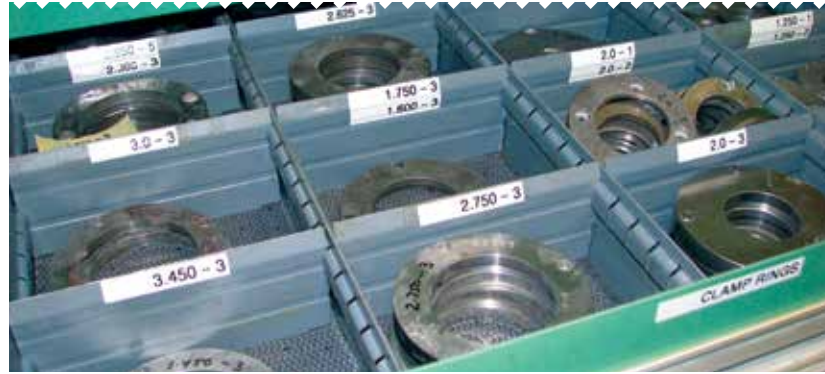


20⁺ YEARS



*Proudly Assisting
Vermont Enterprises
Since 1995*

VERMONT MANUFACTURING EXTENSION CENTER
2014 IMPACT REPORT



**Providing Systems and
Solutions to Help Vermont
Manufacturers Innovate,
Plan, Perform and Grow**

2014



LEARN MORE: vmec.org

A CLOSER LOOK AT VMEC

The Vermont Manufacturing Extension Center (VMEC) has operated statewide as a not-for-profit Center since 1995, collaborating with public and private partners in business, government and education to bring world-class assistance and resources to Vermont manufacturers and other enterprises of all sizes, helping them overcome ever-changing challenges, become more competitive and grow their profitability.

A valuable local *Resource* and *Trusted Advisor*, VMEC has a 20+ year track record of achieving measured results and quantified impact for its clients, with a high average Return-On-Investment (ROI) reported by clients as a *direct result* of VMEC assistance.

The VMEC Team brings expertise in consulting, coaching, hands-on implementation, continuing support, and training & education for leaders and workers – helping them to innovate, plan, perform and accelerate profitable growth in ways that drive increasing enterprise value.

The VMEC Team provides proven *systems* and *solutions* focused on *Strategies, Processes, Products, Technologies* and *People*. ■

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.

Trusted Advisor, Consulting, Coaching and Mentoring

Lean Manufacturing

Administrative/Office Lean

Quality Systems

Cost Reduction

Strategic Planning and Deployment

Innovation Engineering for Profitable New Markets

Industrial Marketing and Branding

Lean Product Development

Expotech for Global Engagement

Public & Onsite Workshops

VT Manufacturers Forums

Leader Development

Vermont NIST MEP National Network Affiliate

www.vmec.org

Value-added Partnerships and Third Parties

Vermont CoreValue Agency

Vermont Manufacturing: The Facts

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****

*This data reflects the results of VMEC client projects from July 2013 through June 2014. The data is from formal surveys conducted by a third party under contract to the National Institute of Standards and Technology (NIST), Hollings Manufacturing Extension Partnership (MEP). Clients surveyed represent only 26 percent of all Vermont clients served by VMEC during the period. *Client-reported impact as a direct result of VMEC assistance. **Results of input-output analysis (IMPLAN modeling) based on results from VMEC clients surveyed.*

**VMEC Delivers Results
Average ROI of 190:1**

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

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

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

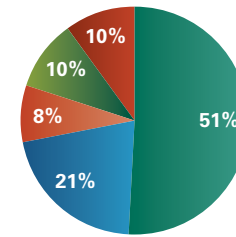
More than 1,062 manufacturing employees from 74 companies participated in public workshops and onsite manufacturing training in Vermont from July 1, 2013 through June 30, 2014.

167

VERMONTERS AT FORUMS

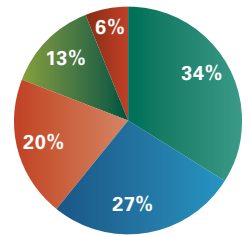
Approximately 167 manufacturing employees from 33 companies participated in five Vermont Manufacturers Forums at various plant sites of companies committed to continuous improvement, Lean manufacturing, and innovation-led growth.

Partial Impact of VMEC: July 2013 - June 2014



Client-reported Investment in Modernization Over the Past Year: \$11,844,000

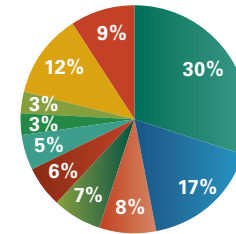
- Plant & Equipment: 51%
- New Products or Processes: 21%
- Information Systems and Software: 8%
- Workforce Practices and Employee Skills: 10%
- Other: 10%



Size of Manufacturing Firms Served by VMEC (by # of employees)

- 1-9: 13%
- 10-50: 27%
- 51-100: 20%
- 101-500: 34%
- 500+: 6%

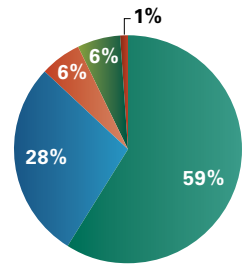
Manufacturing in Vermont



Distribution of Manufacturing GDP in Vermont

VT 2012 MFG GDP ~ \$3.17 billion

- Computers: 30%
- Food: 17%
- Machinery: 8%
- Transportation: 7%
- Electronics: 6%
- Fabricated Metal: 5%
- Wood: 3%
- Plastics: 3%
- Other Durable Goods: 12%
- Other Non-durable Goods: 9%



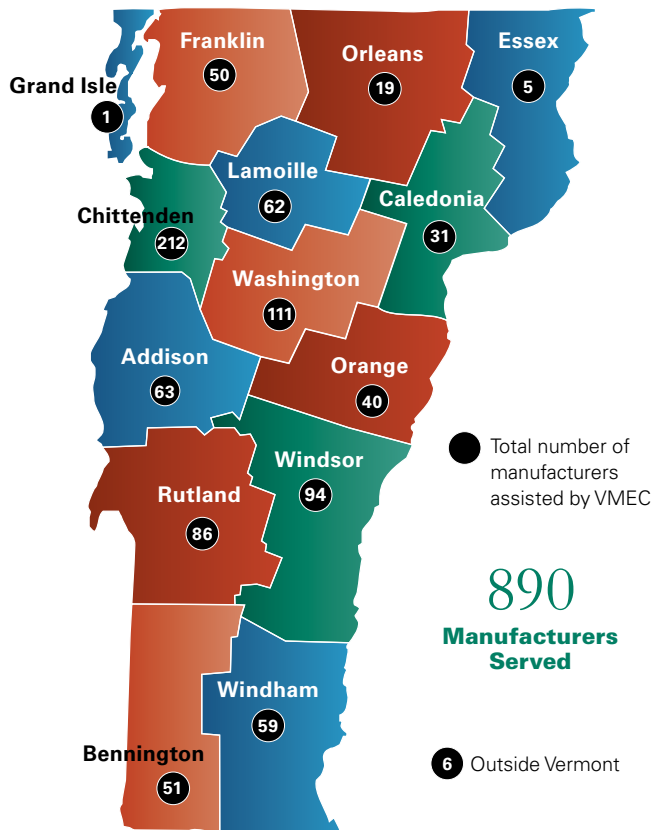
Distribution by Size of Vermont Firms

VT 2012 for 1,011 SMEs

- 1-9: 59%
- 10-49: 28%
- 50-99: 6%
- 100-499: 6%
- 500+: 1%

Source: 2012 Bureau of Economic Analysis, U.S. Census Bureau

**VMEC Assistance by County
January 1996–June 2014**



Vermont Manufacturing Extension Center

MAIL: P.O. Box 12, Randolph Center, VT 05061

ph 802.728.1432 / fx 802.728.1456 / vmec.org

OFFICE: Vermont Tech Enterprise Center: 1540 Vermont
Route 66, Suite 103, Randolph, VT 05060

VMEC's Total Impact on Vermont's Economy'

\$1,537,648,000
January 1996–June 2014

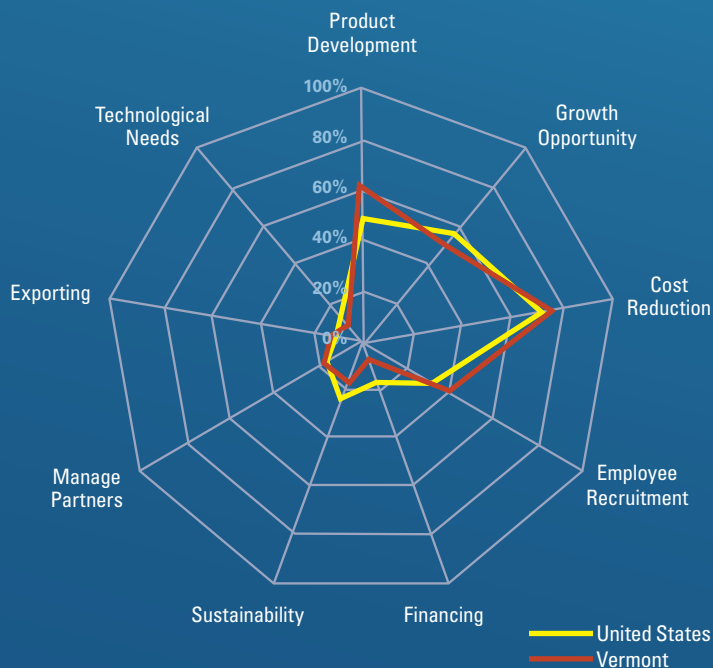
\$136,737,000
July 2013–June 2014

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. **1** Reported impacts are modeled using IMPLAN 3.0 Software and Vermont 2011 State data package.

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?"



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BOB ZIDER
Director/CEO, VMEC

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.

