CARL SMITH

DAYTON AEROSPACE, INC.

PROFILE

Senior business and technical leader with over 30 years of demonstrated results holding global leadership positions in high performance electronics for US military and international Head of State and military aircraft. Strong business acumen demonstrated leading a large, complex and technology driven business, delivering affordable innovation through repurposing, technology insertion and strategic partnering. Specialized expertise in product line strategy, investment planning, design, manufacture, program management and field sustainment of high performance infrared (IR) and radio frequency (RF) systems.

PRINCIPAL AREAS OF EXPERTISE

Program Management & Execution

Led large complex business unit responsible for vision, strategy, profit and loss (P&L), new business capture, program execution, customer interface, profitable growth, investment planning, research and development (R&D), staffing and team development. As leader of Aircraft Survivability business unit, positioned company as world leader in infrared countermeasure (IRCM) system capability with $800M/year in domestic and international sales on 1,400+ aircraft worldwide. Acquired $6.4B in business unit awards—with $1.1B in a single year versus the $705M target. Established profitable growth, beating sector profit margin average by 60-90% annually. Developed next generation products, completed integration, flight test, environmental qualification, live fire test and transitioned advanced self-protection systems to production. Established international depots in UK and Australia to support products and spiral upgrades. Developed and maintained strategic alliances with supply chain and other original equipment manufacturers (OEMs) for affordability, schedule and quality management.

Engineering & Technical Leadership

Led Engineering & Manufacturing (E&M) organizations of 2,500 employees across five locations. Responsible for the division's engineering resources and successful execution of development programs with systems, digital, analog, microwave/radio frequency (RF), power supply, software, opto-mechanical, and test engineering personnel. Led Engineering's enabling technology and Manufacturing's capability roadmap creation to address customer mission gaps and affordability, differentiate products and support time-to-market strategies. Responsible for ensuring required methodology and standardized tools and processes were selected/developed, documented and communicated to the E&M disciplines to effectively meet contractual requirements. Led multi-disciplined engineering team for system architectures, technical compliance, customer interface, earned value, and technical problem solving. Established performance and productivity metrics, leading indicators, training, tools, knowledge management, hiring, capabilities integration across division and site consolidation.

Manufacturing Yield and Cycle Time Improvement

Responsible for all IRCM, RFCM, and targeting products manufacturing to annually support 400 programs—exceeding $600M/year sales. Proven ability to assess system chain analysis to improve design margin, supplier delivery and production yield. Responsible for surface mount technology development (materials, processing, components). Led materials and processing efforts for composites, adhesives, solders, plating and encapsulation materials. Drove continuous process improvement, value stream mapping and automation initiatives, reducing opto-mechanical assembly cycle time and labor by >60%, and improving power supply and microelectronics yield to >95%.

DAYTON AEROSPACE

4141 Colonel Glenn Hwy.
Suite 252
Dayton, Ohio 45431

P: (937) 426.4300

E: carlrsmith13@gmail.com

EDUCATION

MBA, Research & Engineering Management
Illinois Institute of Technology

BS, Mechanical Engineering
Michigan Technological University

The General Manager Program (TGMP)
Harvard University

Six Sigma Greenbelt
University of Michigan

Complex Project Management
Massachusetts Institute of Technology

Finance for Executives
University of Chicago

Capture Strategy
University of Chicago

Leadership Development, Strategy & Program Management
Northrop Grumman

KEY POSITIONS

Vice President, Aircraft Survivability Business Unit
Northrop Grumman

VP, Engineering & Manufacturing
Northrop Grumman, Central Region

Director, RF Combat & Information Systems Engineering Management
Northrop Grumman

Director, Falcon Edge Engineering Project Management
Northrop Grumman

Section Manager, MPM System Technology and Vacuum Electronics
Northrop Grumman

WORK HISTORY

Associate | Dayton Aerospace, Inc.
2018-present, *Dayton, OH*

Provide government and industry customers senior-level support in business area strategy, product line development, investment planning, technology insertion, proposal generation/reviews, program execution, performance improvement/metrics, risk and opportunity management, problem solving/studies, supplier management, customer relationship building, organizational leadership development, design and manufacturing of high performance electronics and electro-optical products, product sustainment, and international business/ITAR.

Vice President, Aircraft Survivability Business Unit| Northrop Grumman Corporation (NGC)
2008-2018, *Rolling Meadows, IL*

Led $800M business unit and established NGC as the global leader in infrared (IR) missile detection and infrared countermeasure (IRCM) system solutions for US and international Head of State and military aircraft. Directed 500+ personnel in the US, UK and Australia while executing domestic and international sales on more than 200 contracts. Responsible for the business unit's vision, strategy, P&L, growth, new business capture, and development of a family of open architecture, multi-spectral, situational awareness (SA) and self-protection system solutions—all integrating the voice of the customer. Established scalable product line solution set based on system performance, size/weight/power (SWaP), affordability and platform mission requirements. Also, responsible for competitive intelligence and ultimate product offering features and performance trade-offs, cost and time-to-market. Established integral multi-functionality as part of threat detection and defeat solutions. Defense suites included digital receiver/exciter radio frequency (RFCM) and IRCM, situational awareness (SA), data links, nontraditional signals of interest (NTSOI) and auto reroute capability to defeat emerging threats. Responsible for entire product life cycle from concept development, technology development, product design, integration and test, environmental qualification, flight test, live fire, initial low rate production (LRP), full rate production (FRP), and logistics/sustainment. Products included: Advanced Threat Warner (ATW), Army Common Infrared Countermeasures (CIRCM), Department of Navy Large Aircraft Infrared Countermeasures (DoN LAIRCM), and the US Air Force (USAF) Large Aircraft Infrared Countermeasures (LAIRCM).

Vice President, Engineering & Manufacturing Central Region | NGC
2005-2007, *Rolling Meadows, IL*

Led Engineering and Manufacturing (E&M) organizations at Rolling Meadows, IL; San Jose, CA; Garland, TX; Tempe, AZ; and Huntsville, AL. Responsible for the leadership of 2,500 employees and 400+ programs and manufacture of $600M in annual sales of miniaturized digital, radio frequency, opto-mechanical electronics and "black box" avionics. Responsible for the department's knowledge management and growth in expertise in a highly technical, dynamic environment including hiring, personnel training/development, and tools development/selection and capital maintenance. Development programs included system, software, digital, analog, microwave/radio frequency (RF), power supply, opto-mechanical, test, logistics and engineering management personnel. Led the department in Engineering's enabling technology and Manufacturing's capability roadmap creation to support four business areas' cost and time-to-market strategies. Responsible for ensuring required methodology and standardized tools and processes were selected/developed, documented and communicated to the E&M disciplines to effectively meet industry and contractual requirements. Proven track record of continuous process improvement—improving yield and cycle time resulting in cost reductions and enhancing reliability performance.

Director, RF Combat & Information Systems Engineering Project Management | NGC
2003-2005, *Rolling Meadows, IL*

Responsible for the design, development, integration and production transition of the division's RF Electronic Warfare (RFEW) programs including F-16 Block 60 Falcon Edge, Joint Strike Fighter (JSF), MMA EWSP, F-15 Korea, F-15 Japan, ALQ-135, ALQ-155, ALQ-162, 4th Generation Advanced Technique Generator (ATG) and various restricted programs. Also served as the lead for $130M subcontract work with integrated microwave assemblies (IMAs) for the Falcon Edge program. Worked directly with Terma-Denmark on subcontract requirements supporting MMA EWSP and Falcon Edge. Responsible for the system solution/architecture, technical compliance of engineering requirements on contracts, technical customer interface, requirements and key performance parameter (KPP) tracking, risk and opportunity management, earned value management (EVM) (cost/schedule) of multi-disciplined technical team, staffing requirements, and program technical problem solving.

Director, Falcon Edge Engineering Project Management | NGC
2000-2003, *Rolling Meadows, IL*

Responsible for the day-to-day technical and program performance of multi-disciplined team of 200+ engineers across five locations during the design and development phase. As part of the $270M contract, designed, integrated, tested and transitioned to production the highly integrated state-of-the-art F-16 Block 60 Integrated Electronic Warfare Suite performing radar warning, electronic intelligence, targeting and self-protection functions. The system architecture was supported by solid state technology, traveling wave tubes, RF assemblies, spiral and horn antennae, traditional and complex digital printed wiring board assemblies for size and weight reduction, phase-matched cables, and 500,000 lines of software code in the 23 LRU system solution. Served as the Lockheed Martin Aerospace and United Arab Emirates (UAE) AFAD technical interface, as well as, business and technical interface to Northrop Grumman executive management. Responsible for earned value (cost, schedule) of technical team. Established and tracked risk and opportunities to ensure contractual compliance.

Section Manager, MPM System Technology and Vacuum Electronics | NGC
1994-2000, *Rolling Meadows, IL*

Led multi-disciplined team of 50+ engineers including multiple PhDs that developed 2-40 GHz Microwave Power Module (MPM) product family and MPM based transmitter product line for electronic warfare, radar and communications applications. The integration of high power, broadband traveling wave tubes with low noise solid state amplifiers and power conditioning circuitry resulted in a miniaturized, highly efficient amplifier. Led team of solid state, traveling wave tube, power supply, mechanical and RF engineers that received three R&D 100 awards and two Flight International awards for technological advancement. Responsible for MPM technology roadmaps, independent research and development (IRAD) and contract research and development (CRAD). Manager of organization responsible for the research, design and development of various vacuum electronic devices. Led USAF Manufacturing Technology program ($5.4M) for low cost MPM production.

Prior to 2000

- Section Manager, MPM System Technology and Vacuum Electronics, NGC, *Rolling Meadows, IL*
- Unit Manager, Advanced Mechanical Design & Technology, NGC, *Rolling Meadows, IL*
- Senior Design Engineer/Engineering Specialist, NGC, Roll*ing Meadows, IL*

AWARDS

- Col Anton Brees Lifetime Achievement Award, Association of Old Crows (2009)
- Technology Award, Association of Old Crows (1998)
- President's Leadership Award, NGC (1998)
- Technology Award, Association of Old Crows, Windy City Chapter (1992)
- R&D 100 Award: 2.5-18 GHz Ultra-Wide Band Microwave Power Module (1997), *R&D Magazine*
- R&D 100 Award: C-Band Microwave Power Module (1994), *R&D Magazine*
- R&D 100 Award: Tri-Service 6-18 GHz Microwave Power Module (1993), *R&D Magazine*

PATENTS

- Printed wiring board structure with integral metal matrix composite core (6,340,796 B1)
- Printed wiring board structure having continuous graphite fibers (6,207,904 B1)
- Graphite aluminum metal matrix composite microelectronic package (5,998,733)
- Method for plating metal matrix composite materials with nickel and gold (5,730,853)