Lewis Shepherd

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Executive Summary

AI strategy and technology executive whose hands-on work building NLP and large-scale semantic search systems dates to 2000, developing what would now be recognized as a precursor to modern language-model architectures – and whose track record of deploying AI at national scale predates the mainstream by more than a decade. From standing up the first AI/ML-driven intelligence-analysis enterprise platforms across 70,000 DoD users beginning in 2003, to helping scale the AI/autonomy digital-twin system now deployed fleet-wide across the U.S. Navy's AEGIS program, to shaping AI policy and infrastructure for Broadcom's global enterprise customers, I have consistently operated at the intersection of deep technical engagement and senior executive authority.

That intersection — where frontier technology meets real-world deployment and value at scale — is where I am most effective. I have led R&D organizations, built and managed technical teams across three continents, led a nine-figure enterprise technology budget, and advised the U.S. Director of National Intelligence, the Secretary of Defense, and the Army Science Board on AI/ML strategy and security. I hold a concurrently active role as a Special Government Employee senior advisor to the Department of Defense on AI/ML.

I bring to frontier AI organizations a rare combination: the technical credibility to engage meaningfully with researchers and engineers on model deployment, infrastructure, and safety; the policy and government fluency to navigate the regulatory and national-security dimensions of AI at scale; and the executive experience to build and lead the teams and partnerships that translate AI capability into real-world impact.

Federal Chief Technology Officer, Broadcom — Palo Alto, CA / Washington, DC 2023-present

Develop and help execute the technical vision and growth roadmap of globally scalable and secure solutions for the world's top-ten-by-market-cap Broadcom, joining on its acquisition of VMware ($69B, the largest tech-company acquisition in history) where I was a direct report to the VMware CTO. Regular speaker on AI strategy at technology forums, media engagement, corporate marketing leadership, strategic collaboration with Legal & Government Affairs.

- Lead AI-focused technical strategy and go-to-market for Broadcom's federal enterprise portfolio, the largest component by revenue of Broadcom's Infrastructure Software Group, spanning AI infrastructure, cloud computing, and AI-enabled edge analytics. Revenue for Infrastructure Software grew from $7.6B (FY23) to over $27B (FY25).
- Authored ongoing series of technical analyses on agentic AI, AI infrastructure governance, sovereign AI, and private cloud security modernization for federal environments (Broadcom, 2024-2026), including "A Game Changer in Federal Agentic AI Modernization" (January 2026), "Inherent Trust and Private Cloud" (December 2025); "Promise and Pitfalls of Generative AI for Legislative Analysis" (November 2024).
- Serve on-loan as Special Government Employee (SGE) senior advisor to the U.S. Department of Defense on AI/ML strategy, at DoD Strategic Capabilities Office since 2017; appointed as SGE also to 2023 Army Science Board special study on protecting Army AI/ML systems, including adversarial robustness and AI safety considerations involving physical/cyber/data-poisoning at training/inference.

Career Highlights

Senior Director, Research and Emerging Technologies, VMware Corp. — Washington, DC / Palo Alto, CA 2018-23

R&D executive with VMware, the pioneering Silicon Valley virtualization company and the world's leading private-cloud-computing provider. Reporting originally to the Chief Research Officer, then promoted under Chief Technology Officer, I shaped strategy and disruptive prototyping efforts for the Palo Alto-headquartered VMware Research & Innovation Group.

- Drove VMware's positioning as the sovereign/private-cloud AI infrastructure of choice for national-security; secured leading roles in U.S. DoD Joint Warfighter Cloud Capability (JWCC), DISA STRATUS private cloud, and U.S. IC Cloud Computing Enterprise (C2E). VMware revenue grew from $7.9B (FY17) to $13.35B (FY23) over this period.
- Created Digital Twin product offering, based on AI/autonomy proof-of-concept for U.S. Navy AEGIS program with virtualized fire-control and real-time ML decision support. Deployed fleet-wide across Navy surface combatant fleet.
- Co-architected AI-augmented Cyber-Range platform, now deployed by NATO and U.S. Cyber Command as the world's largest live-fire cyberwar simulation environment. Platform combines ML-driven threat identification, with automated Software-Defined Data Center scaling, and scenario generation from individual training to full-theater cyber-attack simulation across private, hybrid, and public-cloud environments.
- Collaborated with NIST leadership on post-quantum cryptographic (PQC) standards for multi-cloud communication – an early engagement with the AI safety and governance challenges that now define the frontier AI policy landscape.

Executive Consultant on Advanced Technologies Washington, DC 2015-17

Consulting solo, and for one year with Deloitte Consulting, for the world's leading enterprises. Strategic planning and leading complex change. Personal clients included DoD, NCTC, Goldman Sachs, SpaceX, Samsung Ventures, hedge funds.

GM & Director, Microsoft Institute for Advanced Technologies Washington, DC / Redmond, WA 2007-14

Led a strategic division of Microsoft Strategy & Research, directing applied AI, encryption, and cybersecurity R&D for public-sector customers, bridging Microsoft's research capabilities and the real-world deployment requirements of the U.S. and allied government enterprises. Hired as CTO, promoted within 2 years to GM and Partner (Microsoft's senior executive level). Drove $MM revenue in sales/services using R&D to solve mission challenges. Led a handpicked team of stellar technologists and former U.S./U.K. intelligence executives in DC, Redmond, London.

- Selected to lead early-adopter program for Microsoft HoloLens, one of the most significant and secretive AI/AR hardware projects in Microsoft's history, assessing operational applications for unique enterprise customers.
- Restructured productization strategy with MSFT Research to capture $4MM/month new revenue in services.
- Extended Institute focus beyond pure research to applied encryption & cybersecurity solutions, to win U.S. Army, U.S. Navy, U.S. Air Force enterprise deals, through senior-level engagement with military/civilian leadership.
- Teamed with state/local public-sector accounts; won New York Police Department $40MM Manhattan "Domain Awareness System" real-time data-fusion; resold to other cities making MSFT a global law-enforcement tech leader.
- Partnered with MSFT Singapore in winning one of MSFT's largest Asia deals, $38MM plus $6MM services.

Used agile development for rapid prototypes, dynamically organized virtual ML teams. Worked in strategic concert with MSFT Legal & Corporate Affairs, and MSFT Government Relations. Media engagement, executive crisis communications.

Senior Technology Officer, U.S. Defense Intelligence Agency Washington, DC 2003-2007

Recruited from Silicon Valley to lead "Requirements & Research" for global defense intelligence, a Fortune-200-equivalent enterprise. Promoted rapidly to flag-rank Senior Executive Service. Direct report to DIA Deputy Director/CIO and appointed by DIA Director to the agency's Strategic Planning Committee.

- Held senior decision-making authority over all information technology acquisition – infrastructure, hardware, middleware, software, and secure communications – for a $6B+ agency serving 70,000 users across 500+ global locations on 30+ classified networks. Managed 250+ technologists and intelligence officers across three continents and active war zones.
- Deployed over 20 AI and ML systems across the DoD intelligence enterprise – including predictive analytics, semantic search, and large-scale data-fusion platforms – years before these capabilities entered commercial mainstream. Led the team that built Intellipedia and A-Space, the first large-scale social collaboration intelligence platforms on classified networks; A-Space was named TIME Magazine's "Best Invention of 2008."
- Served as the U.S. government's first customer of Palantir's software, along with multiple other venture-funded disruptive capabilities, establishing a federal AI deployment playbook that led the broader Intelligence Community.
- Experience at DIA directly informed subsequent AI curriculum development; later taught PhD-level AI course (George Mason University) in a program officially accredited for CIA mid-career officers, covering ML algorithms and architectures, large-scale deep-learning infrastructure, and AI ethics and policy for the Intelligence Community.

AI/ML Startup, Head of Business Development: H5 Technologies, Inc. San Francisco, CA 2000-2003

Successful NLP text-analytics/data-mining software startup. "Knowledge Architect" and hands-on developer for proprietary patent-protected large-scale semantic system, the equivalent of a manually-constructed Large Language Model (LLM). Led marketing strategy to media and government customers. Joined founder/CEO pitching top VC firms (won $6.5 million). Personally closed company's first $250,000 in software sales. (H5 subsequently acquired by Lighthouse/Lightyear Capital.)

VP of Public Affairs & Public Policy, The Clinton Reilly Group San Francisco, CA 1996-1999

Leading West Coast government consulting firm. Firm's clients have included Nancy Pelosi, Dianne Feinstein, San Francisco Chamber of Commerce. Developed strategy for technology enterprise-zones, with urban tax incentives to foster startups.

Director of Communications and Speechwriter, The Mayor of San Francisco San Francisco, CA 1994-1996

Directed communications strategy and operations in one of the world's most complex urban environments. Managed tech policy team, contributing to dot-com startup boom. Wrote policy papers, State of the City Address, Annual Budget Message.

Executive Director, San Jose Tomorrow Foundation San Jose, CA 1991-1994
Led small Silicon Valley education/social-policy non-profit, funded by Apple and other tech firms plus government grants. Launched international development and education efforts for underserved youth in Northern Ireland and Costa Rica.

Special Assistant on Policy and Speechwriter, The Mayor of San Jose San Jose, CA 1989-1991
Senior aide and tech advisor for mayor of America's tenth-largest city. Contributed on efforts supporting a global re-branding as "The Capital of Silicon Valley." Met/worked with CEOs of major technology firms (e.g. Apple, IBM, HP, Oracle). Daily media management. I was described as a "Silicon Valley Luminary" by the *San Jose Mercury News* in 1992.

Consultant & Soviet Analyst, Office of the Secretary of Defense Pentagon, DC 1985-1986
Consultant on Soviet analysis during graduate school, on contract in Pentagon Office of Net Assessment for "US-Soviet Long-Term Competition" strategy. Complex Kremlinological leadership analyses, wrote white papers. Briefed results to Pentagon senior leaders, National War College panel of senior analysts from CIA, DIA, other government agencies.

Education

Harvard University, Kennedy School of Government Executive Education non-degree program.

Stanford University PhD program in Political Science (three years, all-but-dissertation). Awarded MA in Political Science. Three-year Rockefeller Doctoral Fellow. International relations, global trade, U.S. politics/legislative affairs.

University of Virginia Awarded BA cum laude in Government. MA coursework in Foreign Affairs.
Politics, international law and economics, Russia/Middle East politics. Arabic and Russian languages.

Université Libre de Bruxelles Deuxième and Troisième Degré in French language.

Selected Awards

"National Government IT Leadership Award," by Government Computer News & Washington Post for "exceptional accomplishments over a substantial period of time in government."

AFCEA International, Chairman's Award "for superior service to AFCEA over a sustained period of time" (article).

Department of Defense, DIA Medal for Meritorious Civilian Service.

DIA Director's Annual Award for Outstanding Team Performance, for classified wartime achievements.

Ford Foundation Fellow in International Security; **Rockefeller Foundation** Fellow in Russian Studies (graduate school).

Professional Leadership Roles

AFCEA, Executive Committee of the Board and Chair, Intelligence Committee Washington DC (2010-current)
Elected head of Intelligence Committee, leading senior public/private sector leaders in 30,000+ member global association.

Office of the Secretary of Defense/Strategic Capabilities Office, Senior Advisor Washington, DC (2017-current)
Special Government Employee (on-loan part-time, unpaid). Innovative strategies to solve complex national security issues.

Technical Advisory Board Member, Quantum Computing Inc. (Nasdaq: QUBT) Washington, DC (2023-2024)
Publicly-traded company; advisory focus on AI and cybersecurity applications.

Startup Advisory Board, LGS (Lucent Government Solutions) Washington, DC (2016-2017)
Spinoff of Bell Labs Government Communications Lab, ML-enabled network security. Acquired by CACI for $750 million.

Georgetown University, Technology Management Advisory Council Washington, DC (2014-2017)
Appointed member of strategic advisory body for GU's graduate-degree-granting program in Technology Management.

Office of the Director of National Intelligence, IC Strategic Studies Group Washington, DC (2011-2017)
Appointed to the DNI's select "think-tank" government advisory body on high-priority long-range issues.

Selected Publications

Author, *"A Game Changer in Federal Agentic AI Modernization."* Broadcom, January 2026 (article).

Author, *"Inherent Trust and Private Cloud: Accelerating Security Modernization in the Federal Sector."* Broadcom, December 2025 (article).

Author, "*The Promise and Pitfalls of Generative AI for Legislative Analysis*." Broadcom, November 2024 (article).

Co-author, *"AI and Autonomy,"* with Dan Maxwell (KaDSci), Mike Bailey (SPA), Steve Riese (JHU Applied Physics Lab), Peggy Wu (Raytheon Technologies Research), in Phalanx: The Magazine of National Security Analysis (Winter 2021, PDF).

Co-author, NATO Defense Conference featured paper, *"Data: The Core of Collaborative Combat."* Presented at 2021 Vauban Sessions, NATO Rapid Reaction Force, France (PDF).

Refereed article co-author, "*Novel Orchestration of Virtualization to Improve Cybersecurity: Software Defined Infrastructure as a Foundation for Clean-Slate Computing Security*." Presented at 2019 C&SAR European Cyber R&D Conference (PDF).

Foreword "Bridge to the Cyber 21st Century," in book Inside Cyber Warfare (O'Reilly Publishing, book site).

Multiple classified policy documents and studies.

Selected Speeches and Presentations

Keynote fireside chat **"One-on-One with Director of National Intelligence Avril Haines**," at annual Intelligence & National Security Symposium, Washington DC, September 2024. (CSPAN video)

FBI, Corporate Security Symposium, Las Vegas Sphere, *"AI: The Next Digital Frontier."* July 2024. (agenda)

Keynote fireside chat **"One-on-One with Jeff Bezos**," CEO/Chairman of Amazon and Blue Origin CEO, on *"Future Trends in Technology and Information,"* at annual AFCEA Intelligence Symposium, Washington DC, April 2017. (article)

Keynote fireside chat "**One-on-One with Elon Musk**," SpaceX/Tesla CEO, on *"Revolutionary Changes for Intelligence,"* at annual AFCEA Intelligence Symposium, May 2015; also panel chair for *"Industry R&D"* (article)

Speech, *"Social Engineering in 2040."* National Academies of Sciences, Intelligence Studies Board, 2020. (agenda)

University Faculty and Selected Lectures

George Mason University, Adjunct Professor, Graduate Engineering School, 5 years teaching PhD-level AI Architectures and Analytics course in Department of Information Sciences and Technology, by special arrangement limited to students in the CIA's officially accredited mid-career graduate-study program. Intensive coverage of AI/ML algorithms and architectures for large-scale deep-learning infrastructures, emergence of transformers, Deep Reinforcement Learning and RLHF, safety and AI responsibility ethics/policy for data science in the Intelligence Community. 2015-2019.

U.S. State Department-organized lecture tour, six Argentine universities (Buenos Aires, Rosario, La Plata). (blog)

Stanford University, recurring Guest Lecturer in Graduate School of Business and Institute for International Studies.