

Roundtable on Capability Development Planning and Technology Transition in the Department of the Air Force

Committee

Robert D. McMurry, Jr.

Chair

Lt Gen Robert D. McMurry, USAF (Ret.) is a seasoned executive with over 35 years of experience leading large, complex organizations—culminating in total life cycle responsibility for all U.S. Air Force (USAF) aircraft, engine, munition, electronic, computer, network, cyber and agile combat support systems. He served in a variety of senior leadership positions including interim Commander of Air Force Materiel Command (AFMC), Commander of the Air Force Life Cycle Management Center (AFLCMC), Air Force Research Laboratory (AFRL) Commander, Space and Missile Systems Center (SMC) Vice Commander, Deputy Program Executive Officer (PEO) for Space, and PEO for the Air Force's Rapid Sustainment Office (RSO). His expertise includes foreign military sales (FMS), source selection, laboratory planning, and execution of the USAF's basic and applied research and advanced technology. Gen McMurry earned his MS in strategic studies from Air War College and a M.S. in systems and control engineering from the University of West Florida.

Todd R. Dyer

Ex Officio Member

Colonel Todd R. Dyer is the Director of Plans, Deputy Chief of Staff, Plans and Programs, Headquarters U.S. Air Force, Arlington, Virginia. He leads a staff of military and civilians in the annual development of the Air Force's 30-Year Resource Allocation Plan. Col Dyer is also responsible for the development and integration of the Air Force strategy and long-range plans to ensure the Air Force builds and employs effective air, space and cyber forces to achieve national defense objectives.

Col. Dyer is a 1998 graduate of the Embry-Riddle Aeronautical University ROTC program. He earned his pilot wings at Euro-NATO Joint Jet Pilot Training and spent the majority of his early career in the F-15E; he is a command pilot with over 3,500 total flying hours and 700 combat hours. He has commanded at the fighter squadron and air base wing level, and his staff assignments include service on the Joint and Headquarters Air Force staffs. Prior to his current assignment, he served as the Director, Advanced Battle Management Cross Functional Team, Deputy Chief of Staff, Air Force Futures, the Pentagon, Arlington, VA.

Amanda Gentry

Ex Officio Member

Ms. Amanda Gentry, a member of the Senior Executive Service, is the Director of the Air Force Materiel Command Integrated Development Office. In this role, she oversees the office's daily capability development operations. The Integrated Development Office connects critical requirements with streamlined acquisition tactics ensuring our forces are equipped with advanced capabilities. The Integrated Development Office performs mission engineering and trade-space analysis, early systems engineering and acquisition, and architecture integration on behalf of the Air Force, and is the primary acquisition advisor to the requirements community focused on modernization. Ms. Gentry oversees an annual budget of more than \$400 million and directs the activities of approximately 200 personnel. She also serves as the Air Force's Deputy Capability Development Executive Officer.

Ms. Gentry began her federal service career in 2001 as an associate materials engineer for the Air Force Research Laboratory. She has held many management and technical positions within the Air Force Research Laboratory, the Joint Strike Fighter Program Office and the Secretary of Air Force's Office for Acquisitions, Technology and Logistics. Prior to her current assignment, Ms. Gentry served as the Director of the Sensors Directorate, Air Force Research Laboratory, Wright-Patterson Air Force Base, Ohio.

Eliahu Niewood

Ex Officio Member

Dr. Niewood is the Director at the Department of the Air Force Integrated Capabilities Office, Washington, DC. He leads the Integrated Capabilities Office in facilitating threat-informed capability development and resource prioritization to deliver lethal warfighting solutions combining Air Force and Space Force equities. In this role, Dr. Niewood ensures sound application of technology to support integrated development. Previously, he served as vice president, Air and Space Forces, in MITRE's National Security Sector, where he set strategy and priorities to ensure MITRE delivered technical capabilities to meet the Services' needs in space warfighting, air operations, nuclear enterprise modernization, cyber operations and multi-domain operations. Dr. Niewood was a technical adviser to the director of the U.S. Air Force Rapid Capabilities Office and served as head of the Engineering Division at the MIT Lincoln Laboratory, where he oversaw mechanical, aerospace, and control systems engineers building space payloads and aircraft sensor systems. From 2011 to 2014, Dr. Niewood chaired the Air Force Scientific Advisory Board. He is an Associate Fellow of the AIAA and received the Secretary of the Air Force Distinguished Service Award. He holds bachelors, masters, and doctoral degrees in aeronautics and astronautics from the Massachusetts Institute of Technology.

Elmer L. Roman

Ex Officio Member

Mr. Elmer L. Roman is the Director of Mission Integration (MI) for Mission Capabilities (MC) in the Office of the Under Secretary of Defense for Research and Engineering (OUSD(R&E)). In this role, he directs MI in developing mission-based inputs for the requirements process, improves Joint Force capability integration and experimentation, and informs the development and maturation of joint warfighting concepts and operational plans. Mr. Roman previously served as Lieutenant Governor, Secretary of State, and Secretary of Public Safety of the Commonwealth of Puerto Rico as well as the Homeland Security Advisor to the Governor of Puerto Rico. He served as Oversight Executive for International Cooperation and Asymmetric Warfare programs, implementing Department of Defense efforts in security cooperation, humanitarian assistance, disaster management, fighting transnational organized crime, and capacity building for allied countries. Mr. Roman holds a B.S. in mechanical engineering from the University of Puerto Rico-Mayaguez Campus and a M.S. in systems engineering from Virginia Tech.

Janet Wolfson

Ex Officio Member

Dr. Janet Wolfson is the Associate Deputy Assistant Secretary for Science, Technology & Engineering, Office of the Assistant Secretary of the Air Force (Acquisition, Technology and Logistics), the Pentagon, Arlington, Virginia. Dr. Wolfson provides guidance, advocacy, and policy for the Air Force's annual \$3.1 billion science and technology program and \$1.9 billion developmental prototyping and experimentation program, conducted at more than 60 research sites worldwide. Previously, she served as the Director of Science, Technology and Engineering for the Office of the Assistant Secretary of the Air Force for Space Acquisition and Integration (SAF/SQ) at the Pentagon, where she led and guided the execution of space related research at the Air Force Research Laboratory. Previously, Dr. Janet Wolfson also served as the Director of Staff for SAF/SQ. In this position, she collaborated and coordinated across the Department, ensuring all opportunities and efficiencies while preserving the authority and autonomy of SAF/SQ. She was the Space Division Chief in the Office of the Assistant Secretary of the Air Force for Acquisition, Special Projects. She is a pioneer in fusing technology and developed the first major change to fusing since World War II. Before entering public service Dr. Wolfson worked as a structural engineer for Applied Research Associates and the Thornton-Tomasetti Group.

Robert L. Clark, Jr.

Member

Dr. Robert (Rob) L. Clark, Jr. (NAE) is a professor of mechanical engineering at the University of Rochester and a consulting venture partner for Breakthrough Energy Ventures. Dr. Clark serves as lead director on the board of Minerals Technologies (MTX) and on the boards of AIM Machines, GW Lisk, and M2X. He previously served as dean of engineering, vice president for research, and provost at the University of Rochester, with oversight for the office of technology commercialization and venture creation. Early in his career, he received the Presidential Early Career Award for Scientists and Engineers through the Air Force Office of Scientific Research (AFOSR) and received the R. Bruce Lindsay Award from the Acoustical Society of America (ASA). He is a fellow of both ASME and ASA. Dr. Clark received his Ph.D. in mechanical engineering from Virginia Tech.

Steffanie B. Easter

Member

Ms. Steffanie B. Easter serves as Senior Vice President and Chief Sustainability Officer at Cobham Advanced Electronics Solutions (CAES), where she is responsible for the overall sustainability efforts of CAES to drive best practices across key elements of environmental, social and governance standards. Previously she served as Vice President, Deputy Army Business Unit and Vice President, Strategy and Planning at SAIC; the Director, Navy Staff for the U.S. Navy; Acting Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) and the Principal Deputy to the ASA(ALT); F-35 Executive Director; Assistant Deputy Chief of Naval Operations for Manpower, Personnel, Training and Education; Assistant Commander for Acquisition at NAVAIR; and Deputy Program Executive Officer for Tactical Aircraft Programs. Ms. Easter earned a degree in chemical engineering from North Carolina State University and a masters of engineering degree from The Catholic University of America.

Andre Gudger

Member

Mr. André Gudger is chairman and CEO at Eccalon. He previously served as the Deputy Assistant Secretary of Defense for Manufacturing and Industrial Base Policy, where he was responsible for ensuring a secure, resilient, and innovative defense industrial base and led global supply chain analyses. He also served as the Director of the Department of Defense's Office of Small Business Programs (OSBP), where he managed more than \$120 billion of annual awards to small businesses. Before his service in the Defense Department, Mr. Gudger was the Chairman and CEO of Solvern Innovations, a corporate entity that provided acquisition support and cyber solutions through training, research, and innovation. He serves on the boards of the Maryland BRAC Small and Minority Business Advisory Board, the University of Maryland Baltimore County, and the Cyber Advisory Council. Mr. Gudger received his B.S. degree from the University of Maryland at Baltimore County and his MBA from the University of North Carolina at Chapel Hill.

Kate Klemic

Member

Dr. Kate Klemic is Director of the Science and Technology Engagement and Analysis Division at Virginia Tech Applied Research Corporation (VT-ARC). Prior to joining VT-ARC, Dr. Klemic spent 18 years in basic and applied research and development, technology transfer, and STEM outreach at Yale University and IBM'S TJ Watson Laboratory. Most notably, her pioneering work to develop novel bio-electronic interfaces in collaboration with Harvard Biosciences resulted in patents and National Institutes of Health-funded development grants. Dr. Klemic served on the National Science Foundation's Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) panel reviews and led the strategic marketing of technology to industry. She advances scientific discovery, technology innovation, transition, and transfer through her strengths of strategic planning and multidisciplinary technology assessment, communication, networking to identify partners and nurture collaborations, and an infectious enthusiasm for science and technology. Dr. Klemic earned a Ph.D. in biophysics/bioengineering from Case Western Reserve University and a B.S. in physics from Wayne State University.

Ivett A. Leyva

Member

Dr. Ivett A. Leyva is the head of the Department of Aerospace Engineering at Texas A&M University. She has 15 years of experience with the USAF, where she was program officer for hypersonic aerodynamics at the Air Force Office of Scientific Research, Air Force Research Laboratory (AFRL), a researcher at the AFRL Rocket Lab working on liquid rocket instabilities, and an authority on munitions and research security at the Office of the Deputy Assistant Secretary of the Air Force for Science, Technology, and Engineering (SAF/AQR). Her technical expertise spans hypersonic aerodynamics and liquid rocket engines. Dr. Leyva is a fellow of the American Institute for Aeronautics and Astronautics (AIAA) and AFRL, a National Associate of the National Research Council of the National Academies. Dr. Leyva holds bachelor, masters, and doctor of philosophy degrees in aeronautics from the California Institute of Technology (Caltech).

Arthur A. Mabbett

Member

Dr. Arthur “Artie” A. Mabbett is Senior Vice President and Operations Manager of the Leidos Innovation Center (LInC), where he leads research and development of innovative technologies and solutions for Leidos. He previously served as Director of Advanced High Speed Weapons for Raytheon Missile Systems, where he was responsible for developing, growing and delivering both offensive and defensive high speed and hypersonic systems to future product lines. Dr. Mabbett also spent 13 years in the Defense Department that included serving as Director of the Long Range Anti-Ship Missile (LRASM) Program Office, program manager at DARPA Tactical Technology Office, and program manager at the Office of Naval Research. He holds a Ph.D. in aerospace engineering from Virginia Tech, dual M.S. degrees in aerospace and mechanical engineering from the University of Michigan, and a B.S. in mechanical engineering from Cornell University.

Wendy Masiello

Member

Lt Gen Wendy M. Masiello, USAF (Ret.) is an independent consultant and president of Wendy Mas Consulting, LLC. Prior to her retirement, she was director of the Defense Contract Management Agency, where she oversaw a \$1.4 billion budget and 12,000 workforce worldwide. During her 36-year military career, Lt Gen Masiello also served as Deputy Assistant Secretary (Contracting), Office of the Assistant Secretary of the Air Force for Acquisition, where she designed and implemented a centralized organization, Air Force Installation Contracting Agency that became the model for what became the Air Force-wide Installation Mission Support Center. As program executive officer for the Air Force’s \$65 billion service acquisition portfolio, Lt Gen Masiello initiated the category management concept within the Air Force and set a standard for service contract planning, execution, and oversight within the Department of Defense. She earned her Bachelor of Business Administration degree from Texas Tech University; a M.S. in logistics management from the Air Force Institute of Technology; a M.S. in national resource strategy from the Industrial College of the Armed Forces; and is a graduate of Harvard Kennedy School’s Senior Managers in Government.

Hina Mehta

Member

Dr. Hina Mehta serves as the Director of University Programs for the Commercialization Division at the Virginia Innovation Partnership Corporation (VIPIC), where she participates in the development and execution of the Commonwealth Commercialization Fund (CCF) grant programs and serves as the lead for promoting and managing the CCF's university-focused programs. Dr. Mehta was previously the Director of the Office of Technology Transfer at George Mason University (GMU), where she successfully built and implemented technology transition enterprise for Mason researchers. Prior to GMU, she worked in biomedical research, in strategic consulting, and co-founded a startup. She serves as mentor to faculty-led teams participating in customer discovery programs such as the National Science Foundation's Innovation Corps (I-Corps) and the Innovation Commercialization Assistant Program (ICAP). She holds a Ph.D. in neuroscience from the Indian Institute of Chemical Biology, and an MBA from the University of Maryland.

Christopher Ristich

Member

Mr. Christopher J. Ristich was the Director, Integrated Capabilities Directorate, Air Force Research Laboratory, where he oversaw the Strategic Development Planning and Experimentation (SDPE) office, the Transformational Capabilities Office (TCO), the Center for Rapid Innovation (CRI), and an architecture office, which are collectively responsible for facilitating Air Staff-sponsored development planning activities; experimentation campaigns; multi-domain modeling, simulation, and analysis; addressing urgent warfighter needs; designing and integrating DAF architectures; and for implementing the transformational component of the Air Force Science and Technology Strategy, including managing the Department of the Air Force's Vanguard programs. Mr. Ristich previously served as Technical Director of the AFRL Plans and Programs Directorate and as a subject matter expert in directed energy effects, where he led counter-precision guided munitions red-team efforts that provided critical vulnerability insights for Air Force senior leadership. His career includes more than 30 years of experience in research, development, and test and evaluation of Air Force, Army, Navy, and Joint programs. Mr. Ristich received his B.S. in electrical systems engineering from Wright State University, Ohio, and his M.S. in materials engineering from the University of Dayton.

Jeffrey H. Stanley

Member

Mr. Jeffrey H. Stanley is a senior executive with over 35 years of acquisition experience as a program manager and engineer. He previously served as the Deputy Assistant Secretary of the Air Force for Science, Technology, and Engineering, where he was responsible for preparing policy, guidance and advocacy for the Air Force's cutting-edge \$5 billion science and technology investment portfolio. In addition, Mr. Stanley was responsible for overseeing a broad range of engineering and technical management policy spanning systems engineering, environmental safety and occupational health, industrial preparedness and functional management of more than 14,000 military and civilian scientists and engineers. As the USAF's Chief Engineer, he was responsible for the oversight of all aspects of safety and technical integrity of products and services. He oversaw technical direction, led risk and opportunity management processes, and ensured all products met performance and airworthiness requirements. Mr. Stanley is a seasoned system program manager across a variety of ACAT 1, II, III programs. He is a recognized subject matter expert in all aspects of acquisition, program management, mission systems, digital engineering, weapon system cybersecurity, and S&T. Mr. Stanley received his bachelor's degree in electrical engineering from Ohio University and a master's degree in business administration from the University of Dayton.

David M. Van Wie

Member

Dr. David Van Wie (NAE) is the Head of the Johns Hopkins Applied Physics Laboratory Air and Missile Defense Sector responsible for programs advancing the ability of the nation to defend itself and its allies against airborne and ballistic threats. Prior to his current appointment, Dr. Van Wie served as Mission Area Executive for Precision Strike focusing on advanced weapon development, electromagnetic spectrum dominance, and novel long-range detection and targeting systems. He has published extensively in the fields of hypersonics, high-temperature fluid dynamics, airbreathing propulsion, and plasma aerodynamics. Dr. Van Wie previously served on the Air Force Scientific Advisory Board and the Aeronautical and Space Engineering Board. Dr. Van Wie is currently a member of the Defense Science Board and holds a research faculty position in the Department of Mechanical Engineering at Johns Hopkins University. Dr. Van Wie is a fellow of the American Institute of Aeronautics and Astronautics (AIAA), and a recipient of the Air Force Award for Meritorious Civilian Service. In 2021, Dr. Van Wie presented the AIAA Theodore Von Karman Lecture in Astrodynamics. He received his B.S., M.S., and Ph.D. in aerospace engineering from the University of Maryland, College Park, and a M.S. in electrical engineering from the Johns Hopkins University.

Ellen Chou

Staff Officer

Ms. Ellen Y. Chou is the Director of the Air Force Studies Board and the Naval Studies Board, where she is responsible for directing all program and research activities conducted under the auspices of these boards. Prior to joining the National Academies, she worked as a program director in the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics in the Department of Defense, where she provided strategic leadership on the Department's acquisition efficiency and improvement initiatives and directed industry relations. She previously worked for more than 15 years in industry as a program manager, responsible for technical, financial, and contractual oversight of multiple professional services contracts in support of the United States Air Force and the Department of Defense. She also worked at the Center for Strategic and International Studies as an economist focused on U.S.-China trade issues and the George Washington University's Office of the Vice President for Academic Affairs. She earned her Master of Arts degree in security policy studies with honors from the Elliott School of International Affairs at the George Washington University and Bachelor of Arts degrees with honors in public policy studies and economics from the University of Chicago. She is DAWIA level II certified in program management, certified as a Contracting Officer Representative (COR), and has completed executive-level education in national and international security at Harvard University's Kennedy School.