

Air Force Studies Board



System of Systems Engineering Analysis

Complex multi-domain operations require an integrated System of Systems engineering approach. The Air Force Studies Board (AFSB) assembles the country's preeminent experts in mission engineering; systems design, architecture, and integration; and human systems integration to meet force modernization challenges. We provide technical, multidisciplinary analysis to enable airmen and guardians to counter the operational challenges in the era of Great Power Competition. Our recent work provides insight on operationally-focused Advanced Battle Management System for Combined Joint All-Domain Command and Control.

"The ABMS architecture must focus on protecting data, computations, and communications from adversary access or manipulation; providing high-bandwidth communications; deploying advanced computational platforms; providing large data curation and storage for near-real-time data accessibility; and allowing for interoperability."

abridged from Advanced Battle Management System: Needs, Progress, Challenges, and Opportunities Facing the Department of the Air Force (2022)

AFSB SELECTED WORK

Advanced Battle Management System: Needs, Progress, Challenges, and Opportunities Facing the Department of the Air Force (2022)

Inter-Service Discussions about Advanced Battle Management System and Project Overmatch: A Meeting of Experts (2021)

Future Air Force Needs for Defense Against High-Speed Weapon Systems (2016)

OUR IMPACT

The AFSB convened experts from NAVWAR, the Navy Digital Warfare Office, the Air Force Rapid Capabilities Office, and the Office of the Chief Architect of the Department of the Air Force for inter-service discussions about the Advanced Battle Management System and Project Overmatch. Both service teams came away with a deeper understanding of the technical efforts, including more ways to collaborate.

Learn more at www.nationalacademies.org/afsb/about.