

**Virginia Polytechnic Institute and State University**  
**2006 – 2012 Strategic Plan**  
**Executive Summary**

**Invent the Future: Quality, Innovation, Results**

The 2006 – 2012 Strategic Plan Update reaffirms Virginia Tech's commitment to achieving excellence as a comprehensive land grant university that makes innovative contributions in learning, discovery, and engagement to the Commonwealth of Virginia, the nation, and the world. The priorities expressed in the 2006 – 2012 Strategic Plan Update, as summarized in the 1-page table (section 2), demonstrate Virginia Tech's ongoing commitment to transform itself as a 21<sup>st</sup> century university capable of responding effectively to opportunities presented in a dynamic and diverse domestic and global environment.

The plan strengthens the university's commitments to its mission and updated core values (sections 7 and 8) and is built upon a university-wide, bottoms-up process of consultation and evaluation (sections 5 and 6). The plan embraces the President's Vision for the Future (section 4) with an emphasis on quality, innovation, and results in a global context. Virginia Tech values the educational contributions made by high quality and diverse students, faculty, and staff who contribute to the robust exchange of ideas. The updated plan introduces the terms *Learning, Discovery, and Engagement* to articulate an updated understanding of the complexities of the university's integrated and multi-disciplinary scholarship areas supported by essential foundation strategies. An important component of the plan is the commitment to link strategic goals to financial planning and outcomes in order to increase Virginia Tech's accountability to a variety of important stakeholders (section 3).

The 2006 – 2012 Strategic Plan Update is comprised of three Scholarship Domains (sections 9, 10, and 11) and three Foundation Strategies (sections 12, 13, and 14) that serve to achieve Virginia Tech's mission and core values. The plan builds upon the goals and achievements of the 2001-2006 Strategic Plan (section 15).

**Three Scholarship Domains: Learning - Discovery - Engagement**

**I. Learning**

Virginia Tech is committed to total enrollments of approximately 29,000 in 2012. Graduate enrollments include 2,600 PhD and 3,900 master's students. Undergraduate enrollments will total 22,500 including 3,000 who enter as transfer students. The strategic priorities in these areas are:

- **Undergraduate Education.** A key element in the learning domain is a commitment to enrich the academic experience of a diverse

undergraduate student body by expanding research and capstone experiences within the new VT Pathways for Learning model. Pathways integrates liberal education throughout the curriculum and provides students with a robust academic experience including expanded foreign language opportunities.

- **Graduate and Professional Education.** The Transformative Graduate Education initiative integrates the university's strengths in research, technology, and teaching to prepare graduate students as the next generation of scientists, educators, scholars, engineers, artists, professionals, and global citizens. Virginia Tech's graduate education will align with National Research Council quality benchmarks aimed at growing and strengthening PhD production.
- **eLearning and Information Systems.** Priority is given to strengthening the university's commitment to distance and distributed eLearning and the use of advanced learning technologies by faculty and students within and outside the classroom. The university libraries will be strengthened to support university's missions.
- **Educating the Whole Student.** Virginia Tech strives to provide undergraduate and graduate students with environments, programs, and services that support the curricular and co-curricular experiences a diverse student body. Goals include building multicultural and international competencies, and supporting students through improved living and learning environments.

## II. Discovery

The Discovery Scholarship Domain outlines the university's commitments to research and creative scholarship in strategically important areas that draw upon established strengths and forecast Virginia Tech's ability to capture opportunities to produce quality research. A specific goal is to expand annual research expenditures to \$540 million by 2012 primarily through research growth in Blacksburg and the National Capital Region. Strategic partnerships will be a key component of the growth strategy. The strategic priorities in the Discovery Scholarship Domain are:

- **Energy, Materials, and Environment.** These areas of scholarship are interwoven and require focused and multidisciplinary research activities. Energy, in particular, promises to be an area for innovative research in sustainable energy supplies. Materials research is a strength upon which collaborations and multidisciplinary efforts can be built within and outside the university. Water quality and environmental health are signature areas for environmental research.

- **Social and Individual Transformation.** The dynamics of economic, social, political, technological, environmental, and cultural change are at the heart of this area of research and creative scholarship, which has application in domestic and international aspects of community life.
- **Health, Food, and Nutrition.** Two areas of focus are the strategic priorities for this research initiative. The infectious disease initiatives are focused on the prevention, diagnosis, treatment, and management of naturally or purposely introduced emerging and re-emerging infectious diseases. A comprehensive approach to the prevention and treatment of obesity is the second key area of emphasis.
- **Innovative Technologies and Complex Systems.** Powering progress in all areas of discovery are cutting edge technologies and the development of systems to solve complex problems. Advancements will be achieved by strategically investing in nanotechnology, bioinformatics, biotechnology, high performance computing, power electronics and robotics, wireless technologies, and geographic information systems.

### III. Engagement

Virginia Tech is the Commonwealth's senior land-grant university and is committed to engaging its intellectual assets to address economic and social needs of communities around the Commonwealth, the nation, and the world. Strategic priorities in Engagement include:

- **Economic Vitality.** Virginia Tech will connect innovations in the scholarship of learning, discovery, and engagement to the economic well-being of individuals, families, businesses, and communities. Central to this goal are entrepreneurial initiatives advancing technology transfer, intellectual property, and the transfer of knowledge in domestic and international partnerships.
- **International Education and Research.** At the heart of this goal is the implementation of the Virginia Tech International Strategic Plan reaffirming the commitment to fostering communities that value all cultures, languages, lands, and people. International collaborations, including the establishment of research and education centers and the expansion of study abroad.
- **PK-12 Education in Science, Technology, and Mathematics (STEM).** This goal is achieved through multi-disciplinary research partnerships, teacher preparation, professional development opportunities for PK-12 educators, and programs connecting PK-12 to STEM undergraduate programs.

- **Student Engagement.** Undergraduate and graduate students will have opportunities to engage in service learning and civic engagement. These opportunities will amplify student learning and build professional skills to strengthen student academic careers and professional development.

**Three Foundation Strategies:  
Organizational Development – Campus Infrastructure – Resource  
Development, Allocation and Management**

**I. Organizational Development: Fostering a High Quality Diverse and Inclusive Academic Environment**

Human resource and work/life strategies support the achievement of the university's missions by attracting and retaining the best instructional, research, and administrative/professional faculty and staff, investing in their development, and supporting them by providing a high quality of work life. Analyses indicate that the salaries of teaching and research faculty will achieve the 60<sup>th</sup> percentile over the six-year planning period with four percent annual increases; however, the university must continue to evaluate trends in faculty salaries to ensure that steady progress is made in providing competitive compensation. Without attention to staff compensation as well, the university will not be able to continue to recruit and retain the caliber of staff needed. With projected retirements resulting in the loss of approximately 12 percent of our faculty and staff over the next 6 years, enhanced faculty and staff recruitment and development programs will provide the foundation for succession planning and knowledge transfer. The university must foster a diverse and inclusive community that supports mutual respect. Efforts to diversify the university by increasing the number of women and underrepresented minorities hired and promoted into faculty and staff ranks must continue to be a priority. Virginia Tech has been considered one of the region's employers of choice for many years. However, to sustain this, the university must continue to promote the health and welfare of the university community through family-friendly policies and a competitive benefits package. Additionally, competition for resources requires that the administrative operations continue to look creatively at developing new strategies for gained efficiencies.

**II. Invest in Campus Infrastructure**

As the university continues to grow at a rapid pace, several key choices must be addressed to ensure the most effective management of the university's learning, living and work spaces. The development of a comprehensive space management system will enable the university to manage space in such a manner to fully meet the academic and research needs of the university community, while ensuring that the maximum amount of indirect costs can be recovered on sponsored projects. Consistent with the Campus Master Plan, it is also a goal of the university to maintain the pedestrian nature of campus and to

continue to implement safety measures. With the university's emerging participation in the biological and medical fields also comes the need for higher security. The university must enhance health, safety and security operations to support the university's discovery, learning and engagement endeavors. The development of university-wide Emergency Preparedness and Hazard Mitigation Plans will help the university plan for major emergencies that threaten the health, safety and security of the campus community. Emphasis must also be placed on promoting robust and integrated information technology strategies that advance Virginia Tech's excellence. The university has been a leader in the information technology arena and is poised to continue to remain on the cutting edge of technology. Finally, the university must advance and implement initiatives to improve operational efficiencies and enhance customer service. The Restructuring Act will provide the university with greater authority over financial and administrative operations, and provide the opportunity for staff to begin to streamline administrative processes and policies.

### **III. Effective Resource Development, Allocation, and Management**

The university has five major sources of funds to manage the operations: state appropriations; tuition and fees; grants and contracts; auxiliary enterprises; and gifts and investments. Staff must continue to work with the Governor, legislators, General Assembly staff, and the State Council of Higher Education in Virginia to increase state funding. Likewise, private fundraising will be critical to achieving the university's goals. Other opportunities to enhance university revenue sources such as more effective use of the university's real estate portfolio and a more aggressive approach to marketing intellectual property and service may yield additional revenue. Additionally, the University is working to develop a comprehensive Debt and Risk Management Policy for both the university and the Virginia Tech Foundation, and is expected to demonstrate management competency as evidenced by either a bond rating in the "AA" range or a two-year history of competency in the areas of finance and capital outlay. As part of its land grant mission, the university has historically maintained affordable tuition and fees to ensure access to all. Increasing student access and affordability to the institution is at the heart of Virginia Tech's new "Funds for the Future" program, which increases the level of institutional funding of student financial aid. The university is committed to continuing programs that will ensure accessibility.