

The Role of Experimentation Campaigns in the USAF Innovation Life Cycle

Proceedings of a Workshop — in Brief

Historically, the United States Air Force (USAF) has been a world leader in innovation and the experimentation campaigns that further it. The resulting innovations have informed both the military and the commercial aerospace industry. Over the last two and a half decades, innovation stemming from USAF experimentation has suffered. To diagnose the reasons for this decline and provide advice on how to rectify it, the U.S. Air Force Office of the Assistant Secretary for Science, Technology and Engineering, SAF/AQR, asked the Air Force Studies Board (AFSB) to conduct a workshop and a consensus study on the subject of experimentation campaigns. The workshop set the stage for the subsequent study (in press), which built on perspectives gained from the workshop and will provide detailed findings and recommendations.



WORKSHOP TOPICS

The workshop assembled speakers on four topics:

The problem and the opportunity as seen by senior Air Force Acquisition leaders

- Gen. Ellen M. Pawlikowski, Commander, Air Force Materiel Command (AFMC)
- Dr. William A. LaPlante, recently retired Assistant Secretary of the Air Force for Acquisition

Current best practices in experimentation within the Air Force

- Mr. David Hamilton, former Director of the Air Force Rapid Capabilities Office (RCO)
- Mr. Robert Andrew Kirk Mitchell, former President of Teledyne Ryan Aeronautical and former VP of Northrop Grumman Aerospace Systems, under whose leadership Teledyne Ryan Aeronautical captured and developed the Global Hawk high altitude, long endurance Unmanned Aircraft System (UAS).

Successful experimentation efforts outside the Air Force

Talks were presented by two innovative aerospace companies and a successful Silicon Valley Venture Capital Partnership:

- Mr. Brett Lindenfeld, Vice President, Operations, Motiv Space Systems,
- Dr. Joel C. Sercel, Founder and Principal Engineer, TransAstra
- Mr. Arif Janmohamed, Partner, Lightspeed Ventures Partners.

Possible barriers to experimentation

- Lt. Gen. Steve Kwast, Commander and President, Air University
- Lt. Gen. C.D. Moore (retired), former Commander, Air Force Life Cycle Management Center
- Dr. Camron Gorguinpour, Director of Transformational Innovation for the USAF Office of the Assistant Secretary of the Air Force for Acquisition

Together, these presenters offered game-changing insights to the Air Force Studies Board Committee on the role of experimentation as it informs innovation, as well as the challenge of restoring the practice of experimentation campaigns in the Air Force to even greater standards of excellence.

COMMITTEE ON THE ROLE OF EXPERIMENTATION CAMPAIGNS IN THE AIR FORCE LIFE CYCLE: Lester L. Lyles (Gen., USAF Ret.), Independent Consultant, *Co-Chair*; Alex Miller, University of Tennessee, *Co-Chair*; Ted Bowlds (Lt. Gen., USAF, Ret.), The Spectrum Group; Charles R. “CR” Davis (Lt. Gen., USAF, Ret.), Seabury Aerospace & Defense; Blaise J. Durante (USAF, Ret.); Antonio L. Elias (NAE), Orbital Sciences Corporation; Ivy Estabrooke, Utah Science, Technology and Research Agency; David E. Hamilton, Jr., Eagle Aerie Inc.; Bernadette Johnson, MIT Lincoln Laboratory; William Johnson, WMJ Associates LLC; Joseph Lawrence, National Defense University; Robert Andrew Kirk Mitchell (NAE), Independent Consultant; Benjamin P. Riley, Georgia Tech Research Institute; Joel Sercel, ICS Associates Inc.; Daniel Ward, Dan Ward Consulting, LLC

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