

Paul Brenner
RAND Corporation

Mr. Brenner focuses on government's management of science and technology, including best practices for technology development, acquisition programs, R&D portfolio management, program evaluation, and risk management. He has supported Homeland Security programs since 2004, working with several DHS components as well as other Departments. He has led technical consulting organizations with over 150 staff supporting multiple government agencies.

2017 to present Senior Management Scientist, RAND Corporation

Projects with the Homeland Security Operational Analysis Center

- *COVID-19 recovery* – improving FEMA's Public Assistance program for hospitals and state & local governments
- *Chemical security* – inventoried DHS programs related to chemical security, characterizing the technologies and processes
- *Puerto Rico long-term recovery plan* – identified 2017 hurricane damages and recovery actions, focusing on water infrastructure. The Plan specifies \$139 B to restore physical and community infrastructure, and the economy
- *Puerto Rico project cost validations* – analyzed recovery projects to ensure that grants are based on accurate costing
- *Gene sequence databases* – organized and led an expert workshop to evaluate how gene sequence databases can reduce bioengineering risks
- *Cybersecurity strategic planning* – supported a strategic plan to improve DHS cybersecurity operations
- *Cyber and Infrastructure Protection analytics* – identified data analysis tools, systems, and staff skills needed to improve DHS infrastructure protection programs

2015 to 2017 Senior Fellow, Safety and Security, CNA Corporation

Support to Homeland Security, Justice, and Education Practices

- *Infrastructure Protection vulnerability assessments* – supported development of a 3-year strategic plan to increase the value of vulnerability assessments
- *National Background Check Program* – improved the HHS program that protects long-term care patients from fraud and abuse
- *Freedom of Information Act* – improved FAA's process for responding to FOIA requests
- *Cost and schedule performance analysis* – investigated early warning signs of FAA program cost and schedule problems based on the Rayleigh distribution

2006 to 2015 Senior Vice President for Homeland Security, ICF International

Projects for DHS Infrastructure Protection, S&T, FEMA, and TSA include:

- *National Infrastructure Protection Plan* – helped develop the national program for protecting 16 critical infrastructure sectors, including the underlying risk framework, partnership model, and performance metrics

- *Critical Infrastructure Protection R&D Plan* – supported S&T and the White House Office of Science and Technology Policy to plan R&D priorities across the critical infrastructure sectors
- *Risk assessment methodologies* – for S&T, identified risk analysis approaches and their appropriate use in different homeland security decision contexts
- *R&D Portfolio Analysis* – supported the S&T Program Analysis & Evaluation Office in assessing the performance of S&T projects and their match to DHS missions.
- *Target Capabilities* – supported FEMA efforts to improve national preparedness through capability-based planning with States and cities
- *Transportation security* – supported the Transportation R&D Working Group and helped TSA develop protection plans for Transportation and Postal & Shipping sectors.
- *Water security* – supported EPA in developing the Water Sector protection plan in coordination with industry and government partners
- *Financial Sector* – supported Treasury in developing the Banking & Finance Sector Specific Plan for protection and resilience

2002 to 2006 Practice Leader, Technology & Program Management, ICF international

Leader of a technology and management consulting practice specializing in support for large government programs. Key clients include the FAA (\$67M over 11 years), US Postal Service (\$305M over 23 years), Internal Revenue Service, DHS, and Defense logistics groups. Direct participation in client projects including:

- R&D Portfolio planning for US Army Chief Scientist, USPS Engineering Center, and DHS S&T
- Design of national R&D programs for Japan's Ministry of Economy, Trade, and Industry
- Evaluation of field tests for prototype mail processing technologies affecting sorting and delivery for several dozen facilities
- Performance-based management for DHS, DOE, and DOL – assessing performance of government programs; performance-based contracting and budgeting

**1994 to 2002 President, Program Systems Management Company
(an Arthur D. Little, Inc. subsidiary)**

Staff of 155 provided SETA-type services to government and commercial clients through 60-80 task orders per year, including:

- *FAA* – lifecycle RDT&E and logistics to implement air traffic control technologies
- *TSA* – acquisition and life-cycle support for aviation security equipment
- *USPS* – Studies, analyses, and technology development for USPS departments
- *Army Soldier Systems Command* – equipment acquisition and deployment
- *South Carolina Research Authority* – partnership with a State agency, managing government technology programs and public-private R&D partnerships
- *Internal Revenue Service* – providing web-based education to IRS employees

Led a project reporting to the FAA Administrator to clarify roles and responsibilities for Operations, R&D, and Acquisition groups throughout the acquisition life cycle.

Recommendations showed how airlines' and airports' involvement in acquisitions could improve

requirements; how to build operations & maintenance costs into capital investment decision-making; how to establish learning processes so that technology refresh is based on operating experience; and how a new Systems Analysis staff group (supporting their Joint Requirements Council) could develop a common architecture and foster one-FAA culture.

1993 to 1994 Sloan Fellow, MIT Sloan School

Master of Science in Management degree (MBA plus thesis) in a program with 50 other mid-career executives from 20 countries. Thesis analyzed methods to assess the learning capabilities of organizations.

1983 to 1993 Arthur D. Little Technology Resource Center

- **Managing Director (1988 - 1993)**
- **Operations Research Practice Leader (1983 - 1988)**

Leader of a contractor-operated R&D center for the US Postal Service with a staff of up to 87 FTEs and 20 subcontractors. The TRC analyzed capability requirements, identified postal applications of new technologies, and managed applied R&D by universities and corporate research groups. Mr. Brenner founded the TRC's Operations Research program and personally developed a simulation of the USPS sorting network to identify performance and cost requirements for sorting machines. Mr. Brenner served on the USPS Task Force which formed the Corporate Automation Plan specifying \$2+ Billion in capital investment. The TRC won the 1991 USPS Quality Supplier Award.

1978 to 1983 Consultant, Arthur D. Little, Inc.

Project assignments in risk analysis, logistics, manufacturing planning, market research, and public policy.

Education

MIT Sloan School	MS in Management, 1994
University of Michigan	MS in Industrial and Operations Engineering, Operations Research Program, 1978
Princeton University	BS in Civil Engineering, 1977

Certifications

Project Management Professional
Professional Cost Estimating Analyst

Boards of Directors

Chairman, ADL Program Resources, Inc. (1998-2002)
Director, R. Dixon Speas Associates (1997-1999)

Publications

“Assessing the Learning Capabilities of an Organization” (Masters Thesis)
“Can Mega-Projects Be Nimble,” Project World Proceedings
“The Learning Organization Journey: Assessing and Valuing Progress,”
The New Workplace, Pegasus Communications
“Managing Across the Acquisition Life Cycle” (study for the FAA Administrator)
“Risk Analysis and Management Methodologies” (study for DHS S&T)