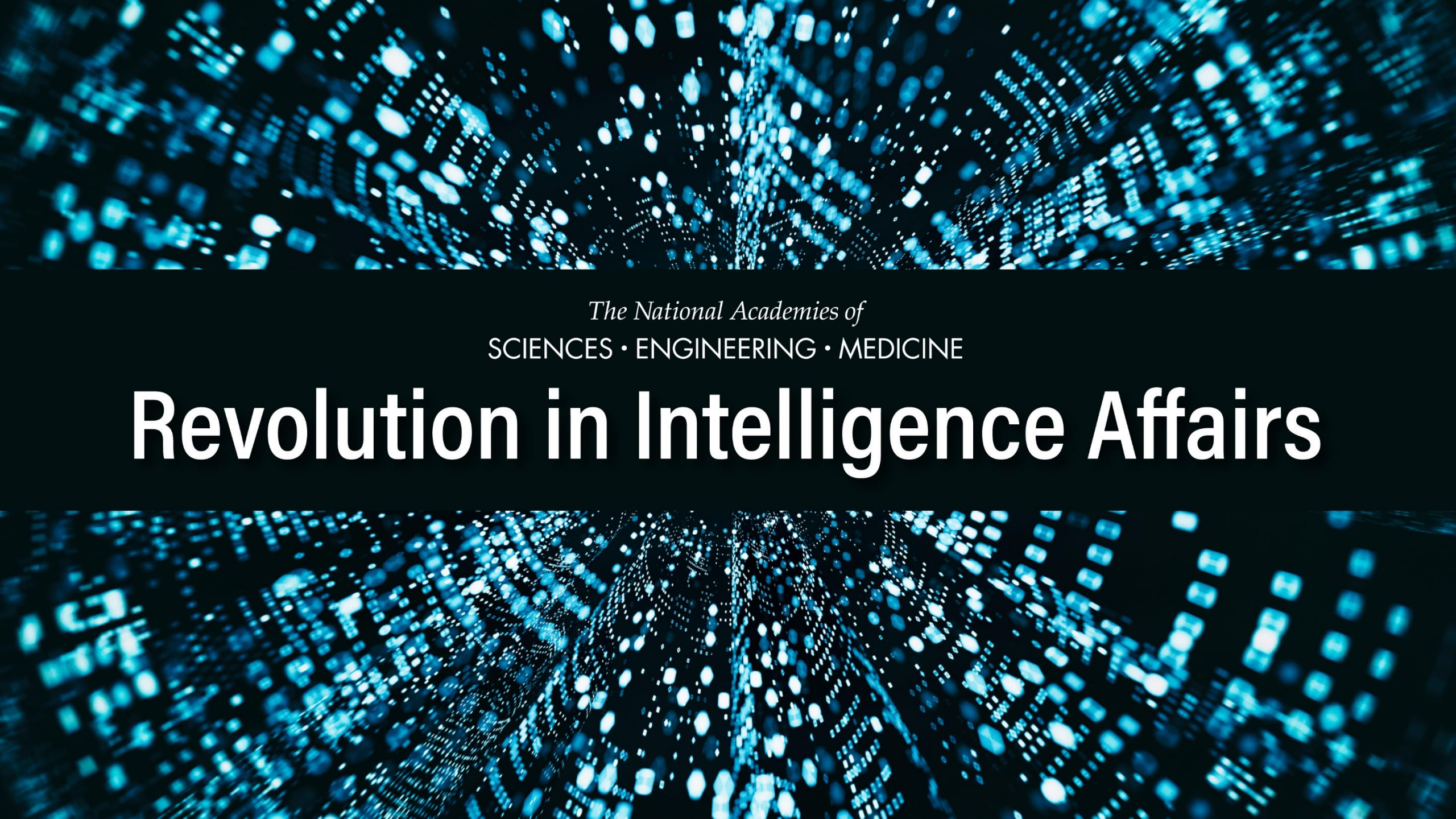




The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Revolution in Intelligence Affairs

Revolution in Intelligence Affairs: Future Strategic Environments

AGENDA

11:00 - 11:10	Introduction and administrative announcements, Joseph Czika, NASEM
11:10 - 11:20	Welcome from the Office of the Director of National Intelligence, Dan Flynn, ODNI
11:20 - 11:30	Welcome from the National Academies of Sciences, Engineering, and Medicine, Scott Weidman, NASEM
11:30 - 12:30	Panel 1 (Zachery Tyson Brown, Elsa Kania, William Lahneman, Carmen Medina)
12:30 - 12:45	BREAK
12:45 - 1:45	Panel 2 (Jeffrey “Skunk” Baxter, Miriam “Mim” John, Ellen McCarthy, Matt McKnight)
1:45 - 2:45	BREAK
2:45 - 3:45	Panel 3 (David Omand, Itai Shapira, Gregory Treverton, Samuel S. Visner)
3:45 - 4:00	BREAK
4:00 - 5:00	Panel session moderated by Anthony Vinci
5:00	ADJOURN

*All times ET

Panel Topics

Panel 1: Developments in the Strategic Environments

What political, military, economic, and social developments during the next two decades will drive the need for a revolution in intelligence affairs?

Zachery Tyson Brown, Intelligence and National Security Futurist

Elsa Kania, Center for a New American Security

William Lahneman, Embry-Riddle Aeronautical University

Carmen Medina, Central Intelligence Agency (retired)

Panel 2: Convergence Driven Technology Changes

How will future sociopolitical developments converge with technological developments (e.g. AI, automation, smart cities, synthetic biology) to drive changes in intelligence?

Jeffrey “Skunk” Baxter, Independent Defense/Intelligence Community Consultant

Miriam “Mim” John, Sandia National Laboratories (retired)

Ellen McCarthy, Former Assistant Secretary of State for Intelligence and Research

Matt McKnight, Ginkgo Bioworks

Panel 3: Changes in the Functions of Intelligence

How should intelligence operations change to maintain the greatest competitive advantage in a changing sociopolitical and technological landscape?

David Omand, King’s College London

Itai Shapira, The University of Leicester

Gregory Treverton, University of Southern California

Samuel S. Visner, The MITRE Corporation and Georgetown University

The background of the entire image is an abstract, high-tech digital visualization. It features a dense field of bright blue and white particles, dots, and lines that appear to be moving or pulsing, creating a sense of depth and dynamic energy. The particles are concentrated in the upper and lower portions of the frame, with a dark, solid black horizontal band in the center where the text is located.

INTRODUCTION



Dan Flynn
ODNI

Mr. Dan Flynn is the first director of the Office of IC Net Assessment within the Office of the Director of National Intelligence (ODNI). In this position, he is responsible for developing forecasts and comparative assessments to identify emerging challenges and opportunities for U.S. intelligence capabilities.

Prior to his current assignment, Dan was the director of the Global Security Program for the National Intelligence Council's (NIC) Strategic Futures Group. In this position, he led national-level assessments of long-term and crosscutting military-security issues for senior U.S. policymakers and defense officials. Prior to joining the NIC, Dan served in multiple positions at CIA where he was responsible for assessments of foreign weapons, technologies, and military innovations. He was a member of CIA's Senior Analytic Service (SAS) and chairman of the SAS Council.

From 2004 to 2005 Dan served as a senior staff member on *The President's Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction*. His duties included leading the commission's research on the capabilities of the Intelligence Community to support future U.S. military operations, perform strategic assessments, and conduct scientific and technical analysis.

Dan earned an MS in national security strategy from the National War College where he graduated with distinction and a BS in aerospace engineering from Boston University. Dan is also an ODNI "Plank Holder."



Scott Weidman
NASEM

Dr. Scott Weidman is the Deputy Executive Director for the Division on Engineering and Physical Sciences of the National Academy of Sciences. Prior to this role, Scott served as director of the National Research Council's (NRC) Board on Mathematical Sciences and Analytics (BMSA).

Scott joined the NRC in 1989 with BMSA and moved to the Board on Chemical Sciences and Technology in 1992. In 1996, he established a new board to conduct annual peer reviews of the Army Research Laboratory, which conducts a broad array of science, engineering, and human factors research and analysis. He also later directed a similar board that reviews the work of the National Institute of Standards and Technology (NIST). He rejoined BMSA as its director in 1999.

Before joining the NRC, Scott held positions with General Electric, the General Accident Insurance Company, Exxon Research and Engineering, and MRJ, Inc.

Scott earned BS's in mathematics and materials science from Northwestern University and a PhD and MS in applied mathematics from the University of Virginia.

The background of the entire image is an abstract, high-tech digital pattern. It consists of numerous bright blue and white points of light, some of which are blurred into streaks, creating a sense of rapid movement or data flow. These elements are arranged in a way that suggests a complex, interconnected network or a digital landscape. The overall color palette is dominated by deep blues and bright whites, giving it a futuristic and technological feel.

PANEL 1



**Zachery Tyson
Brown**
TNSP

Mr. Zachery Tyson Brown is an intelligence and national security futurist interested in the many ways in which intelligence, strategy, organizational design, and disruptive technologies intersect.

A veteran military intelligence analyst who served in both Iraq and Afghanistan, Zachery is now a national security fellow at the Truman National Security Project, a proclaimed U.S. Army Futures Command “mad scientist,” and a board member of the Military Writers Guild.

Since separating from the military, Zachery continues his service in the defense and intelligence communities both as a contractor and civil servant.

Zachery most recently graduated from the National Intelligence University’s master of science of strategic intelligence program, where his thesis *Adaptive Intelligence for an Uncertain Age* was awarded the LTC Michael D. Kuszewski Award for outstanding thesis on operations-intelligence partnership.



Elsa Kania
CNAS

Ms. Elsa Kania is an adjunct senior fellow with the Technology and National Security Program at the Center for a New American Security (CNAS). Her research focuses on Chinese military strategy, military innovation, and emerging technologies. Her book, *Fighting to Innovate*, should be forthcoming in 2022.

At CNAS, Elsa contributed to the Artificial Intelligence and Global Security Initiative and the “Securing Our 5G Future” program, while acting as a member of the Digital Freedom Forum and the research team for the Task Force on Artificial Intelligence and National Security.

Elsa also works in support of the U.S. Air Force’s China Aerospace Studies Institute through its Associates Program, is a non-resident fellow in Indo-Pacific Defense with the Institute for the Study of War, and is a non-resident fellow with the Australian Strategic Policy Institute’s International Cyber Policy Centre. She serves as an adjunct policy advisor for the non-profit Institute for Security and Technology; contributes to the Party Watch Initiative at the Center for Advanced China Research; and co-founded the China Cyber and Intelligence Studies Institute, a non-profit research collaboration.

Elsa's writings and commentary have appeared in *Foreign Affairs*, *Foreign Policy*, *Lawfare*, *Politico*, *Defense One*, *The Strategist*, and *The Bridge*, among others.

Elsa is a PhD candidate at Harvard University's Department of Government. She is also a graduate of Harvard College and earned an MA in government from Harvard University. She was a Boren Scholar in Beijing, China, and speaks Mandarin with professional proficiency.



William Lahneman
Embry-Riddle Aeronautical
University

Dr. William Lahneman is a professor of homeland security and chair of the Security Studies and International Affairs Department at Embry-Riddle Aeronautical University. He held academic positions as associate chair of the Political Science Department at the U.S. Naval Academy and as associate director for programs at the Center for International and Security Studies at the University of Maryland's School of Public Policy, where he conducted several open-source research projects for different parts of the US intelligence community.

William is on the editorial advisory boards of the *International Journal of Intelligence and Counterintelligence* and the *International Journal of Intelligence, Security, and International Affairs*. A retired career naval officer, he was a surface warfare officer with specializations in strategic planning, international negotiations, and nuclear propulsion.

William's research interests include homeland security, the future of intelligence analysis, military intervention and nation building, and international relations theory. He received a Smith Richardson Foundation International Security and Foreign Policy junior faculty research grant for his book project *Keeping U.S. Intelligence Effective: The Need for a Revolution in Intelligence Affairs* (2011) and was awarded a U.S. Fulbright senior scholar grant to conduct research and teach in Madrid, Spain from January to May of 2019.

William earned a PhD in international relations from the Johns Hopkins University's School of Advanced International Studies (SAIS), an MA in national security affairs from the Naval Postgraduate School, and a BS from the United States Naval Academy.



Carmen Medina
Medinanalytics, LLC

Ms. Carmen Medina retired from the Central Intelligence Agency (CIA) after a 32-year career of distinguished service. She is the founder of Medinanalytics, LLC, which provides bespoke analytic services on national security issues, cognitive diversity, global trends, intrapreneurship, and thinking ahead.

In her last assignment before retiring from CIA, she oversaw its “Lessons Learned” program and led its first effort to address the challenges posed by social networks, digital ubiquity, and the emerging culture of collaboration.

From 2005–2007 Carmen was part of the executive team that led CIA’s Directorate of Analysis. She was a leader on diversity issues at CIA, serving on equity boards at all organizational levels and across directorates. She was the first CIA executive to conceptualize many IT applications now used by analysts, including online production, collaborative tools, and Intellipedia—a project she personally greenlit.

As a senior executive in 2005, Carmen began using social networking and blogs to reach her diverse workforce. Upon her retirement from CIA, she received the Distinguished Career Intelligence Medal.

From 2011–2015, Carmen was a member of Deloitte Federal Consulting where she served as senior advisor and mentor to Deloitte’s flagship innovation program, GovLab, and sponsored research projects on Bitcoin, Millennials, and the impact of the Internet of Things on government.

Carmen studied at Georgetown University’s Walsh School of Foreign Service and earned a BA in comparative government from the Catholic University of America. She is coauthor of the book *Rebels at Work* (2014).

The background of the entire image is a dynamic, abstract digital composition. It features a dense field of glowing blue particles, some appearing as bright, out-of-focus spheres while others are sharp points of light. These particles are interconnected by a network of thin, shimmering blue lines that create a sense of depth and movement, resembling a data stream or a complex digital architecture. The overall color palette is a range of blues, from deep navy to bright cyan, set against a black background.

PANEL 2



Jeffery "Skunk" Baxter

Independent Defense/
Intelligence Community
Consultant

Jeffrey "Skunk" Baxter is currently a consultant/contractor for a number of US Government agencies and advises top military, government, defense contractors and civilian groups on missile defense, terrorism & counter-terrorism, cyber-warfare, intelligence, virtual reality, CGI, military and civilian space, war gaming, next-generation technologies and unconventional strategies. He is a Senior Fellow and member of the Board of Regents at the Potomac Institute for Policy Studies, a member of the Director's Strategic Red Team at MIT/ Lincoln Laboratories, a consultant for the Global Security Sector of the Lawrence Livermore National Laboratory and a Senior Thinker at the Institute For Human & Machine Cognition. He was a Specialist Reserve Officer with the Anti-Terrorist Division of the Los Angeles Police Department for 15 years and a founding member of the Terrorism Early Warning Group, Los Angeles Sheriff's Department.



Mim John
Independent Consultant

Dr. Miriam "Mim" John serves in various consulting and board roles since her retirement as vice president of Sandia's California Laboratory.

During her Sandia career, Mim worked on a wide variety of programs, including nuclear weapons, chemical and biological defense, missile defense, and solar energy. She also provided leadership for a number of the laboratory's energy, national security, biosciences, and homeland security programs.

Mim is a member of the Defense Science Board (DSB) and vice chairperson of its Threat Reduction Advisory Committee (TRAC). She supports STRATCOM as a member of the Bomber Task Force of the STRATCOM Advisory Committee. She is also a member of the AAAS Committee on Science and Engineering Public Policy (COSEPP), the National Academies' Intelligence Community Studies Board and Board on Chemical Sciences and Technology. She is also a member of the board of advisors for MIT Lincoln Laboratory, and of the mission committee of the Lawrence Livermore National Laboratory's board, overseeing the technical programs of the laboratories. She is also on the board of directors for Leidos, Inc., where she chairs the Technology and Information Security Committee.

Mim is a senior fellow and past chair of the California Council on Science and Technology, serves on the dean's advisory board for the School of Science and Engineering, and chairs the advisory board for the Department of Chemical and Biomolecular Engineering at Tulane University. She is a member of the external advisory board of the DOE sponsored-, UC Berkeley-led Nuclear Science and Security Consortium. She was appointed a National Associate of the National Academies and is the recipient of the Navy's Superior Public Service Award and DoD's Eugene G. Fubini Award.



Ellen McCarthy
Independent Consultant

Ms. Ellen McCarthy most recently served as the assistant secretary of state for intelligence and research. Before to her return to government service, she was president of Noblis NSP, overseeing the organization and leading its mission to serve clients in the US intelligence community.

Prior to joining Noblis, Ellen served as chief operating officer of the National Geospatial-Intelligence Agency (NGA). Prior to NGA, she served as the president of the Intelligence and National Security Alliance (INSA). Prior to INSA, she was director of the Human Capital Management Office (HCMO) and the acting director of security within the Office of the Under Secretary of Defense for Intelligence (OUSD(I)). Amongst her significant accomplishments, she developed and deployed the Defense Civilian Intelligence Personnel System (DCIPS).

Before joining the staff at the OUSD(I), Ellen was the director of intelligence operations, strategy, and policy for the US Coast Guard (USCG). In this capacity she played a critical role in moving the USCG intelligence program into the IC. She has also worked extensively with the US Navy at the strategic, operational, and tactical levels having served as a Soviet submarine analyst at the Office of Naval Intelligence and at Atlantic Fleet where she supported the Navy's undersea warfare community. Additionally, she provided direct support to joint forces as the deputy chief of joint analysis and warfighter support at the U.S. Atlantic Command focusing on counter-drug and counter-terrorism operations.

Before her employment in the IC, Ellen served as a technical research analyst at the Institute for Defense Analysis supporting the Strategic Defense Initiative Organization.

Ellen is a graduate of the University of South Carolina and earned an MPP from the University of Maryland.



Matt McKnight
Ginkgo Bioworks

Mr. Matt McKnight is the chief commercial officer of Ginkgo Bioworks.

Prior to Ginkgo, Matt spent seven years as an investor at IndUS Growth Partners and was the president and COO of Decision Resources Group.

Matt previously supported business development at Palantir Technologies and is an active seed stage venture investor.

Early in his career, Matt served as an officer in the US Marine Corps.

Matt earned a degree an MBA at the Harvard Business School and an MPP at Harvard University's Kennedy School of Government as part of a joint degree program, where he was a Zuckerman Fellow. and a BA at Dartmouth College.

The background of the entire image is an abstract, high-tech digital pattern. It consists of numerous bright blue and white dots, lines, and clusters of light that create a sense of depth and movement, resembling a data stream or a complex network. The pattern is most dense in the center and fades slightly towards the edges.

PANEL 3



David Omand

Kings College London

Sir David Omand is visiting professor in war studies at King's College London, PSIA Sciences Po in Paris and the Norwegian Defence University in Oslo, where he teaches intelligence studies.

David's previous posts in British government service included UK security and intelligence coordinator in the Cabinet Office, permanent secretary of the Home Office, director of GCHQ, and deputy under-secretary of state for policy in MOD. He also served for 7 years on the Joint Intelligence Committee (the JIC).

David is the author of *Securing the State* (Hurst, 2010) and co-author with Professor Mark Phythian of *Principled Spying: the Ethics of Secret Intelligence* (OUP, 2018). His latest book is *How Spies Think: 10 Lessons from Intelligence* (Penguin Viking, 2020).



Itai Shapira

Independent Consultant

Mr. Itai Shapira most recently served as a director in Deloitte Israel, where he headed the defense sector and led the data strategy practice.

Prior to this role, Itai retired from the Israel Defense Forces (IDF) with the rank of colonel after 25 years of distinguished service as an intelligence analyst and manager - on the tactical, operational and strategic level. Throughout his IDF service, Itai held several senior positions such as deputy head of the IDF's Research and Analysis Division, project manager for Israel Defense Intelligence's (IDI) Strategic Transformation, senior intelligence analyst, and head of the "Read Teaming" department.

Itai's current professional focus is on bridging the domains of defense and business, providing defense-related methods and techniques for corporate strategy, as well as geopolitical analysis for business CEOs.

Itai is pursuing a PhD in philosophy with a focus in intelligence studies at the University of Leicester, where he is researching Israeli national intelligence culture. He earned an MBA at Tel Aviv University's Collier School of Management and a BA in economics and philosophy at Tel Aviv University. He is also a graduate of the IDF National Defense College.



Gregory Treverton
CSIS

Mr. Gregory Treverton is a non-resident senior adviser with the Transnational Threats Project at the Center for Strategic and International Studies (CSIS). He is also a professor of the practice of international relations and spatial sciences at the University of Southern California

Prior to these roles, Gregory served as chair of the National Intelligence Council (NIC) between 2014 and 2017. He also served as vice chair of the NIC, and in both roles he oversaw the production of National Intelligence Estimates (NIEs).

Gregory directed the RAND Corporation's Center for Global Risk and Security, its Intelligence Policy Center, International Security and Defense Policy Center, and was associate dean of the Pardee RAND Graduate School.

Earlier in his career, Gregory handled European affairs for the National Security Council, taught at Harvard University and Columbia University, was a senior fellow at the Council on Foreign Relations, and deputy director of the International Institute for Strategic Studies in London.

Gregory earned a PhD in economics and politics and an MPP from Harvard University, and an AB from Princeton University. His latest books are *Beyond the Great Divide: Relevance and Uncertainty in National Intelligence and Science for Policy* (2015) and *Dividing Divided States* (2014).



Mr. Sam S. Visner is the director of the National Cybersecurity Federally Funded Research and Development Center (NCF), which the MITRE Corporation manages in support of the National Institute of Standards and Technology's National Cybersecurity Center of Excellence. In this role, he oversees efforts to bring together experts from industry, government, and academia to demonstrate integrated cybersecurity solutions that are cost-effective, repeatable, and scalable. The FFRDC is the first of its kind dedicated to cybersecurity.

Samuel S. Visner

The MITRE Corporation
Georgetown University

Sam joined MITRE from an executive position at ICF International, which advises business and government entities on issues related to health, homeland security, defense, and energy. He also held leadership positions at the Computer Sciences Corporation (CSC) and the Science Applications International Corporation (SAIC).

Additionally, Sam served as chief of signals intelligence programs at the National Security Agency, where he was awarded the agency's Exceptional Civilian Service Award in 2003.

Throughout his career, Sam has worked across multiple federal sponsors. He sits on the National Academies' Intelligence Community Studies Board, the Army Science Board, and serves as an adjunct professor of cybersecurity at Georgetown University.

Sam earned an MA in telecommunications from the George Washington University, and a BSFS in international politics from Georgetown University's Walsh School of Foreign Service.