

RICHARD MUTZMAN

ASSOCIATE, DAYTON AEROSPACE, INC.

PROFILE

Over 40 years in the aerospace and defense industry. Former technical engineering authority for the Aerospace Systems Directorate, Air Force Research Laboratory (AFRL/RQ)—provided systems engineering and program management direction and guidance across the directorate. Led various major, high-visibility programs such as the very successful X-51 Scramjet Engine demonstrator as chief engineer with overall technical responsibility for the design, development, and flight testing of this hypersonic scramjet powered vehicle. Chief engineer for the aeronautical enterprise program office and air vehicle platform chief for the Global Hawk program during its development and transition to operations. Led the integrated flight-propulsion control integrated product team (IPT) during the Joint Strike Fighter (JSF) concept demonstration program and served as lead flying qualities/flight control engineer on the F-22 fighter and B-2 bomber during design, development, and flight testing. Prior to entering government service, worked as a flight test engineer for the Boeing Commercial Aircraft Company, and as a preliminary design engineer with Gulfstream Aerospace. DR-04 and GS-15, Department of the Air Force (DAF) (retired) and former industry executive.

PRINCIPAL AREAS OF EXPERTISE

Systems Engineering	Roadmap Development	Design, Development &
Budget Formulation	Program Management	Testing
Flying Qualities/Controls	Airworthiness Certification	Risk Management

WORK HISTORY

Associate | Dayton Aerospace, Inc.

2023-present, Dayton, OH

Provides system engineering, airworthiness, and program management support across all program phases including development, production, sustainment, and operations—to both industry and government clients. Specific areas of expertise include airworthiness, flight systems engineering, flight control, stability and control, flying qualities, hypersonics, systems acquisition, program formulation, implementation, and road-mapping.

Systems Engineering and Airworthiness Consultant | Huntington Ingalls Industries

2017-2023, Dayton, OH

Provided expert guidance to various Air Force Life Cycle Management Center (AFLCMC), AFRL, and Defense Advanced Research Projects Agency (DARPA) program offices in matters concerning systems engineering and airworthiness, leading to approval for flight. Provided systems engineering preliminary design review (PDR) and critical design review (CDR) entrance and exit criteria for program functional reviews. Executed multiple functional and system level reviews, PDRs, CDRs, and airworthiness activities identifying areas of technical, schedule, and programmatic airworthiness risks and provided recommendations. Developed documentation defining the airworthiness approach and criteria, reviewed airworthiness artifacts, and supported coordination with the US Air Force (USAF) Technical Airworthiness Authority (TAA) for approvals.



DAYTON AEROSPACE

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EDUCATION

MS, Aeronautical Engineering

Air Force Institute of Technology
(AFIT)

BS, Aeronautical and Astronautical
Engineering

Ohio State University

Air War College

Defense Systems Management
College (DSMC)

CERTIFICATIONS & RECOGNITION

Defense Acquisition Workforce
Improvement Act (DAWIA)

Program Management - Level III

Systems Planning, Research,
Development and Engineering
(SPRDE) - Level III

WORK HISTORY (CONT'D)

Systems Engineer and Airworthiness Subject Matter Expert (SME) | MacAulay Brown 2015-2017, Dayton, OH

Provided over-arching airworthiness and systems engineering expert technical support, guidance, and counsel to the AFRL delegated technical authority (DTA) for airworthiness. This included Department of Defense (DoD), USAF, and civil Federal Aviation Administration (FAA) airworthiness policies and processes. Provided recommendations to the AFRL DTA on air system conformance to airworthiness requirements and developed the military flight releases for AFRL DTA signature. Developed, wrote, coordinated, and published the AFRL airworthiness process and policy to ensure alignment and compliance with DoD and USAF policies.

Chief Engineer | Aerospace Systems Directorate, AFRL 2010-2015, Wright-Patterson Air Force Base (WPAFB), OH

Dual hatted as the technical engineering authority and chief engineer for the Aerospace Systems Directorate and senior functional for program management. Responsible for providing advice and counsel to the director. Oversaw the directorate portfolio on systems engineering, programmatic cost, schedule, and performance. Developed and implemented systems engineering processes, policies, practices, tools, and training across the directorate. Provided long range strategic planning and direction for an organizational construct which merged two organizations, resulting in an organization of 1,600 personnel and an \$800M budget. Part of an industry-government team that developed long range strategy and plans for future hypersonic science and technology efforts resulting in the DARPA Hypersonic Air-breathing Weapon Concept (HAWC) program.

Chief Engineer | X-51A Scramjet Engine Demonstration Program, AFRL 2004-2011, WPAFB, OH

Chief engineer for the X-51 scramjet engine demonstration program from initiation through flight. Established the program top level requirements documents and schedules. Identified technical and schedule risk areas and developed and implemented risk mitigation plans. Led the program through the system requirements, PDR, and CDR by developing entrance/exit criteria and the technical agenda and arranging for the support of team members from across multiple organizations. Organized and executed an independent technical review (ITR) by senior technical personnel from Air Force Materiel Command (AFMC), National Aeronautics and Space Administration (NASA), and DARPA to assess technical and cost risk. Developed the ITR charter, conducted a detailed technical review, and organized and conducted follow-up meetings at the airframe and propulsion contractor locations. Results of the ITR cleared the program to proceed to first flight. Led and executed the X-51A/B-52 system airworthiness review. Tailored MIL-HDBK-516 airworthiness criteria for the system in coordination with the B-52 chief engineer and Seek Eagle office. Conducted over 10 different system and sub-system reviews, ensuring all components were airworthy, flight qualified and mission ready for conduct of X-51 flight test activities. Successful completion of these reviews resulted in signing of the flight clearance letter by the B-52 system program office (SPO) and entrance into a successful flight test program.

Chief Engineer | Aeronautical Enterprise Program Office (AEPO), AFLCMC 2003-2004, WPAFB, OH

The AEPO was tasked with developing cross-cutting solutions to issues which span the aeronautical enterprise. Responsible for development of the Secretary of the Air Force (SECAF) and Chief of Staff of the Air Force (CSAF) mandated USAF Fleet Viability Board (FVB) process to provide senior USAF decision makers with the necessary information to decide on continued sustainment or retirement of USAF platforms. Developed the process, briefed the USAF Air Staff A4/A7, estimated and obtained resources and established the office after briefing and receiving SECAF/CSAF approval. Led the first ever USAF FVB technical assessment conducted on the C-5A. Coordinated fact-finding trips, guided the technical assessment, developed the overall report format, wrote the technical section, and briefed USAF senior leadership on the results. Responsible for the technical management and supervision of personnel in all areas of systems engineering. Planned and assigned work, set priorities and schedules, evaluated the performance of subordinates, and provided career council and guidance.

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WORK HISTORY (CONT'D)

Chief Flight Systems Engineer | Global Hawk SPO, AFLCMC 2001-2003, WPAFB, OH

Responsible for the technical management and supervision of experts in the areas of flight mechanics, aerodynamics, structures, subsystems, and propulsion. Planned and assigned work, set priorities and schedules, evaluated the performance of subordinates, submitted employees for recognition, and provided career council and guidance. Responsible for the planning and development of the Global Hawk Aircraft Structural Integrity Program (ASIP), encompassing analysis, design, and testing of Global Hawk structure. Lead engineer for the low-rate initial production (LRIP) contract, developing the statement of objectives, the contract work breakdown structure (WBS), contract statement of work (SOW), schedules, and contract data requirements lists (CDRLs). Responsible for development of air vehicle requirements for the Global Hawk air system specification and product acceptance criteria. Lead engineer for the design and development of the redesigned Global Hawk and evaluation of the technical proposal for the redesign. Wrote and developed the Global Hawk airworthiness certification plan and tailored airworthiness certification criteria (TACC), documenting the certification approach. Working with the systems safety engineer (SSE), identified flight critical hardware and software requiring certification for an unmanned platform. Coordinated with the contractor to identify what analysis and test data was available from the advanced concept technology demonstrations (ACTD) phase of the program and where shortfalls existed in the data. These documents formed the basis for on-going work during the transition to an engineering and manufacturing development (EMD) phase of the program.

Technical Specialist | Joint Strike Fighter (JSF) Joint Program Office (JPO), AFLCMC 1995-2000, WPAFB, OH

Led the vehicle management system (VMS) integrated flight-propulsion control (IFPC) IPT within the JSF program. Responsible for the technical direction and coordination of a geographically dispersed, multi-service and multi-national team of technical experts, providing guidance and government insight into the development of the JSF Concept Definition aircraft program. Led on-site reviews at two contractor facilities, evaluating the concept demonstrator aircraft being developed during this phase of the program; evaluated preferred weapon system concepts (PWSC) design trade studies; and conducted program and technical baseline reviews evaluating technical and schedule risks. Briefed senior leadership on specific IFPC technical risks and wrote contractor performance assessment reports (CPARs).

Prior to (1995)

- Chief Flight Systems Engineer, Wright Laboratory Special Projects, WPAFB, OH
- Senior Project Engineer, Flight Control, F-22 SPO, AFLCMC, WPAFB, OH
- Senior Project Engineer, Integrated Vehicle Control System (IVCS), National Aerospace Plane (NASP) JPO, AFLCMC, WPAFB, OH
- Lead Stability and Control/Flying Qualities Engineer, B-2 Systems Program Office, WPAFB, OH
- Group Leader, Stability and Control Group, Flight Stability and Control Branch, WPAFB, OH
- Aeronautical Engineer, Gulfstream Aerospace, Bethany, OK
- Flight Test Engineer, Boeing Commercial Aircraft Company, Seattle, WA

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