

## BIOGRAPHY

**David D. Foreman**

**Vice President, Munro & Associates, Inc.**



David is a principal architect of the Munro Design Profit®/Lean Design® Process. He is an expert in the application of lean manufacturing, materials management, process planning, and plant layout. David has worked extensively with clients to quantify and optimize product designs' impact on development and manufacturing costs. This has driven his efforts to develop methods and tools to provide complete lifecycle cost analysis capability from the earliest stages of development through deployment.

David received the 1994 "Community Affairs Award" from the Institute of Industrial Engineers for his work in the field of MTM studies and process development. David regularly shares his expertise by speaking at conferences and universities on the topics of *Design for Producibility*, *Total Life Cycle Costs*, *Manufacturing Readiness*, *product Innovation*, *Lean Design* and *Ergonomics*. Additionally, David has been called upon as an authority by leading industry magazines such as *Crain's Business Digest*, *Material Handling Management*, *Automotive Industries*, *Automotive Interiors*, and *IIE* and is a Member of SAE, SME and the NDIA (National Defense Industrial Association).

David participated on the National Defense Industry Association (NDIA) Systems Engineering Policy Subcommittee and the Manufacturing Readiness Level (MRL) Working Group under the Joint Defense Technology Panel. David is currently on the Architectural Working Group for Engineered Resilient Systems (ERS) under the Office of The Secretary of Defense (OSD).

David has worked on programs for several OEM's and Tier .5, 1, 2 and 3 suppliers worldwide in industries including defense, small aircraft, commercial aircraft, automotive, appliance, medical, specialty manufacturers, and utility vehicles. Some of those clients include ATK, KAMAN Aerospace, Raytheon Missile Systems, Lockheed Martin, Medtronic, DRS, Boeing Commercial, Embraer, Daimler Trucks, The Oldenburg Group, Oxford Automotive, DICKEY-john, Air International, Visteon, Yanmar Agriculture Equipment, Ford Motor Company, Bombardier, LG, Abbott Vascular, Samsung, and more... David is also actively involved with supporting programs for Operationally Responsive Space (ORS), ERS, and Adaptive Vehicle Make.

With hands-on experience in lean manufacturing, industrial engineering and computer science, David helped to create the industry leading Design Profit software for Munro and Associates. A full career of varied experience allows David to continue helping companies realize their profit potential. However, Lean Design and Manufacturing are only the start of David's expertise as he has also developed Design Profit's TRL, MRL and SRL tools which can reap dramatic savings for customers who need to know producibility of products early in the R&D process. Therefore validating concepts, enhancing product quality, lowering worker compensation costs, and increasing profitability.

David not only provides consulting services. As Vice President of Munro & Associates, he oversees many aspects of the business operations including Global Partners, Software Development, IT, ISO, Defense Contract Management, and FSO responsibilities, just to name a few. For the last 25 years David has played a vital role in the growth of Munro & Associates, Inc.

David joined Munro in 1994 from Manns & Kinney, an industrial engineering and ergonomics software developer and consulting firm. From 1986 to 1990 David proudly served in the United States Army where he was in the Signal Core and assigned to the 112<sup>th</sup> Military Intelligence Brigade located at Fort Devens, Massachusetts. While serving in the military David received the Army Expert Shooting Badge, the Army Good Conduct Medal, the Army Achievement Medal, and the Army Commendation Medal. David attended the United States Army Soldier Support Institute in Indianapolis where he earned his degree as a programmer analyst.

## Some of David's major consulting program activities include:

Currently on the Engineered Resilient Systems (ERS) Architectural Working Group –ERS is under the Department of Defense, Science and Technology portfolio. The objective is to mitigate new and emerging technologies thru science and engineering.

Currently supporting Operationally Responsive Space (ORS) – ORS Office is working with the broader space community to provide “assured space power focused on timely satisfaction of Joint Force Commanders’ needs.” The end state of the ORS concept is the ability to address emerging, persistent, and/or unanticipated needs through timely augmentation, reconstitution, and exploitation of space force enhancement, space control, and space support capabilities.

Supported client working under DARPA's Adaptive Vehicle Make (AVM) - AVM addresses revolutionary approaches to the design, verification, and manufacturing of complex defense systems and vehicles.

Manufacturing Facility, Heavy Equipment – Program manager overseeing business transformation. Responsible for managing teams for plant layout and process improvements, wall process, costing, and plant consolidation. Member of the customer's advisory board reporting directly to the CEO.

National Center for Manufacturing Sciences (NCMS) – Conducted a manufacturing readiness assessment of multiple substrate surface treatments to measure the bond integrity of the substrate to carbon fiber for a major Automotive OEM and Tier 1 Materials supplier.

National Center for Defense Manufacturing and Machining (NCDMM) – Under contract to NCDMM developed a manufacturing system for Letterkenny Army Depot for a major defense system.

ManTech DMS&T (Contract FA8650-10-C-5702) – Producibility Modeling during the Acquisition Process for Cost and Complexity Reduction, co-authored and developed new tools to expand the capability and awareness of producibility modeling tools to improve affordability and producibility (AP) for defense weapon systems.

Bowe Bell & Howell – Designed a new production system and phase out plan for current and new model year scanner system (*see attached client testimonial*)

Bell Helicopter – Conducted a lean manufacturing assessment of the fabrication and tooling plant to identify waste and areas for improvement

New Piper Aircraft – Conducted lean assessment of the Meridian and Malibu aircrafts to identify both process and design driven waste; trained Piper engineers in Lean Design®; facilitated team efforts in calculating recurring and non-recurring costs, and developed manufacturing assembly processes for the New Piper Jet

RICON Corporation – Trained executive management team in Lean Manufacturing techniques; oversaw plant wide implementation of JIT, KANBAN and related lean improvement initiatives (*see attached client testimonial*)

Major OEM Import – Provided training and technical support for implementing Lean Design®

Club Car/Ingersoll-Rand – Developed a major all new vehicle assembly line; responsibilities included manufacturing strategy, process plans, line layout, tools, display equipment, ergonomics, RFP development, supplier qualification, LRIP, and much more (*see attached client testimonial*)

Cirrus Design – Planned and implemented lean manufacturing to support doubling of the production rate; supported improvements in composites fabrication, assembly, and paint operation (*see attached client testimonial*)

ITT Automotive/Valeo – Developed improved assembly processes and material handling devices for a series of major automotive modules

Daimler Chrysler – Provided extensive technical support for product commonality, competitive teardown and benchmarking analysis

Land Rover – Analyzed vehicle quality issues derived from port of entries used for developing comprehensive engineering plans for vehicle improvements.