

Vermont's Science & Technology Plan

The Vermont Technology Council believes that Vermont's focus must be on growing its own technology- and knowledge-based firms.

The Vermont Science & Technology Plan builds on our state's competitive advantages and suggests several strategies for turning science and engineering "know how" into new products and services.

These strategies, summarized here, will foster the development and commercialization of new products, better leverage the state's research and development resources, create jobs, and further diversify the region's industrial base in an increasingly competitive global economy.

This Plan is intended to provide state government, economic

development organizations, and business and academic leaders with a framework for making informed decisions to maintain a vibrant, dynamic state economy.

Strategy One

**Solid Research Infrastructure:
Support and Expand Vermont's
Research and Development
Infrastructure**

1.1: Firmly establish a culture of research and development in Vermont's universities and colleges through continued support for research infrastructure programs such as Vermont EPSCoR and the Vermont Genetics Network.

1.2: Focus our research and development resources on several key science and technology areas: environmental science and sustain-

able technologies, biological science and technology, and computational science and information technology.

1.3: Under the direction of Vermont EPSCoR, establish statewide high-end computing capabilities and complex systems modeling programs to support and enhance the research and development focus areas.

1.4: Establish the Vermont Eminent Scholars Program, which would provide funds for recruiting renowned scientists to Vermont to lead extraordinary programs of research and development with high potential economic development impact for the state.

1.5: Sustain and promote the Vermont Academy of Science & Engineering in order to bring a deeper understanding of the benefits of science and technology for

Vermont to its citizens, and to persuade more young Vermonters to choose scientific or technical careers.

Strategy Two

Strong R&D Ties Between Industry and Academia: Foster Collaborative Research Projects Between Vermont's Academic Scientists and the Private Sector

2.1: Increase technology transfer activity at the University of Vermont and expand university-industry collaborations.

2.2: Establish the Vermont Commercialization Fund, which would provide “pre-seed” development funds for promising technologies resulting from academic research.

2.3: Establish a pilot program to provide research and development vouchers to help Vermont's technology-based businesses take better advantage of the resources found in our academic research facilities.

2.4: Develop and maintain an online science and technology directory for Vermont, as well as a database of instrumentation and related equipment within our universities and colleges.

2.5: Establish annual meetings and other regular networking events to promote interactions between higher education and the private sector.

Strategy Three

Entrepreneurship & Capital: Foster Entrepreneurship and Attract Investment

3.1: Provide entrepreneurship and research commercialization training to university faculty in order to increase academic contributions to Vermont's innovation pipeline.

3.2: Promote Vermont's academic entrepreneurship programs through the state's economic development organizations to create an environment where technology entrepreneurs can easily find business expertise and training opportunities.

3.3: Build strategic alliances between the Vermont Center for Emerging Technologies and other incubator programs throughout

Vermont, New England, and Canada to expand opportunities for Vermont companies.

3.4: Establish a high-profile and prestigious Governor's Entrepreneur in Residence program at the Vermont Center for Emerging Technologies. This program would provide a stipend to a seasoned entrepreneur who commits to work on-site with faculty, business/MBA students, existing Vermont firms, and start-up companies to identify commercially viable opportunities.

3.5: Provide ongoing support for SBIR training programs and proposal writing assistance to increase the competitiveness of Vermont companies in obtaining federal grants.

3.6: Expand and promote Vermont EPSCoR's highly successful SBIR

"Phase 0" program, which funds pre-SBIR projects that show promise for federal grants, and create a partner "Double Zero" program to help defray some of the costs incurred in developing a SBIR proposal.

3.7: Nurture Vermont's existing technology business associations, create new associations as needed, and form strategic alliances between these organizations and the state's regional development corporations to promote the growth of these sectors.

Strategy Four

Talent: Develop and Retain a World-Class Technology Workforce

4.1: Make higher education more affordable for Vermonters by developing a long-term plan to dramati-

cally improve Vermont's state ranking for higher education funding.

4.2: Provide increased support for science and engineering education, expand Vermont's science and engineering graduate programs, and promote hands-on research opportunities for students.

4.3: Create a central clearinghouse for internship opportunities with Vermont companies.

4.4: Support further development of distance-learning technologies for the delivery of high-quality workforce training.

4.5: Maintain Vermont's strongly performing K-12 science and mathematics education system by providing increased professional development opportunities for science and mathematics teachers.

4.6: Increase the percentage of the Vermont workforce participating in training programs and lifelong learning.

Strategy Five

Advanced Manufacturing:
Maximize Efficiencies, Support
21st Century Transformation, and
Expand Opportunities for Vermont
Manufacturers

5.1: Promote and ensure continued support for the Vermont Manufacturing Extension Center, which has provided valuable assistance to over 800 Vermont companies since 1996, and has leveraged millions of dollars of federal, state, and private funds from fees-for-service.

5.2: Encourage training and education programs, practices, and processes necessary to ensure a suf-

ficient supply of new and incumbent workers prepared to meet the changing needs of Vermont's manufacturers.

5.3: Using experienced resources such as VMEC, encourage, support, and grow the skillful adoption and successful implementation of continuous improvement methodologies (such as "Lean Manufacturing"), market-driven knowledge, a culture of innovation, and the exploitation of new technologies to meet the needs of Vermont manufacturers, their supply chains, and their marketplaces.

5.4: Encourage and promote training, knowledge sharing, and technical assistance to Vermont manufacturers to grow global export opportunities.