

GAO Highlights

Highlights of [GAO-21-64](#), a report to the Committee on Armed Services, House of Representatives

Why GAO Did This Study

According to DOD, the EMS is essential for facilitating control in operational environments and impacts operations in the air, land, sea, space, and cyber domains. The pervasiveness of the EMS across warfighting domains means that maintaining or achieving EMS superiority against an adversary is critical to battlefield success.

House Report 116-120 that accompanied a bill for the National Defense Authorization Act for Fiscal Year 2020 included a provision that GAO assess DOD's EMS strategy. This report (1) describes reported threats from peer adversaries; (2) outlines challenges to DOD's superiority in the EMS; and (3) evaluates the extent to which DOD has implemented EMS-related strategies and is positioned to achieve future goals. GAO analyzed 43 EMS studies identified through a literature review, reviewed DOD documentation, and interviewed DOD officials and subject matter experts.

What GAO Recommends

GAO is making five recommendations, including that DOD should identify processes and procedures, reform governance structures, assign leadership for strategy implementation, and develop oversight processes. DOD concurred with the first two recommendations and partially concurred with the last three recommendation. In response to these three latter recommendations, DOD stated that it will take action once the department has developed—and the Secretary of Defense has reviewed—organizational reform recommendations.

View [GAO-21-64](#). For more information, contact Joseph W. Kirschbaum at (202) 512-9971 or kirschbaumj@gao.gov.

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ELECTROMAGNETIC SPECTRUM OPERATIONS

DOD Needs to Address Governance and Oversight Issues to Help Ensure Superiority

What GAO Found

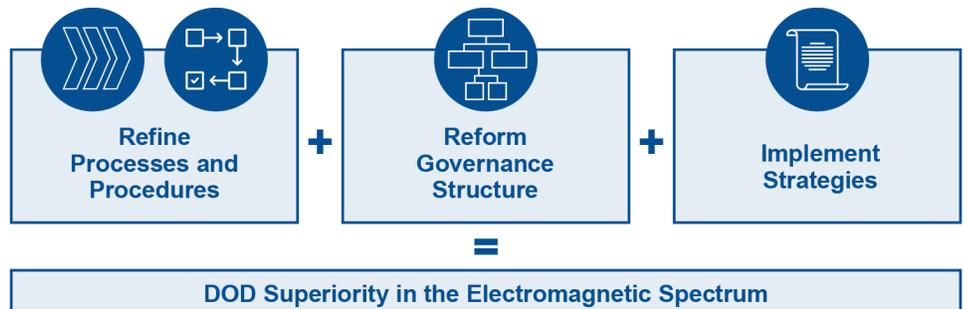
According to studies by the Department of Defense (DOD) and others, near-peer adversaries China and Russia are aware of the importance of the electromagnetic spectrum (EMS) and have taken steps to improve their capabilities to threaten DOD's ability to use and control the EMS. China is taking steps to enhance its capabilities to use the EMS through strategic, organizational, and training advances. Meanwhile, Russian electromagnetic warfare forces, described by the Defense Intelligence Agency as "world class," have demonstrated their effectiveness through successful real-world applications against U.S. and foreign militaries.

Studies by DOD and others have also highlighted internal challenges that may affect the department's ability to ensure superiority, or operational control, in the EMS. These include issues related to:

- Governance and organization,
- Technology acquisition and development,
- EMS operational concepts,
- Spectrum management, and
- Staffing and training.

DOD issued strategies in 2013 and 2017 to address EMS-related challenges, but did not fully implement either strategy because DOD did not assign senior leaders with appropriate authorities and resources or establish oversight processes for implementation. DOD issued a new strategy in September 2020, but the department risks not achieving the new strategy's goals because it has not taken key actions—such as identifying processes and procedures to integrate EMS operations (EMSO) across the department, reforming governance structures, and clearly assigning leadership for strategy implementation. Also, it has not developed oversight processes, such as an implementation plan, that would help ensure accountability and implementation of the 2020 strategy goals. Doing so would help position the department to achieve its EMSO goals (see figure).

Actions to Ensure DOD Superiority in the Electromagnetic Spectrum



Source: GAO analysis of Department of Defense (DOD) information. | [GAO-21-64](#)