



SMA NDU Panel Discussion

Innovation Amongst Allies Now—Greater Than the Sum of the Parts

*Part of SMA's "Innovation Now—New Paths Forwards"
Speaker Series*

**Tuesday 20 April 2021
1030-1145 EDT**

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Strategic Multi-Layer Assessment (SMA) provides planning support to Commands with complex operational imperatives requiring multi-agency, multi-disciplinary solutions that are NOT within core Service/Agency competency. Solutions and participants are sought across USG and beyond. SMA is accepted and synchronized by Joint Staff/J-39 DDGO and executed by ASD (EC&P).

Agenda

Panel Description: Allies and international networks are central to innovation, as illustrated by cutting-edge research in AI by Google’s UK-based pioneering AI unit DeepMind, or by scientific networks to tackle Covid-19. But even amongst the most established alliances, such as the “Five Eyes” community, effective collaboration requires understanding that each partner has distinct—as well as shared—national interests and perspectives. We bring together leading UK and US voices with deep expertise in science and innovation related to national security, to ask how such allies can collaborate—as they have so effectively before—to provide the networks needed to meet global challenges now.

Our distinguished panelists include:

- **Prof. Anthony Finkelstein** (Chief Scientific Adviser for National Security, UK)
- **Ms. Claire Hancock** (Deputy Chief Scientific Adviser for National Security, UK)
- **Dr. Timothy Grayson** (Director, Strategic Technology Office at DARPA, US)

Our moderator will be **Dr. Nicholas Wright** (Intelligent Biology, Georgetown University Medical Center, University College London, and New America)

Speaker Series Description: This is an event in our SMA NDU event series, entitled “Innovation Now—New Paths Forwards.”

Strategy is the art of creating power, and technological innovation has been central to creating global economic, political, and military power for at least the past two centuries. But how to foster innovation and translate it into power has differed across times and contexts. During the Cold War—which itself differed from previous epochs—defense industries spearheaded US innovation in key fields like air and space, whilst today civilian sectors dominate innovation in artificial intelligence (AI) or space. During the Cold War the US and Soviet Union both showed remarkable innovation—Sputnik sparked the ARPA’s creation—and although for a few decades afterwards the US faced no true peer competitor, now China is transitioning to join the US at the technological frontier. This is the next phase of China’s economic development as it transitions from catch-up imitation to innovation. Meanwhile, allies make significant contributions to US innovation, such as the UK-based pioneering AI unit DeepMind bought by Google, whilst Russia has regained its innovative mojo in niche areas, and the European Union (EU) now explicitly seeks “technological sovereignty.”

So, what options does the US have to foster innovation in our contemporary world?

SMA will host a series of events to address this question, in order to help US and allied policymakers understand the challenge and to provide fresh paths forward.

Speaker Biographies

Prof. Anthony Finkelstein (Chief Scientific Adviser for National Security, UK)

Anthony Finkelstein CBE FREng is Chief Scientific Adviser for National Security to HM Government. His personal research is based at the Alan Turing Institute and he holds a Chair in Software Systems engineering at University College London (UCL). His scientific work is in the broad area of software development tools and processes. Before being appointed to his current post he was the Head of UCL Computer Science and then Dean of the UCL Faculty of Engineering Sciences. He is an elected Fellow of the Royal Academy of Engineering (FREng). He is also an elected Member of Academia Europaea and a Fellow of the City and Guilds of London Institute. He is a Fellow of the Institution of Engineering and Technology (IET) and the British Computer Society (BCS). He was appointed Commander of the Order of the British Empire (CBE) in the 2016 Birthday Honours for services to computer science and engineering.

Ms. Claire Hancock (Deputy Chief Scientific Adviser for National Security, UK)

Claire Hancock is the Deputy Chief Scientific Adviser for National Security to HM Government. She has worked in a broad range of roles across the UK National Security community, with a particular focus on the intersection between state-led threats and science and technology. She established HMG's assessment body for state-led threats to national security (2017). She has held UK Foreign & Commonwealth Office roles in Sweden (2015) and Bosnia & Herzegovina (2007) focused on security and defence.

Dr. Timothy Grayson (Director, Strategic Technology Office at DARPA)

Dr. Timothy Grayson is the director of the Strategic Technology Office (STO). In this role, he leads the office in development of breakthrough technologies to enable warfighters to field, operate, and adapt distributed, joint, multi-domain combat capabilities at continuous speed. These technologies include sensing, communications, and electronic warfare technology and the supporting tools and decision aids needed to compose, integrate, and operate complex combat architectures. Grayson came to STO in 2018 from a varied career in government and industry. Most recently he was the founder and president of Fortitude Mission Research LLC, a consulting company specializing in organizational and operational strategy development and technology analysis related to defense, security, and intelligence. His primary client was DARPA, and in this role, he provided direct support to the Deputy Secretary of Defense's modernization study, of which DARPA was the lead in the fall of 2017. Grayson helped spearhead the project that resulted in "A Blueprint for Winning," a framework for how to modernize the Defense Department for the 21st century.

Grayson has extensive government experience. He spent several years as a senior intelligence officer with the Central Intelligence Agency (CIA) in the Directorate of Science and Technology and culminating in a tour at the Office of the Director of National Intelligence. Prior to the CIA, Dr. Grayson was a program manager and senior scientist at DARPA. He initiated new programs in space situation awareness and networked sensing and also managed DARPA's quick reaction program portfolio, successfully deploying technology to Afghanistan during the early days of Operation Enduring Freedom.

Grayson holds a doctorate in physics from University of Rochester, where he specialized in quantum optics, and a Bachelor of Science in physics from University of Dayton with minors in mathematics and computer science.

Dr. Nicholas Wright (Intelligent Biology, Georgetown University, UCL, and New America)

Dr. Nicholas Wright is an affiliated scholar at Georgetown University, honorary research associate at University College London (UCL), Consultant at Intelligent Biology and Fellow at New America. His work combines neuroscientific, behavioural and technological insights to understand decision-making in politics and international confrontations, in ways practically applicable to policy. He leads international, interdisciplinary projects with collaborators in countries including China, the U.S., Iran and the UK. He was an Associate in the Nuclear Policy Program, Carnegie Endowment for International Peace, Washington DC and a Senior Research Fellow in International Relations at the University of Birmingham, UK. He has conducted work for the UK Government and U.S. Department of Defense. Before this he examined decision-making using functional brain imaging at UCL and in the Department of Government at the London School of Economics. He was a clinical neurologist in Oxford and at the National Hospital for Neurology. He has published academically (some twenty publications, e.g. Proceedings of the Royal Society), in general publications such as the Atlantic and Foreign Affairs, with the Pentagon Joint Staff (see www.intelligentbiology.co.uk) and has appeared on the BBC and CNN. Wright received a medical degree

from UCL, a BSc in Health Policy from Imperial College London, has Membership of the Royal College of Physicians (UK), has an MSc in Neuroscience and a PhD in Neuroscience both from UCL.