Providing Systems and Solutions to Help Vermont Manufacturers Innovate, Plan, Perform and Grow
How VMEC Assists Companies and Organizations

**OPERATIONAL EXCELLENCE and CONTINUOUS IMPROVEMENT ▶▶▶▶**
Cost reduction and operational excellence are among the top needs we hear from manufacturers. VMEC Advisors are master trainers, coaches and highly experienced implementers in all aspects of LEAN Manufacturing and Administrative / Office LEAN. VMEC can recommend and support systems and solutions to identify and systematically drive out waste in all of its forms, transform office/administrative and plant processes, solve problems, lower costs, improve quality, increase customer and employee satisfaction, manage talent and train employees, and grow a culture of continuous improvement. VMEC Advisors focus on how to transform and continuously improve companies and organizations, helping them implement innovative strategies that positively impact top and bottom lines of their enterprises, enabling the achievement of new levels of success.

We help leaders plan and implement winning strategies to create and sustain a profitable future. We understand all that’s required to grow revenues, profits and increase enterprise value.

**INNOVATION, GROWTH and TECHNOLOGY ACCELERATION ▶▶▶▶**
Vermont Manufacturers are asking for help to develop new products and increase sales to new markets. Spanning the innovation continuum, VMEC can help plan, accelerate and implement strategies to integrate advanced manufacturing technologies into profitable new Products & Services, Processes and Business Models for systemic excellence and sustainable growth. VMEC was an early Innovation Engineering™ “pioneer” (2006) and is a licensed member of the growing global Innovation Engineering Network of practitioners and 20+ Universities and Colleges now offering this new scientific discipline and field of academic study that is grounded in over 35 years of real world projects.

The VMEC Team includes 5 certified Innovation Engineering Black Belts who help our clients address their innovation challenges - by advancing innovation CREATIVITY, developing a world class innovation CAPABILITY and growing an innovation CULTURE. Our Innovation Engineering Black Belts can train and educate enterprise leaders and their staff and also lead and coach innovation projects using a variety of intelligent tools, methods and systems to increase Speed of Innovation and Speed to Market (up to 6X), while decreasing Risk associated with innovation (30-80%).

**WORKFORCE STRATEGIES and TALENT DEVELOPMENT ▶▶▶▶**
Developing a highly skilled workforce is critical to Vermont’s manufacturers. VMEC offers a variety of networking and training opportunities through its basic and advanced public and on-site Workshops, Vermont Manufacturing Forums held at local plants, and focused Special Events. These exceptional offerings are designed to inform, challenge and train attendees about how they might improve their operations, accelerate profitable growth, and gain competitive advantage through best practices in advanced talent management and investments in people.

**RESOURCES for VERMONT MANUFACTURERS ▶▶▶▶**
Manufacturers need quick access to information and resources for wide-ranging needs. Currently comprised of 12 highly experienced professionals, The VMEC Team has a total combined experience of over 327 years in all aspects of manufacturing and enterprise growth. And when necessary, we have ready access and established relationships with State of Vermont and private resources, plus more than 1,500 NIST MEP National Network consultants and numerous other resources across the nation through VMEC’s longstanding affiliation with federal stakeholder partner, the Hollings National Institute of Standards & Technology (NIST) Manufacturing Extension Partnership (MEP) within the U.S. Department of Commerce. Companies can also access a wealth of valuable information and resources through the VMEC website, newsletters, events, certification programs and connections to numerous local, regional and national resources.

Cover photos courtesy of Mack Molding, Superior Technical Ceramics Corporation, and Omega Optical.
Manufacturing is Critical to Vermont’s Economy

Jobs: In 2014, manufacturing employed about 32,000 people, or 10.4% of Vermont’s total employment population of about 306,700. This is a greater proportion than the United States overall at 9%. Source: U.S. Bureau of Labor Statistics

Wages: In 2013, manufacturing paid average annual wages that were 31% higher ($53,978/yr) than the state average wage ($41,123/yr). Source: Economic Modeling Specialists International

State GDP: In 2013, manufacturing accounted for about $3.3 billion or 12% of the state’s gross domestic product (GDP). Source: Economic Modeling Specialists International

Exports: In 2012, manufactured goods made up almost two-thirds (65.2%) of all Vermont exports, or about $2.8 billion in total value. Source: U.S. Census Bureau Foreign Trade Division

Economic Multiplier Impact: Every $1 in manufactured goods generates an estimated $1.32 worth of additional economic activity—the highest of any other economic sector. Source: Bureau of Economic Analysis, 2012

Employment Multiplier: Each manufacturing job supports an additional 1.6 jobs, and each “Advanced Manufacturing” job supports as many as 4.9 other jobs. Source: “Local Multipliers,” American Economic Review, Papers and Proceedings 100

Research & Development: Manufacturers in the U.S. perform two-thirds of all private sector research and development in the nation, driving more innovation than any other sector. Source: National Science Foundation

Partial VMEC Impact

Jobs created that otherwise would not have existed: 109*
Last three years: 409

Jobs retained: 114* / Last three years: 439

Total jobs created (direct, indirect and induced): 578** that paid a total of $26.4 million*** in employer wages and benefits

Client investment in modernization: $11,844,000*
Last three years: $82,558,000

Cost savings: $10,877,000** / Last three years: $22,868,000

Increased and retained sales: $57,453,000***
Last three years: $219,094,000

Additional labor compensation: $56,000,000****

Total value added (gross state product): $62,860,000*****

*Based on company-reported data from April 2011 through March 2014.

**Client-reported impact as a direct result of VMEC assistance.

***Results of input-output analysis (IMPLAN modeling) based on results from VMEC clients surveyed.

Over the past 3 years, every $1 spent by clients on VMEC assistance returned an average on that investment of $190.*

VMEC Delivers Results
Average ROI of 190:1

890 MANUFACTURERS SERVED
VMEC served more than 890 of Vermont’s approximately 1,200 manufacturers from January 1996 through June 2014. VMEC served 91 manufacturing companies from July 2013 through June 2014.

1,062 EMPLOYEES TRAINED
More than 1,062 manufacturing employees from 74 companies participated in public workshops and onsite manufacturing training in Vermont from July 1, 2013 through June 30, 2014.

167 VERMONTERS AT FORUMS
Approximately 167 manufacturing employees from 33 companies participated in five Vermont Manufacturers Forums at various plant sites of companies committed to continuous improvement, Lean manufacturing, and innovation-led growth.
Challenges to Manufacturing Growth in Vermont

Three years of surveys (2011–2013) of VMEC Vermont manufacturing clients conducted by a third party under contract to NIST MEP revealed that their highest ranking concerns include: staying cost competitive, finding skilled workers, developing innovative and competitive new products, expanding into new markets, and managing partners.

Responses to the question: “What do you see as your company’s three most important strategic challenges?”

VMEC’s Total Impact on Vermont’s Economy

Includes the direct client impact reported by clients via third-party survey, the indirect impact generated when clients’ firms increase their purchases from suppliers, and the induced impact caused by increased household expenditures generated by direct and indirect effects. *Reported impacts are modeled using IMPLAN 3.0 Software and Vermont 2011 State data package.

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The VMEC Board is an elected board of experienced manufacturers and other leaders with manufacturing interests who serve without compensation for a minimum of two years. The board works with the center’s director to help set basic policies and directions to enable VMEC to fulfill its mission.