HOW VMEC ASSISTS COMPANIES AND ORGANIZATIONS

OPERATIONAL EXCELLENCE and CONTINUOUS IMPROVEMENT

Ongoing continuous improvement, cost reduction strategies and operational excellence remain among the top needs we hear from manufacturers. 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.

- TRUSTED ADVISING & EXECUTIVE COACHING
- QUALITY SYSTEMS
- LEAN MANUFACTURING
- COST REDUCTION
- ADMINISTRATIVE LEAN
- SIX SIGMA

RESOURCES for VERMONT MANUFACTURERS

Manufacturers need quick access to information and resources for wide-ranging needs. The VMEC Team is comprised of a highly experienced group of professionals with many years of combined experience in all aspects of manufacturing and enterprise growth. 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.

- VERMONT NIST MEP NATIONAL NETWORK AFFILIATE
- VALUE-ADDED PARTNERSHIPS & EXPERTS
- VERMONT COREVALUE AGENCY
- WWW.VMEC.ORG

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 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%).

- STRATEGIC PLANNING
- INNOVATION ENGINEERING
- MARKETING & BRANDING
- PRODUCT DEVELOPMENT
- EXPORT SALES
- SUPPLY CHAIN

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.

- WORKSHOPS & TRAINING
- FORUMS & NETWORKING
- WORKFORCE & LEADER DEVELOPMENT

Photos courtesy of North Hartland Tool Corporation, Twincraft Skincare, WallGoldfinger and GW Plastics
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 was a greater proportion than the United States overall at 9%. *Source: U.S. Bureau of Labor Statistics*

- **Wages:** In 2014, manufacturing paid average annual wages that were 29% higher ($55,290/yr) than the state average wage ($43,017/yr). Total manufacturing wages paid in 2014 exceeded $1.725 billion. *Source: VT Department of Labor, ELMI Division*

- **State GDP:** In 2014, manufacturing accounted for about $2.9 billion or 10% of the state’s gross domestic product (GDP). *Source: US Bureau of Economic Analysis*

- **Exports:** In 2014, manufactured goods exported by Vermont companies made up almost 71% of all Vermont exports, or about $2.57 billion in total value. *Source: US Census Bureau Foreign Trade Division*

- **Economic Multiplier:** Every $1 in manufactured goods generates an estimated $1.37 worth of additional economic activity—the highest of any other economic sector. *Source: Bureau of Economic Analysis, Industry Input-Output Tables (2013)*

- **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 & 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:** 81*
  - Last three years: 397
- **Jobs retained:** 90**/ Last three years: 299
- **Total jobs created (direct, indirect and induced): $10** that paid a total of $21.6 million** in employer wages and benefits
- **Client investment in modernization:** $16,540,000*
  - Last three years: $53,243,000
- **Cost savings:** $8,250,000**/ Last three years: $23,699,000
- **Increased and retained sales:** $104,466,000**
  - Last three years: $223,292,000
- **Additional labor compensation:** $31,500,000**
- **Total value added (gross state product):** $40,240,000**

This data reflects the results of VMEC client projects from July 2014 through June 2015. 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 46% 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 216:1

Over the past 3 years, every $1 spent by clients on VMEC assistance returned an average on that investment of $216.*

*Based on company-reported data from April 2012 through March 2015.

895 MANUFACTURERS SERVED

VMEC served more than 895 of Vermont’s approximately 1,200 manufacturers from January 1996 through June 2015. VMEC served 91 manufacturing companies from July 2014 through June 2015.

948 EMPLOYEES TRAINED

More than 948 manufacturing employees from 59 companies participated in public workshops and onsite manufacturing training in Vermont from July 1, 2014 through June 30, 2015.

155 VERMONTERS AT FORUMS

Approximately 155 manufacturing employees from 42 companies took part in four 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

VMEC client surveys completed October 2014 – September 2015 by an independent third party under contract to NIST MEP, revealed that their five highest-ranking strategic challenges included:

- 75% Ongoing Continuous Improvement/Cost Reduction
- 56% Product Innovation / Development
- 48% Growth Opportunities
- 42% Employee Recruitment & Retention
- 19% Sustainability in Products & Processes

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

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.

VMEC’S TOTAL IMPACT ON VERMONT’S ECONOMY

$1,656,085,000 January 1996 – June 2015

$118,437,000 July 2014 – June 2015

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.

VMEC ASSISTANCE BY COUNTY

JANUARY 1996 – JUNE 2015

<table>
<thead>
<tr>
<th>County</th>
<th>Number of Manufacturers Assisted</th>
<th>Total Manufacturers Assisted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Isle</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Orleans</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Essex</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Chittenden</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Lamoille</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>Caledonia</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Washington</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Addison</td>
<td>111</td>
<td>111</td>
</tr>
<tr>
<td>Orange</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Rutland</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td>Windham</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>Bennington</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Outside VT</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

VMEC’S TOTAL IMPACT ON VERMONT’S ECONOMY

$1,656,085,000 January 1996 – June 2015

$118,437,000 July 2014 – June 2015

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.