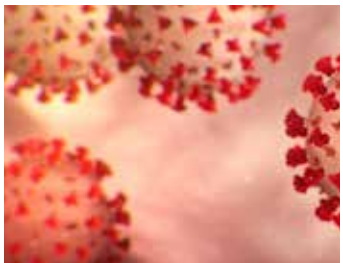




*Vermont's Trusted Advisor and
Go-To Resource for Manufacturing*

2020 IMPACT REPORT

• SINCE 1995 •



PART OF THE  MEP
National
Network™
OFFICIAL REPRESENTATIVE

**VERMONT
TECH**
Small college. **Big outcomes.**
VMEC HOST SINCE 1995

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

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OUR MISSION: TO STRENGTHEN AND EMPOWER VERMONT MANUFACTURERS



CLIENT PROFILE

AMERICAN MEADOWS

Lean Pull System Improves Delivery

American Meadows, Inc. (AMI) is in the business of growth. Founded in 1980, AMI offers only the best seeds and bulbs to gardeners of wildflowers, perennials and vegetables. With growers throughout the U.S. and Europe, and inventory in four warehouses in Vermont, New Jersey and Utah, they have become one of the most respected online retailers in the industry.

AMI has worked with VMEC for many years to implement Lean strategies in their administrative and manufacturing processes. All employees go through Lean 101 training, helping them eliminate waste, improve delivery and the customer experience, and ultimately increase the bottom line. Recently, VMEC helped AMI with a Lean Pull System. The analysis triggered changes to their inventory levels, reorder points as well as replenishment that increased capacity and shipped orders more quickly to meet customer demand.

“VMEC was able to bring their experience with other companies to bear and proposed a pull system in our seed warehouse that enables us to increase capacity in our production and fulfillment process.”

— MIKE ALLAN, AMERICAN MEADOWS

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 25+ 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 is Vermont’s go-to trusted resource for expertise in manufacturing consulting, coaching, hands-on implementation, continuing support, and training for leaders and workers. We help clients 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.

Multiplier Impacts of Manufacturing



Economic Multiplier

Every \$1 in manufactured goods generates an estimated **\$1.82** worth of additional economic activity, the highest of any other economic sector. If the entire manufacturing and supply chain is included, every \$1 spent in manufacturing adds another **\$3.60** in economic activity.



Employment Multiplier

Each manufacturing job supports an additional **four jobs** elsewhere.

Source: National Association of Manufacturers

VMEC Impacts: Partial Impact of VMEC in Vermont

- ▶ Jobs created that otherwise would not have existed: **39***
Last three years: **303**

- ▶ Jobs retained: **247*** / Last three years: **906**

- ▶ Total jobs created – direct, indirect and induced: **621****
These jobs paid a total of **\$29.2 million**** in employer wages and benefits

- ▶ Client investment in modernization: **\$7,659,000***
Last three years: **\$52,108,000**

- ▶ Cost savings: **\$17,331,000*** / Last three years: **\$51,766,000**

- ▶ Increased and retained sales: **\$36,657,000***
Last three years: **\$160,560,000**

- ▶ Additional labor compensation: **\$43,531,000****

- ▶ Total value added (gross state product): **\$48,703,000****

*This data reflects the results of VMEC client projects from July 2019 through June 2020. 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 42% 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.

HOW VMEC ASSISTS ENTERPRISES

Strategic Business Management and Planning, Operational Excellence, and Continuous Improvement

Strategic business management & planning, operational excellence, continuous improvement, and cost reduction strategies 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.

- **Trusted Advising and Executive Coaching**
- **Strategy Development and Deployment**
- **Lean Manufacturing**
- **Administrative Lean**
- **Cost Reduction**
- **Quality / Management Systems & Certifications**
- **Six Sigma**
- **Supervisor Skills / Training Within Industry**

Workforce Strategies and Talent Development

Developing and retaining a highly skilled workforce are 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 virtually and at local plants, and focused Special Events.

- **Workshops and Training (Remote & On-site Delivery)**
- **Forums (Remote & On-site) and Networking**
- **Workforce and Leader Development**
- **Online Innovation Engineering™ Courses**

Innovation, Growth, and Technology Acceleration

Vermont Manufacturers are asking for help to develop new products and increase profitable sales to new markets. Spanning the innovation continuum, VMEC can help plan, accelerate and implement strategies to integrate advanced manufacturing technologies into new Products & Services, Processes and Business Models for systemic excellence and sustainable growth.

- **Innovation Engineering™**
- **Marketing / Branding**
- **Product Development**
- **Supply Chain**
- **Industry 4.0**
- **Cybersecurity Compliance**
- **Supplier Scouting and Technology Solutions**
- **Export Planning and Growth**

Resources for Vermont Manufacturers

Manufacturers need quick access to information and resources for wide-ranging needs. The VMEC Team is a highly experienced group of professionals with many years of combined experience in all aspects of manufacturing and enterprise growth. We have ready access and established relationships with State of Vermont and private resources, plus MEP National Network™ consultants and numerous other resources across the nation through VMEC's long-standing affiliation with federal stakeholder partner, the Hollings National Institute of Standards & Technology (NIST) Manufacturing Extension Partnership (MEP).

- **Representative of the MEP National Network™ in Vermont**
- **Member and Licensee of the Innovation Engineering Network™**
- **Value-added Partnerships and Experts**
- **A Founding Partner and active supporter of the Vermont Manufacturing Collaborative (VT-MC)**



CLIENT PROFILE

GREEN MOUNTAIN ANTIBODIES

Developing Strong Leadership and Delivering Customer Value

From its laboratories in Burlington, Green Mountain Antibodies (GMAb) designs and manufactures antibodies for biotech and health research businesses. GMAb scientists bring expertise in the field of monoclonal and polyclonal antibodies to help customers address some of the world's most pressing health challenges.

GMAb has developed leaders at all levels to be strategically-aligned system thinkers, committed to using visual, daily management to see and respond to opportunities as well as integrating Lean and Continuous Improvement knowledge into their everyday work. GMAb has engaged with VMEC in individual and small group leadership coaching using "Leading in a Lean Management System" as well as book clubs and multi-company training workshops, including a Supervisor Skills series. GMAb took part in TWI Job Relations training, which helps supervisors develop strong leadership skills and offers a toolkit that guides them in tackling any problems that may arise.

"Learning about the foundations for good relations and realizing how much of an impact this knowledge will have on our team was a pivotal takeaway from the training. I am thankful to have the 4-step method as a tool now. You've given me new hope!"

– KRISTLE PIETTE, GREEN MTN. ANTIBODIES

Client Return on Investment » 206:1



Over the past 3 years, every \$1 spent by clients on VMEC assistance returned an average on that investment of \$206.

Based on company-reported data, April 2017 through March 2020.

Size of Firms Served by VMEC by Number of Employees*



1-9 » 15%
 10-50 » 36%
 51-100 » 19%
 101-500 » 26%
 500+ » 4%

*July 2019 – June 2020



Meeting Unexpected Challenges with a Peer Support Network

St. Johnsbury-based MMIC Medical Systems supports the work of hospitals throughout North America by manufacturing and leasing temporary medical facilities. Their work has never been more important than 2020, in the face of the COVID-19 pandemic and the challenges it has created for the healthcare industry.

CEO Jeffrey Paquet had worked with VMEC for a number of years on a variety of projects, so when VMEC contacted him last March about joining its newly-established CEO

Leadership Group, he didn't hesitate.

"VMEC has provided the right resources to get us over some crunches when we needed them," he said. "They asked if participating would be helpful as a way to provide peer support when the COVID shutdowns began."

During the weekly forum, the CEOs shared information about what they were encountering and how they were addressing the various problems arising around the pandemic. Overall the group offered some crucial and timely support.

"Being a CEO is a lonely job, and it's good to have peers from whom you can seek advice and provide feedback when considering decisions."

— JEFFREY PAQUET,
MMIC MEDICAL SYSTEMS

Vermont Manufacturing Facts*

- 10% Vermont GDP contribution by manufacturing
- 10% Vermont workers (34,162) employed by manufacturers
 - 346,061 Vermont total workforce population
 - 624,358 Total Vermont Population
- \$59K Average annual compensation for Vermont manufacturing employees, compared to the average Vermont compensation of \$48K

*Manufacturing facts are based on 2018 data

Manufacturers Served

VMEC served 101 manufacturing clients over the last year. The average of repeat clients over the last 3 years is 87%.

Employees Trained

More than 880 manufacturing employees from 101 companies participated in public workshops and onsite manufacturing training in Vermont from July 1, 2019 through June 30, 2020.

VMEC Impact on Vermont's Economy*

\$2.87 Billion: January 1996–June 2020

\$129 Million: July 2019–June 2020

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 3.1 Software and Vermont 2016 State data package.

Challenges to Manufacturing Growth

The five highest-ranking strategic challenges reported by VMEC clients include the following (based on client surveys completed October 2019-September 2020 by an independent third party under contract to NIST MEP):

- 71% ➤ Employee Recruitment and Retention
- 63% ➤ Continuous Improvement and Cost Reduction
- 43% ➤ Product Innovation and Development
- 41% ➤ Growth Opportunities
- 31% ➤ Technology Needs

2021 VMEC ADVISORY BOARD

David Blittersdorf, CEO, AllEarth Renewables, Inc.

Ben Clark, CEO, Ann Clark Ltd.

Jeff Couture, Executive Director, Vermont Technology Alliance

Bob Flint, Executive Director, Springfield Regional Development Corporation

Rob Green, Operations Director, Vermont Precision Tools

Lisa Groeneveld, COO and Co-owner, OnLogic

Dr. Christopher Koliba, President's Fellow for Engagement & Professor of Community Development & Applied Economics, University of VT

Lindsay Kurrle, Secretary, Vermont Agency of Commerce and Community Development

Dave Lynn, Senior Vice President & Top Operations Officer, Agri-Mark/ Cabot Creamery, Inc.

Greg Maguire, Director of Acquisitions and Strategic Initiatives, Liquid Measurement Systems

Kenneth McAvey, Senior Director of Central Engineering, GlobalFoundries

Pat Moulton, President, Vermont Technical College

Mike Rainville (Chairman), President and Owner, Maple Landmark, Inc.

Brenan Riehl, President & CEO, Nolato GW, Inc.

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.

PHOTOS COURTESY OF AMERICAN MEADOWS, INC., GORDON'S WINDOW DECOR, GREEN MOUNTAIN ANTIBODIES, JK ADAMS, AND MMIC MEDICAL SYSTEMS



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