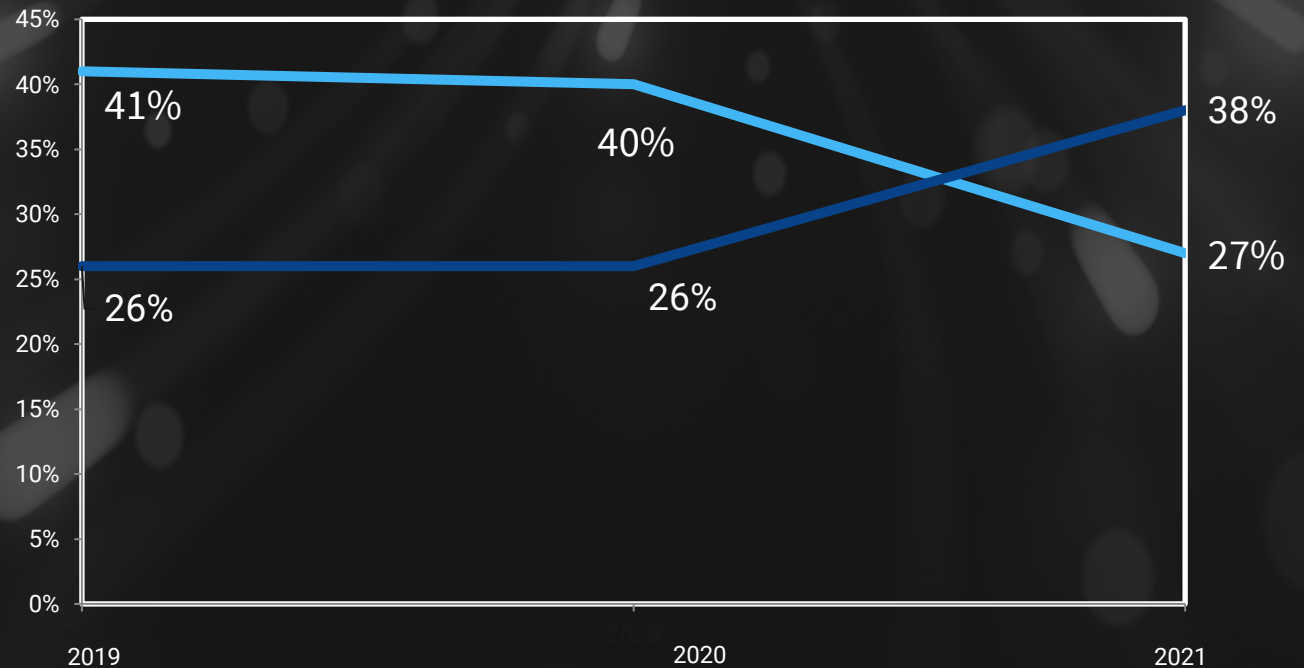
How would you say U.S. defense communications technologies rank relative to those used by its adversaries?

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If we don't start accelerating our development and delivery of capabilities, [China] will exceed us,”

— General David Thompson, Vice Chief of Space Operations for Space Force

— Far ahead of / ahead of — Far behind / behind



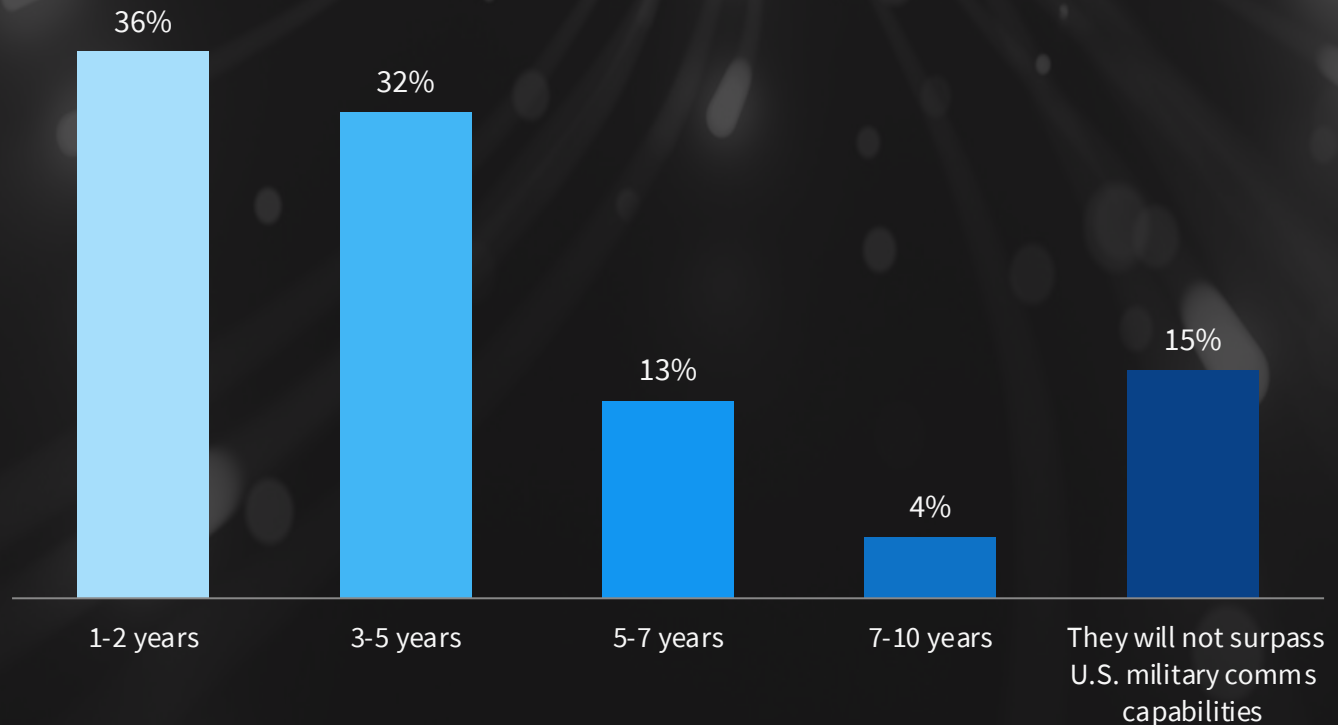
Percentage of respondents, n=252 (2019), n=149 (2020), n=256 (2021)  
Note: Percentages may not add up to 100% due to rounding

**73%**

Of 2021 respondents believe U.S. defense communications technologies are either on par with or falling behind its adversaries compared to 60% of 2020 respondents.



As things stand today, when do you believe near-peer adversaries will match or surpass US military communications capabilities?



Percentage of respondents, n=252  
Note: 2021 data. Percentages may not add up to 100% due to rounding

## How to compete?

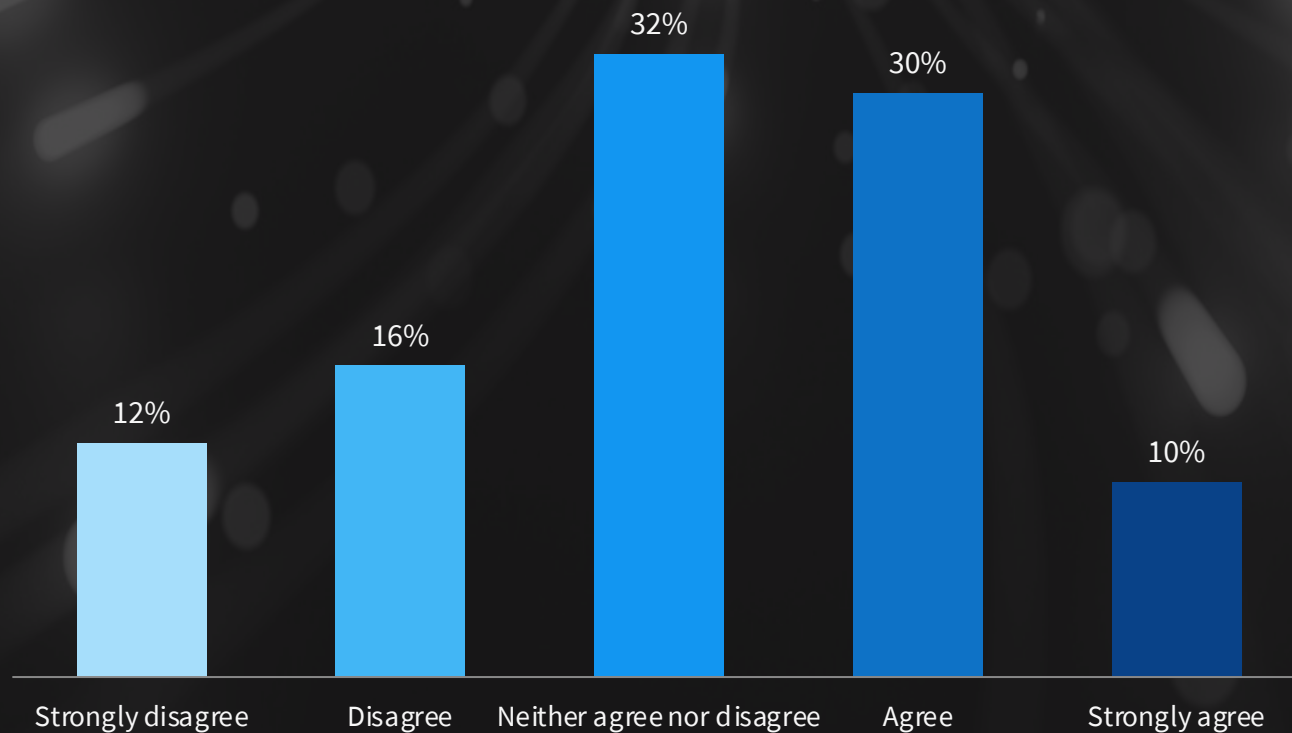
In 2020, respondents rated advanced satellite communications, advanced analytics, and 5G technology as the most important next-gen technology to advance defense comms capabilities above that of adversaries.

“My agency is adequately prepared for a cyber attack on defense communications technology/infrastructure.”

“

Our adversaries have grown more emboldened, conducting increasingly aggressive activities to extend their influence with limited fear of consequences. We must change our approaches and responses here if we are to change that dynamic.”

— Navy Adm. Michael S. Rogers, Commander of US Cyber Command



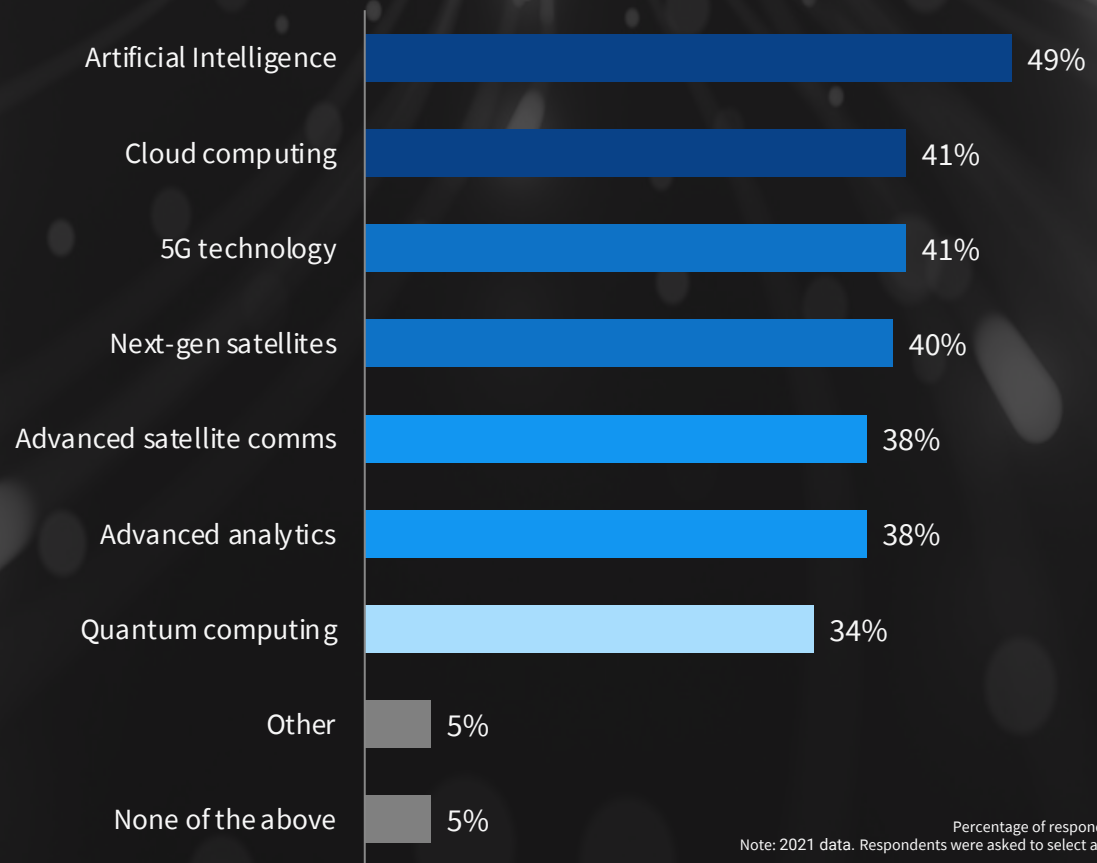
Percentage of respondents, n=272  
Note: 2021 data. Percentages may not add up to 100% due to rounding

**24%**

of 2020 respondents were very or extremely confident in their agency's preparedness for a cyber attack on defense communications.

# DRIVING COMMUNICATIONS FORWARD

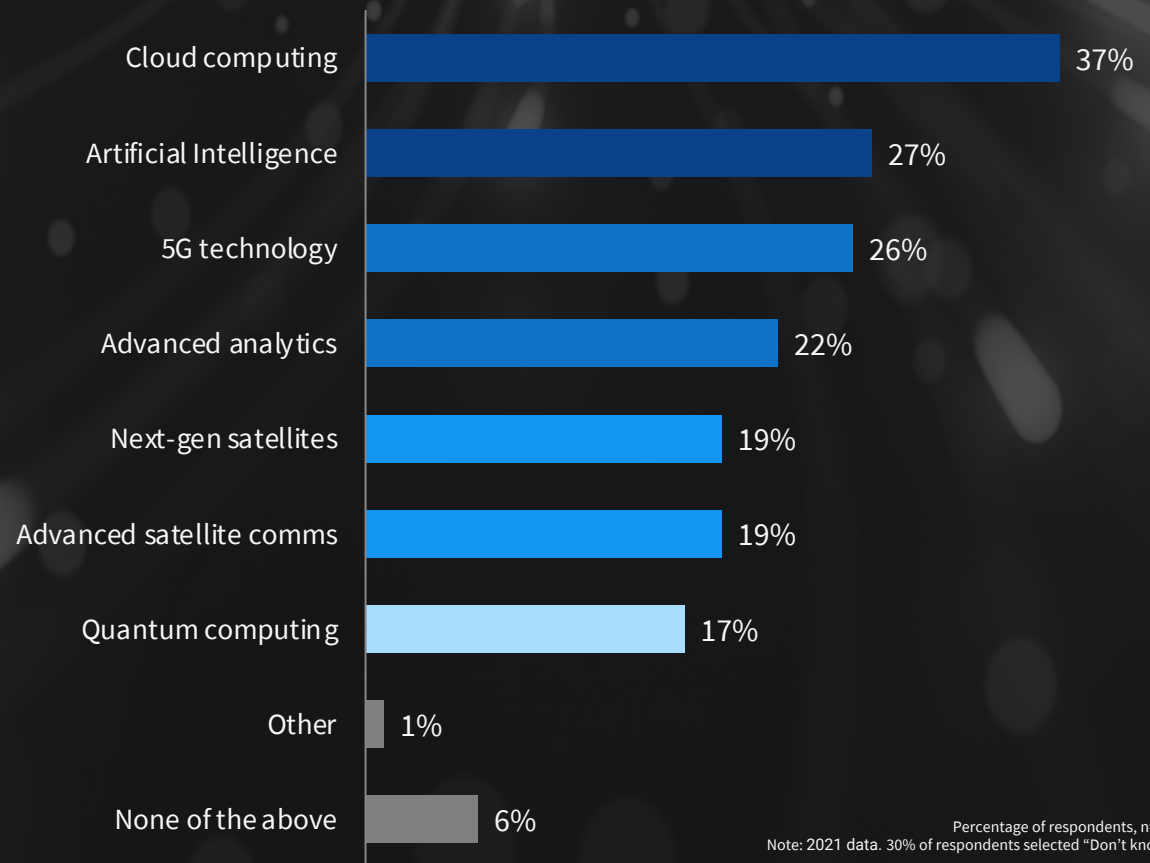
What next-gen technology do you think your agency must leverage to advance defense communications capabilities above that of adversaries? Please select all that apply.



**27%**

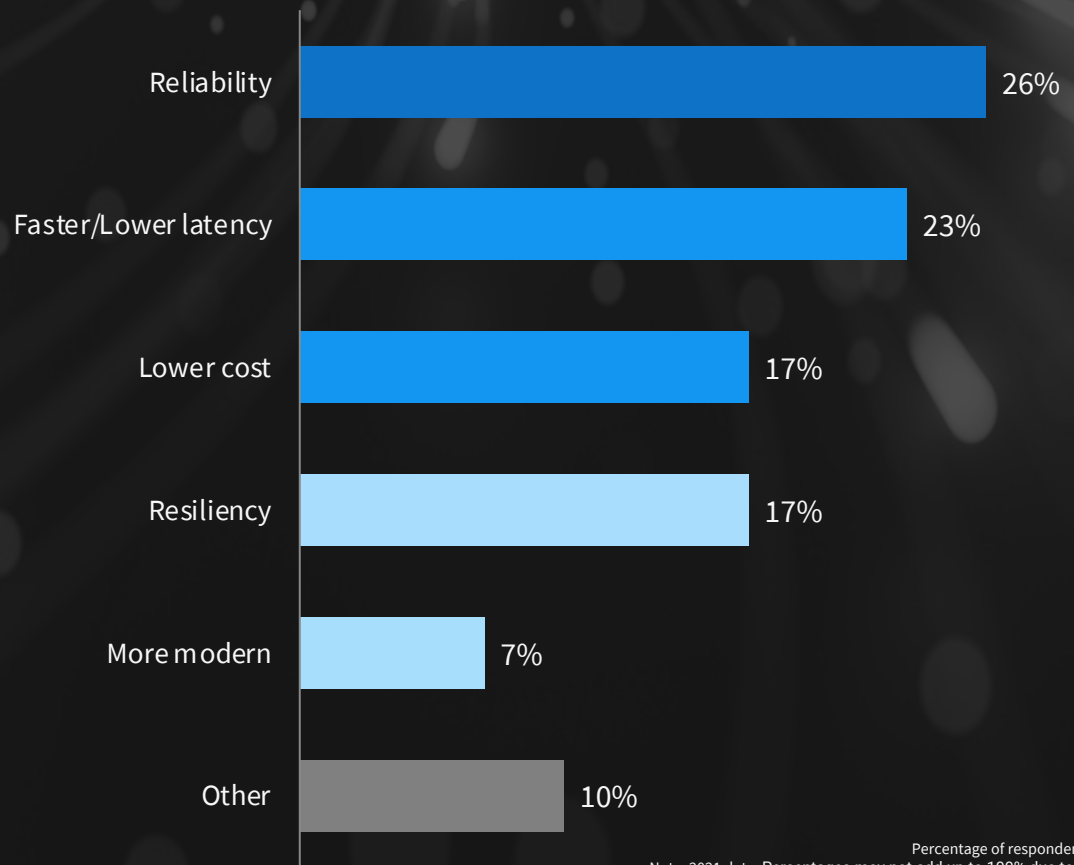
Only 27% of respondents report that AI is the next-gen technology that their agency is investing in to support the warfighter.

What next-generation technology is your agency actively investing in to support the defense communications needs of the modern warfighter? Please select all that apply.



3%

What do you view as the biggest advantage of proliferated low earth orbit (LEO) SATCOM networks when compared to medium earth orbit (MEO) or geostationary orbit (GEO)?

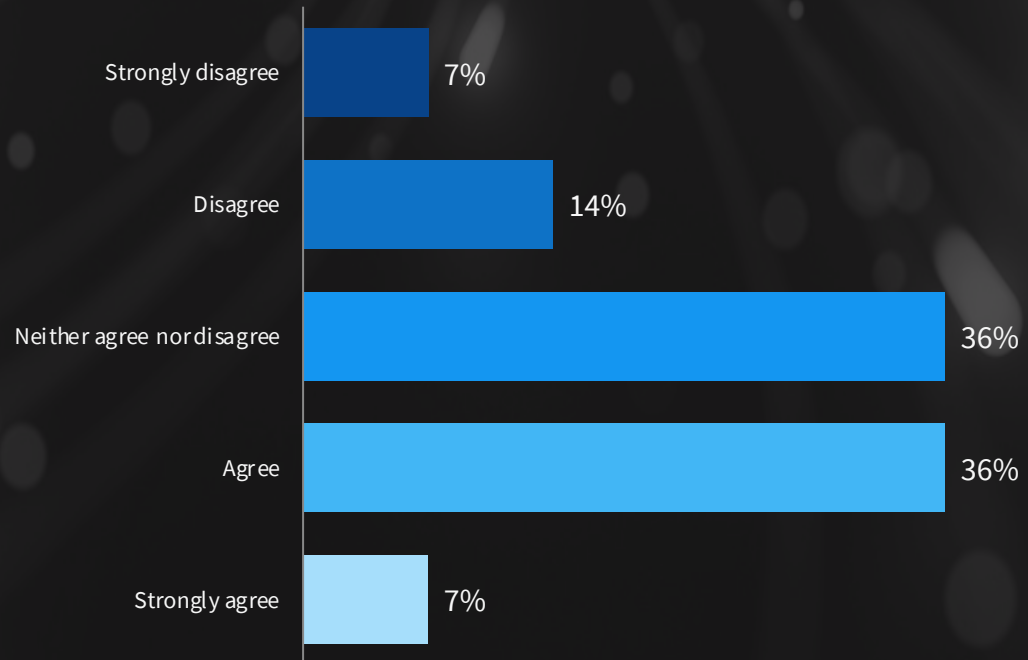


Percentage of respondents, n=226  
Note: 2021 data. Percentages may not add up to 100% due to rounding

**26%**

of respondents think that reliability is the biggest advantage of LEO SATCOM networks.

"My agency's defense communications provide sufficient cloud-enabled access to drive strategic decisions for mission operations."



Percentage of respondents, n=236  
Note: 2021 data. Respondents were asked to select all that apply.

**34%**

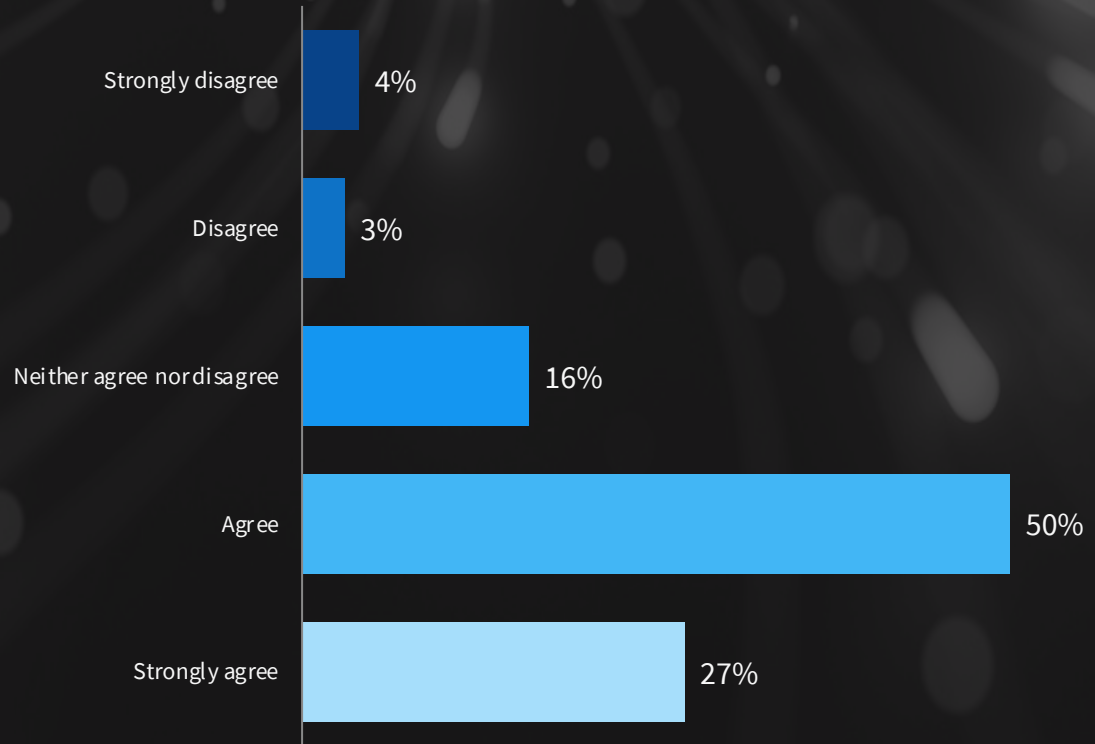
of respondents in 2020 agree to some extent that their agency's defense comms provide sufficient cloud-enabled access compared to 43% in 2021, suggesting some improvements in this area.

"The future fight will require advanced space-based networking capabilities to meet DoD operations and mission needs in every domain."

“

We need to create this unity of effort around our space missions... because the space domain has rapidly become far more contested.”

— Lt. Gen B. Chance Saltzman, Space Force



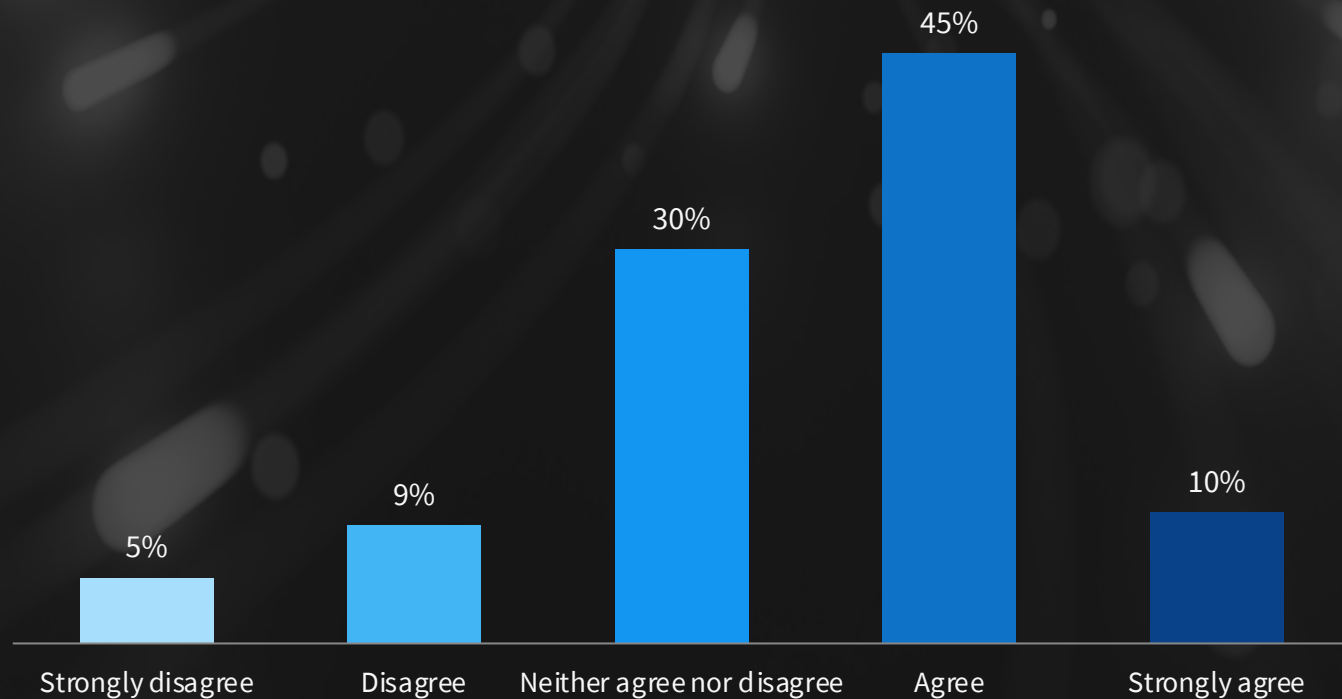
Percentage of respondents, n=236  
Note: 2021 data. Percentages may not add up to 100% due to rounding

**77%**

of respondents think that the future fight will require advanced space-based networking capabilities.

# THE ROLE OF COMMERCIAL SOLUTIONS

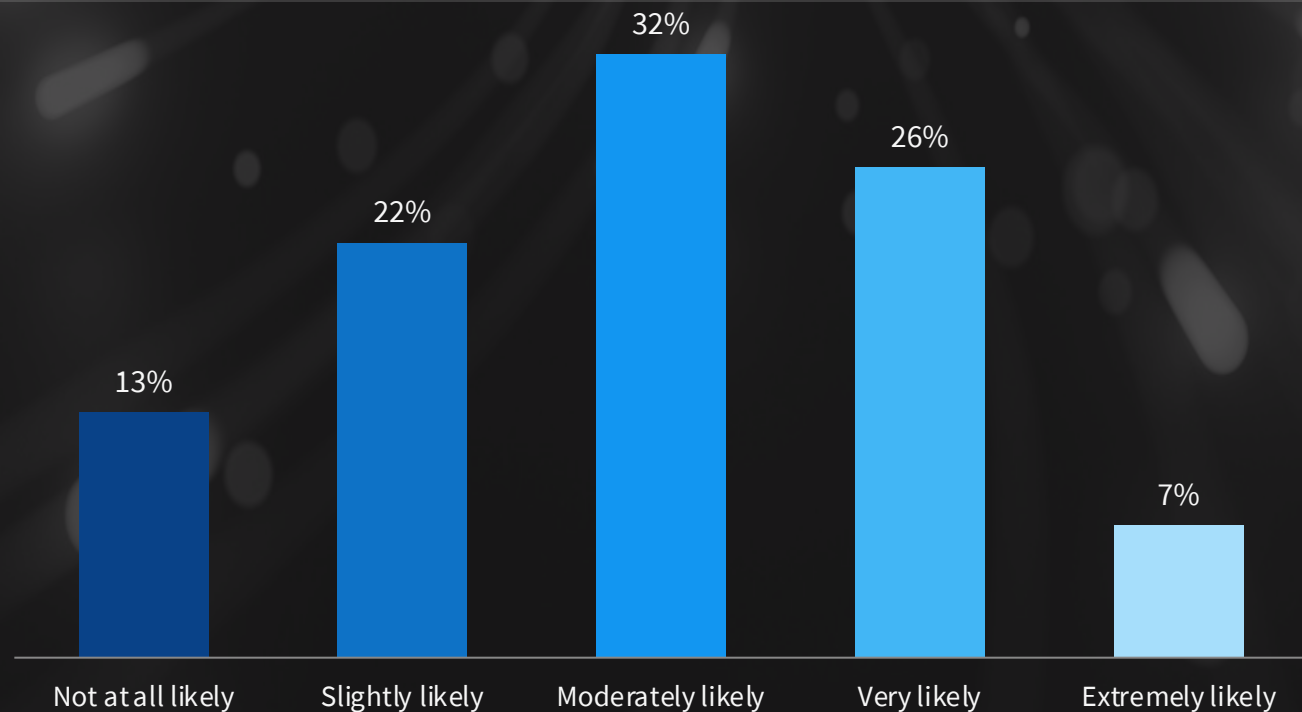
"Commercial communication capabilities are capable of delivering the same or better levels of performance compared to DoD purpose-built communication solutions."



Percentage of respondents, n=234  
Note: 2021 data. Percentages may not add up to 100% due to rounding



In the next 12 months, how likely is your agency to adopt commercial defense communications technology and services to keep pace with U.S. adversaries?

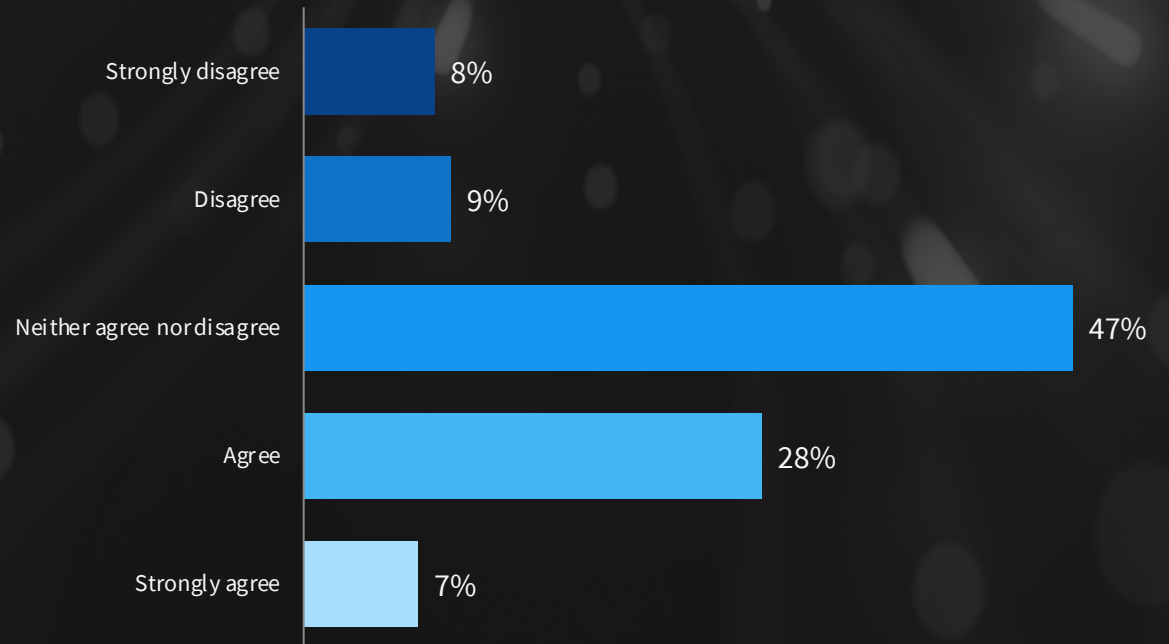


Percentage of respondents, n=255  
Note: 2021 data. Percentages may not add up to 100% due to rounding

**26%**

of 2020 respondents said that their agency would be very or extremely likely to issue third-party defense communications technology to keep pace with U.S. adversaries. In 2021, that pool grew by seven percentage points.

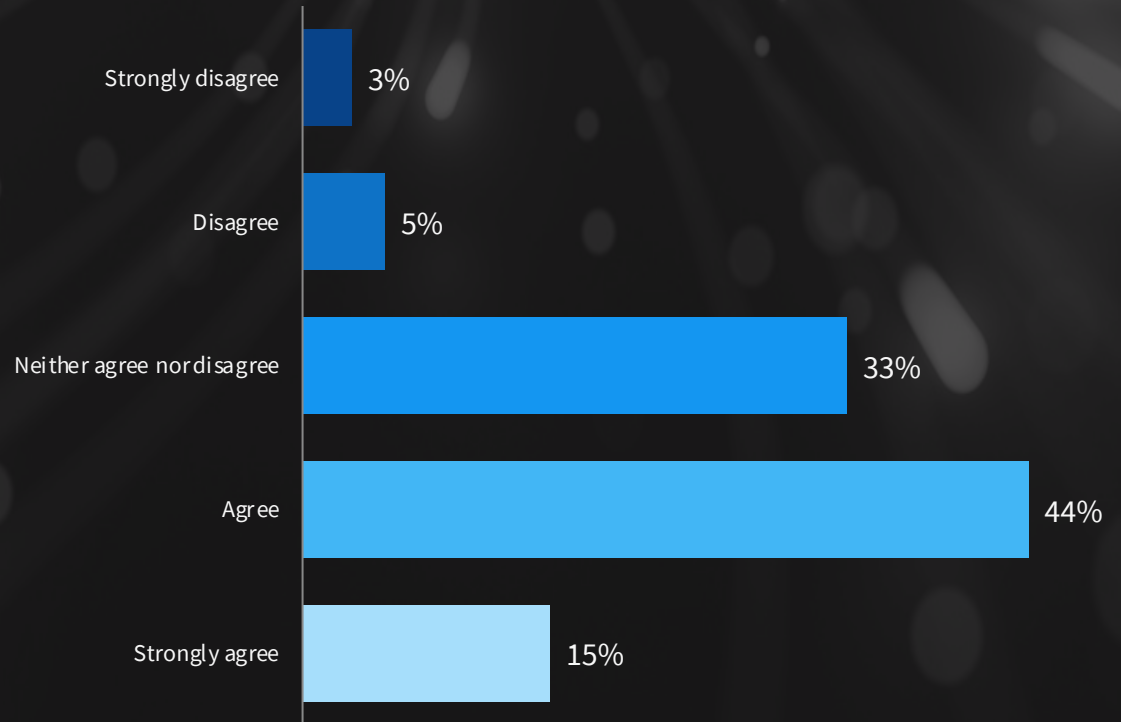
"My agency is taking advantage of new acquisition processes and mechanisms like OTAs (Other Transaction Agreements) and as-a-service models to help update its defense communications technologies."



Percentage of respondents, n=238  
Note: 2021 data. Percentages may not add up to 100% due to rounding

63%

"Increasing the use of commercially developed solutions is critical to accelerating the realization of strategic initiatives like Joint All Domain Command and Control (JADC2) and other joint warfighting programs."



Percentage of respondents, n=236  
Note: 2021 data. Percentages may not add up to 100% due to rounding

**63%**

of respondents in 2020 agree that commercially developed solutions would speed up the pace of defense acquisitions. Fifty-nine percent of 2021 respondents agree that these solutions are critical to the accelerated achievement of strategic defense initiatives.

# ABOUT GOVERNMENT BUSINESS COUNCIL

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As GovExec'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 50 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.

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# ABOUT VIASAT

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## VIASAT INC.

Viasat is a global communications company that believes everyone and everything can be connected. That's why we're building the ultimate communications network, to enable great, global connectivity to be brought to where it's needed and wanted most: to homes all over the world, to faraway communities, to warfighters on the battlefield, and to people in the air or at sea — to name a few.

Learn more at:

<https://www.viasat.com>

## 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.