

OVERVIEW:

The totality of the six-year plan should describe the institution's goals as they relate to goals of The Virginia Plan for Higher Education, the Higher Education Opportunity Act of 2011 (TJ21) and the Restructured Higher Education Financial and Administrative Operations Act of 2005. The instructions under institutional mission and alignment to state goals, below, ask for specific strategies around four priority areas. Other sections will offer institutions the opportunity to describe additional strategies to advance institutional goals and state needs. *Please be as concise as possible with responses and save this narrative document with your institution's name added to the file name.*

Section A. Institutional Mission, Vision, Goals, Strategies, and Alignment to State Goals:

Provide a statement of institutional mission and indicate if there are plans to change the mission over the six-year period.

Provide a brief description of your institutional vision and goals over the next six years, including numeric targets where appropriate. Include specific strategies (from Part 3 – Academic-Financial Plan and Part 4 – General Fund Request) related to the following areas: (1) access and enrollment, particularly for underrepresented students; (2) retention, completion and time to degree; (3) affordability and funding; and (4) workforce alignment and retention of graduates. Strategies also can cross several state goals, notably those related to improved two-year and four-year transfer, and should be included here. If applicable, include a short summary of strategies related to research. The description of any strategy should be one-half page or less in length. Be sure to use the same short title as used in the Part 3 and Part 4 worksheets.

RESPONSE:

Inspired by our land-grant identity and guided by our motto, Ut Prosim (That I May Serve), Virginia Tech is an inclusive community of knowledge, discovery, and creativity dedicated to improving the quality of life and the human condition within the Commonwealth of Virginia and throughout the world.

Strategies: Part 3 – Academic-Financial Plan

The animating vision throughout this Six-Year Plan is one of partnership, grounded in mutual commitment and dependable follow-through, designed to advance the strategic priorities of the Commonwealth and Virginia Tech. That partnership is crystalized through the university's proposal of an Institutional Performance Partnership Agreement (IPPA) that sustains and builds upon Virginia Tech's unique strengths through targeted, performance-based investment from the Commonwealth.

Proposed in detail at the end of this document and in the attached IPPA summary, the university's vision for an expanded partnership with the commonwealth is exemplified through several of the following academic, research, and financial initiatives. Together, we can position the

Commonwealth and the university for continued success in the global competition for talent and innovation.

1) Advance Faculty Salary Competitiveness to the 60th Percentile

The success of the university is due in large measure to its outstanding faculty who are committed to excellence in education, research, and outreach. In a competitive, global marketplace that values human capital, the highest quality employees in our organization are constantly being recruited by peer institutions, industry, and research centers around the world. Attracting and retaining the caliber of faculty needed to maintain and improve upon our success is becoming increasingly competitive. While compensation is only one factor that contributes to the university's ability to attract and retain the best faculty, it remains a major consideration. In addition, the replacement of faculty is far more expensive than the cost to retain those persons for whom the university has already invested significant time and resources. The university's actual faculty salary currently ranks at the 32nd percentile of the SCHEV peer group for Virginia Tech: 20th out of 26 institutions in terms of salary competitiveness, which is measurably below average. Maintaining an annual merit process that rewards our top faculty for their efforts is fundamental to keeping pace with the market and mitigating turnover. SCHEV estimates peer salaries moving at an average of 2.8% per year. While the recently enacted 2.75% statewide compensation process maintained the university's relative position relative to our peer institutions, the university plans to make limited progress by leveraging institutional nongeneral fund resources with General Fund resources.

2) Increase Staff Salaries

Much like faculty, the slow pace of growth of staff compensation has negatively influenced retention and recruitment efforts at the university, a trend likely to accelerate as the local labor market continues to tighten. Competitively compensating the hard-working support staff at the university is a key factor in ensuring a highly productive and innovative organization. The university implemented the state's 5% statewide Classified Staff compensation process in 2019 and a 2.75% merit-based compensation process for University-Staff. This supports a multi-year strategy to position the university at the median of the competitive market, enabling the university to compete for talented staff that support continued university excellence.

3) Develop 'Destination Areas' that Differentiate Virginia Tech and Advance Regional, National, and Global Impact

The university will continue its investment in world-leading instruction and research clusters, including Adaptive Brain and Behavior, Data and Decision Sciences, Global Systems Science, Integrated Security, and Intelligent Infrastructure for Human-Centered Communities. Destination Areas courses directly support Virginia Tech's goal of becoming an exemplary model for the modern land-grant university with a global mission. By transcending traditional academic boundaries, the university's Destination Areas engage students and faculty to evaluate and address complex (regional, national and global) challenges in a holistic manner. Sustained investment in high-demand degree attainment and transdisciplinary research will allow the university to continue to attract and retain innovative and creative faculty and students who will

strengthen Virginia's workforce and knowledge economy. The university will make progress across the 2020-22 biennium with nongeneral funds and the reallocation of existing resources.

4) Expand and Extend Access for Low- and Middle-Income Virginia Families

As a modern land grant institution, Virginia Tech remains very sensitive to student access to higher education, including student cost and borrowing levels. As a Restructured Level III institution, part of the university's Management Agreement includes a commitment to mitigate tuition increases and reduce the unmet need of Virginia residents. To fulfill these responsibilities, the university recently expanded its support of the Funds for the Future and Virginia Tech Grant financial aid programs. Funds for the Future protects returning students with financial need within certain parameters from tuition rate increases, while the Virginia Tech Grant program seeks to further reduce student need.

The primary goal of investment in student financial aid is to reduce the net price for Virginians in the first through third income quintiles, ensuring that financial obstacles are mitigated for low- and middle-income students. Additional General Fund support of student financial aid will allow the university to make a greater impact on student access and affordability. Prospective allotment of General Fund resources to expand access to low-income students from underserved populations across the state will be matched by the university. *This strategy is included in the university's Institutional Partnership Performance Agreement proposal.*

5) Expand Degree Completion, Pathway Opportunities, VT-Shaped Transdisciplinary Learning, and Student Advising

To improve course completion rates and thereby enhance timely degree completion, Virginia Tech is working with faculty to incorporate research-based approaches to course design and delivery that facilitate a personalized adaptive learning experience, allowing students to learn in ways that suit their individual strengths. This will be accomplished through the combined use of multi-modal course design (allowing multiple ways to engage learners) with learning technologies designed to help both learners and instructors more fully understand what is happening through the use of learning analytics. This approach will be developed in partnership with other institutions and made available to Virginia community colleges and high schools to help improve the preparation of students for the growing workforce in data analytics.

As part of a holistic approach to student advising, the university is investing in real-time jobs market analytics software that will provide students, advisers, and faculty with the latest labor market data. The ability to access data-driven information on employment demand and potential earnings by discipline will allow students to make informed choices on potential career paths and promote sound financial planning after graduation. The university will also enhance and expand its efforts to improve student financial literacy and mitigate student debt. The university will provide guidance on borrowing decisions, return on investment, loan repayment plans, tools for estimating monthly payments, and budgeting.

To further align academic decisions with potential career paths, the newly established Office of Learning Systems Innovation and Effectiveness (LSIE) will facilitate experiential learning opportunities through internships, service learning, apprenticeship, clinical, cooperative education, and fieldwork experiences, and undergraduate research. Extending learning beyond the classroom provides students with a unique opportunity to translate and test their knowledge and skills in a professional setting.

To accelerate degree completion, the university is developing course offerings in formats that support reduced time-to-degree and contribute to the sticky pathways that grow the state's talent pipeline. In parallel, the university continues to expand on-campus, on-line, and hybrid course offerings during summer and winter that provide students with additional opportunities to complete degree requirements and participate in experiential learning opportunities. *Elements of this strategy are included in the university's Institutional Partnership Performance Agreement proposal.*

6) Be a Destination for Talented Faculty, Staff, and Students in Increasingly Competitive Markets

A fundamental priority of Virginia Tech's recently approved strategic plan is to serve as a destination for talent. Virginia Tech will attract bold and dynamic faculty, staff, and students to a diverse and inclusive community to be a force for positive change. Talent attraction, both of students and employees, is increasingly competitive as industry and peers seek the same. Meeting this challenge will require investments into recruitment, retention, and personnel management systems. Competitive compensation, mentorship, and employee development programs will play critical roles in talent development, and supporting student success programs, alumni mentorship opportunities, and co-curricular learning experiences will ensure that the university both attracts and incubates a talented pool to students ready to make contributions to the Commonwealth and beyond.

7) Support Faculty Start-Up Packages

Establishing and setting up a research facility or lab for a newly hired faculty member typically costs millions of dollars. Investment in advanced facilities and equipment is essential for faculty to successfully compete for research funding from the federal government and other private sources. The university continues to expand the number of faculty to adequately serve enrollment growth, and startup resources are a significant factor in our recruitment efforts. *Additional state investment in faculty start-up packages is included in the university's Institutional Partnership Performance Agreement proposal.*

8) Advance Institutional Excellence through organizational effectiveness and efficiency

In April 2019, the university engaged the management consulting firm Deloitte to initiate a comprehensive administrative and operations analysis, including a review of current work processes, and to identify areas of improvement. Their review will consider several key areas, including finance, business operations, and facilities management, and will include processes, transactions, structures, and policies at the enterprise level. The goals of the process include eliminating barriers, unnecessary work flows, and duplicative or redundant efforts at all levels

within the university; using best practices to deliver services; leveraging technology to automate and simplify processes and reduce transaction times; professionalizing workplaces; developing and using cost-effective and administrative-efficient operating principles; leading a culture of continuous improvement; ensuring administrative and operations work is aligned with strategic priorities; and deploying leading change management principles to navigate new systems, processes, and structures. The implementation phase of this initiative is scheduled to begin in fall 2019. These processes are university-funded initiatives that are expected to bend future costs curves and potentially reduce long-term costs and increase effectiveness, allowing resources to be recycled into a continuous improvement process.

In addition to the efficiency initiative described above, the university will also allocate funding to ensure compliance with federal mandates, including obligations related to Title IX and the Americans with Disabilities Act. Funding will be used primarily to hire additional compliance officers and safety personnel, as well as enhancing accessibility both in the physical and virtual space.

9) Increase Graduate Enrollment in Strategic Areas

The university will strive to increase graduate student enrollment with an emphasis on professional master's degrees and attracting leading doctoral level science, technology, engineering, mathematics, and health sciences (STEM-H) students. Graduate education is a key component of the university research mission and supports university efforts to remain a leader in innovation, technological development and entrepreneurship. Enrollment growth and externally sponsored research revenue will be utilized to support the instructional needs of this initiative.

10) Reallocation of Existing Resources to Support University Priorities

In an environment of cost containment and limited capacity for revenue generation, the university plans to continue efforts to reallocate existing resources. Strategic reallocation will support university priorities including academic advancement, faculty startup packages, and other emerging needs.

11) Library Enhancement

Addressing the rising costs of journals and other library materials is central to maintaining and enhancing the value of the university's library collection to both students and researchers. Additional investment is needed to offset the increasing costs of subscription based resources and information platforms, ensuring continued access to information on cutting-edge research across a variety of subject areas. The university's expanding research programs require access to new resources, journals and other databases outside the current collection. These costs will be managed by the university.

12) Operation & Maintenance Support for New Facilities Coming On-Line During the 2022-24 Biennium

With new facilities coming on-line during the planning period, including the Health Sciences & Technology Building, and two current capital projects to renovate and up-fit existing facilities,

operation and maintenance support is a primary cost driver in the future budget. Facilities must be open year-round in order for the university to deliver its mission of providing programming for the citizens of the Commonwealth. Addressing operation and maintenance of facilities will ensure maximum facility service life and prevent building deficiencies. This is a university-funded initiative.

13) Non-General Fund for Current Operations

The university anticipates inflationary increases to existing operational expenses. This line-item represents a placeholder to account for these increases. These costs will be managed by the university.

14) Utility Cost Increase

Rising costs of utility service must be addressed to maintain consistent delivery of institutional services. This is a university-funded initiative.

Strategies: Part 4 – General Fund Requests

1) Provide Inflationary Increase to General Fund Base E&G Budget

The maintenance of the current buying power of the university's General Fund Base E&G budget provides a foundation of stable resources on which the university can effectively plan and implement new initiatives. For the purposes of this request, inflation is estimated to be 2.9% per year. *This strategy is included in the university's Institutional Partnership Performance Agreement proposal.*

2) Expand and Extend Access for Low- and Middle-Income Virginia Families by Continuing to Expand Need-Based Financial Aid to Undergraduate Students

As a modern land grant institution, Virginia Tech remains very sensitive to student access to higher education, including student cost and borrowing levels. As a Restructured Level III institution, part of the university's Management Agreement includes a commitment to mitigate tuition increases and reduce the unmet need of Virginia residents. To fulfill these responsibilities, the university recently expanded its support of the Funds for the Future and Virginia Tech Grant financial aid programs. Funds for the Future protects returning students with financial need from tuition rate increases, while the Virginia Tech Grant program seeks to further reduce student need.

The primary goal of investment in student financial aid is to reduce the net price for Virginians in the first through third income quintiles, ensuring that financial obstacles are mitigated for low- and middle-income students. Additional General Fund support of student financial aid will allow the university to make a greater impact on student access and affordability. *This strategy is included in the university's Institutional Partnership Performance Agreement proposal.*

3) Develop and Deploy Scalable Internship Model to Expand Experiential Learning and Enhance Workforce Development

Virginia Tech's strategy to recruit, educate, and retain top talent for employment in the

Commonwealth includes systematic efforts to partner with Virginia-based companies to increase the number of students who complete work-related experiences during their time in college. Virginia Tech is actively engaged in developing new and enhanced internship models as part of the Commonwealth Cyber Initiative and through a collaborative response to SCHEV's request for proposals to pilot internship programs.

In partnership with the Commonwealth, other universities, business organizations, and individual Virginia employers, and with modest state investment, the university will contribute to the development of scalable internship models and promote their rapid regional and statewide adoption as part of a major initiative to brand Virginia nationally as the "Best State for Internships." The attraction, development, and retention of top talent is critical for success in a knowledge-based economy. Virginia's future depends on its major commitment to support meaningful internship opportunities over the next two biennia. *This strategy is included in the university's Institutional Partnership Performance Agreement proposal.*

4) Support Faculty Start-Up Packages, Particularly for New Faculty in the STEM-H Fields, Including Equipment and Lab Renovation

Establishing and setting up a research facility or lab for a newly hired faculty member typically costs millions of dollars. Investment in advanced facilities and equipment is essential for faculty to successfully compete for research funding from the federal government and other private sources. With a growing emphasis on providing authentic experiential learning opportunities, the university continues to expand the number of faculty to adequately serve enrollment growth. Startup resources are a significant factor in our recruitment efforts. *This strategy is included in the university's Institutional Partnership Performance Agreement proposal.*

5) Leverage Partnerships to Further Expand Research Programs in the Roanoke Region

In December 2018, Virginia Tech celebrated an historic \$50 million donation from the Horace G. Fralin Charitable Trust to support the expansion of biomedical research and the recruitment of world-leading biomedical researchers at the newly renamed Fralin Biomedical Research Institute. As part of the VTC Health Sciences and Technology Campus, the Fralin Biomedical Research Institute has played a transformative role in propelling growth in the Roanoke/Blacksburg knowledge economy. According to a study by the Weldon Cooper Center for Public Service's Center for Economic and Policy Studies, the number of employees at the Health Sciences and Technology Campus is projected to increase by 85% to 3,150 by 2026. Its economic impact over the same time period is expected to approach half-a-billion dollars per year. In addition, the Carilion and Virginia Tech partnership has spawned significant growth in the Roanoke's burgeoning health sciences start-up ecosystem, attracting investment from both local angel investors and institutional investors based outside the Commonwealth.

While private philanthropic support will contribute towards building a sustainable financial future for the Institute, it will not address pressing, short-term needs. Additional state investment will fill these gaps and continue the momentum gained during the initial phases of this critical project.

This strategy is included in the university's Institutional Partnership Performance Agreement proposal.

6) Cultivate Groundbreaking Research through Expansion of University Research Capabilities

In partnership with the Commonwealth, Virginia Tech's research enterprise has grown very rapidly in comparison to the most competitive Research Intensive (R1) universities in the United States over the past two decades. With total annual research expenditures of over \$520 million from federal, state, private, and institutional sources, Virginia Tech currently ranks # 46 nationally in the latest NSF Higher Education Research and Development (NSF HERD) survey. As a leading comprehensive land-grant university, Virginia Tech has a diverse and balanced portfolio of competitively funded programs that align with its well-established strengths in engineering and technology, agriculture and life science, computational and data sciences together with its more recent growth in health sciences and technology. Virginia Tech's diverse portfolio includes programs that span from basic discovery-driven science to applied use-inspired research that often engages industry partners. This research has produced transformative advances in the health, well-being, safety and security of the citizens of the Commonwealth and beyond.

To advance promising areas of university research, such as autonomous vehicle systems, direct state investment remains crucial for the strategic growth of research infrastructure and capacity as well as new partnerships with industry. The Virginia Research Investment Fund provides an additional means to strengthen the university's technology transfer practices, expand opportunities for commercialization, and incentivize university-industry partnerships. Both of these fund sources remain critical for attracting talent to Virginia and creating new knowledge-intensive, high growth companies in the Commonwealth.

7) Provide Additional General Fund to Moderate In-State Undergraduate Tuition (From 4.9% to 2.9%)

In order to support inflationary costs and make modest progress towards university initiatives, a 4.9% annual increase to in-state undergraduate tuition and fees is assumed in this plan. This matches the state's aforementioned inflationary increase, ensuring the university does not lose overall purchasing power, and provides incremental resources available to support shared state and university goals such as faculty and staff compensation. In order to hold in-state tuition and fees to inflationary levels and continue to make progress towards these goals, incremental state support is requested to fund the difference. For the purposes of this request, inflation is assumed to be 2.9%, resulting in a request for state support of the equivalent of 2% of in-state undergraduate tuition and fees. This request is incremental to the previous request. *This strategy is included in the university's Institutional Partnership Performance Agreement proposal.*

8) Provide Additional General Fund to freeze In-State Undergraduate Tuition (From 2.9% to 0.0%)

Fully mitigating the need to increase in-state tuition and fees results in an additional General Fund request equivalent to 2.9% of in-state tuition and fees. This request is incremental to the previous request. *This strategy is included in the university's Institutional Partnership Performance Agreement proposal.*

9) Increase Support for Unique Military Activities: Virginia Tech's Corps of Cadets is one of six Senior Military Colleges in the United States, established by law, and one of only two that is a Corps within a public tier-one research university. The mission of the Corps, established in 1872, is to develop leaders of character for the Commonwealth and the country. The Corps' ability to fulfill its mission is predicated on the receipt of an equitable population-based level of support as other military programs in the commonwealth. Based on the state's per-student UMA General Fund formula, Virginia Tech Corps has a shortfall of \$1,159,290 as compared to VMI. Addressing this shortfall over six years results in an annual incremental General Fund increase of \$193,215 per year. This critical request allows the Corps to address mandatory cost increases and make critical programmatic enhancements to ensure mission success.

Section B. Tuition and Fees Predictability Plans: Provide information about the assumptions used to develop tuition and fee charges shown in PART 1. The tuition and fee charges for in-state undergraduate students should reflect the institution's estimate of reasonable and necessary charges to students based on the institution's mission, market capacity and other factors. Include information, if applicable, on tuition increase plans for program- and level-specific charges or on any other alternative tuition and fee arrangement.

RESPONSE:

Providing an affordable education and predictable pricing for Virginia's families is a fundamental component of Virginia Tech's land grant mission. Of the Commonwealth's 15 public four-year institutions, Virginia Tech's total cost for in-state undergraduates ranks 9th lowest. Virginia Tech has held in-state undergraduate tuition and fee increases to no more than 2.9 percent since 2016-17, while the statewide average has ranged from 4.6-5.4 percent.

To further mitigate the impacts of tuition and fee increases and maximize pricing predictability, the university has intentionally:

- continued to enhance its Funds for the Future program, providing financial aid to offset the increase of tuition and fees to students from families earning up to \$100,000,
- kept tuition increases within the levels projected in prior six-year plan submissions,
- annually invested in student financial aid programs to ensure that the buying power of financial aid increases faster than tuition,
- held current students harmless when implementing new differential program fees (Engineering, for example), to ensure that existing students are not negatively impacted by charges that did not exist when they started at Virginia Tech.

In 2019-20, in-state undergraduate tuition and fees (including differential tuition) will remain flat at 2018-19 levels. Investment of General Fund by the Commonwealth makes this possible, and provides a framework for future partnership between the state and the university.

As detailed on schedule 1B of the attached Six-Year Plan, the university is instructed to project future in-state tuition and fee increases assuming no new General Fund. Based on the university's financial needs including inflationary cost increases, continued progress towards established faculty compensation goals, and the implementation of academic initiatives that will enhance the availability and quality of a Virginia Tech education, the university can reasonably expect in-state tuition and fees to increase at an annual pace of inflation plus two percent (an estimate of 4.9 percent is used for planning purposes). This allows the university to address fixed and inflationary costs and make modest progress on strategic initiatives and quality enhancement. As a result of strong and increasing demand for a Virginia Tech education, the university will once again enroll its largest class of Virginia undergraduates in history in fall 2019. Due to the university's consistently below average tuition for Virginia residents and the statewide trend of increases, an annual increase of 4.9 percent should maintain the university's position as a substantial value for Virginia residents.

Two additional scenarios are posed for consideration.

- Scenario 2: As part of the university's proposed Institutional Performance Partnership Agreement (IPPA), the university can commit to reducing the projected in-state tuition and fee increase from 4.9 percent to inflation (projected to be 2.9 percent) with the equivalent General Fund support.
- Scenario 3: Further, with General Fund fully supplanting the resources generated from the projected in-state tuition and fee increase, the university can commit to freezing in-state tuition. Each of these scenarios can be achieved through partnership with the Commonwealth in any or all years of the predictability plan offered within this submission.

The university continues to work with the Commonwealth to limit price increases to Virginia's families while enhancing the quality and availability of a Virginia Tech education.

Section C. Other Budget Items: This section includes any other budget items for which the institution wishes to provide detail. Descriptions of each of these items should be one-half page or less.

RESPONSE:

Consistent with SCHEV's guidance, Virginia Tech's Six-Year Plan does not include the university's Tech Talent Pipeline proposal, which was submitted through SCHEV's separate process. To understand the totality of the university's Six-Year academic and enrollment plans, the two must be combined.

Section D. Programs and Instructional Sites: Provide information on any new academic programs, including credentials and certificates, or new instructional sites, supported by all types of funding, that the institutions will be undertaking during the six-year period. Note that as part of

the revised SCHEV program approval process, institutions will be asked to indicate if a proposed new program was included in its six-year plan. Also, provide information on plans to discontinue any programs.

RESPONSE:

Virginia Tech plans to support learning and innovation in new academic programming in the form of certificate and degree programs at both the undergraduate and graduate levels. In an effort to meet the public teacher shortage in the state, the institution will create multiple undergraduate education programs. Additional undergraduate planning includes programming in the fields of behavior decision science and plant and environmental sciences. Graduate program planning includes the fields of computer science, computer engineering, cybersecurity, neuroscience, water, and global sustainability. As the Innovation Campus is established as a new off-campus instructional site in northern Virginia, preparations for interim off-campus instructional sites must also be anticipated. As associated enrollment and academic programming increase, space in existing instructional sites will quickly be maximized. Therefore, Virginia Tech must have the flexibility to provide temporary instructional locations on an interim basis to support the enrollment growth and academic programming until the establishment of the Innovation Campus.

Section E. Financial Aid: TJ21 requires “plans for providing financial aid to help mitigate the impact of tuition and fee increases on low-income and middle-income students and their families, including the projected mix of grants and loans.” Virginia’s definitions of low-income and middle-income under TJ21 are based on HHS Poverty Guidelines. A table that outlines the HHS guidelines and the definitions is attached.

RESPONSE:

Virginia Tech’s student financial aid programs are designed to support student access, enrollment, retention and graduation goals. The university provides access to low and middle income students with demonstrated financial need through multiple funding sources, including the use of unfunded scholarships as prescribed in §23.1-612 of the Code of Virginia, and as required by the university’s management agreement.

A key innovation in meeting this need is the university’s Funds for the Future program, which ensures a predictable tuition rate for returning students. Starting with the incoming class of 2005, the university has protected continuing students with financial need from tuition and fee increases with the Funds for the Future program. The program provides tuition increase protection for families with adjusted gross incomes to \$100,000, capturing both low and middle-income students with need.

Additionally, the Virginia Tech Grant has been retooled to better support low and middle-income students with the greatest financial need. The university also supports other, smaller programs that assist low and middle-income students. The university’s Virginia resident graduates continue to track lower than their national peers in the percentage who take out student loans and their

average debt at graduation. And, as an indicator of debt moderation and employment success of Virginia Tech graduates, the university's 3-year Cohort Default Rate is 1.8%; the third lowest of all Virginia public four-year institutions and the fourth lowest of the university's national SCHEV peer group.

State support for student financial aid has been extremely helpful in supporting access and affordability for Virginia residents, and the university plans to continue to support the goal of reducing the net price for Virginia residents in the first through third income quintiles.

Section F. Capital Outlay: Provide information on your institution's top two Education and General Programs capital outlay projects, including new construction as well as renovations, that might be proposed over the Six-Year Plan period that could have a significant impact on strategies, funding, student charges, or current square footage. Do not include projects for which construction (not planning) funding has been appropriated.

RESPONSE:

Virginia Tech appreciates the significant support to advance enrollment growth, research and economic development by fully funding two high priority capital projects in the 2019 Session.

Virginia Tech leads the state overall in STEM-H degree production, with over 4,600 degrees awarded annually. This represents 54 percent of Virginia Tech's total degree production and 24 percent of the statewide STEM-H degree production at public universities. As Virginia Tech's total undergraduate enrollment continues to expand, STEM-H enrollment is growing at faster rate. Supporting enrollment growth and STEM-H instruction is a primary goal of the university. However, the university's existing inventory of STEM-H instructional space is now too small and generally outdated to accommodate the current and growing demand.

The university's first priority project, the Undergraduate Laboratory Building, begins to address this need. This new instructional facility will help address enrollment growth, support innovative instructional approaches of the 21st Century, and meet STEM-H instruction needs, including the core curriculum of all tech talent pipeline students. Without this project, the university cannot provide the necessary training experience or accommodate STEM-H enrollment growth.

The second priority project, replacing Randolph Hall, will allow the university to offer increased and improved instructional space to support instruction for the engineering program. Replacing Randolph is at the core of supporting engineering growth and enrollment growth. The proposed replacement building would house five large engineering departments, including Computer Science, and would provide additional space for student team research projects, including national team-based research and development competitions.

In accordance with the state's traditional capital outlay process, the university has begun its internal work to develop the 2020–2026 Capital Outlay Plan which has a heavy focus on STEM-

H support, facility improvements, and campus renewal to continue to advance the instruction, research, economic development, and campus infrastructure.

Virginia Tech is sensitive to the total cost of education passed on to our students and understands resources are finite. Projects that impact the cost of attendance undergo significant planning to ensure that students' value meets or exceeds the impact of new costs. Planning for these activities is coordinated with growth and spending plans and balanced with the impact on student costs.

Section G. Restructuring: Provide information about any plans your institution has to seek an increased level of authority, relief from administrative or operational requirements, or renegotiation of existing management agreements.

RESPONSE:

In the fourteen years since the General Assembly passed the Restructured Higher Education Financial and Administrative Operations Act of 2005, Virginia Tech has experienced significant benefits through the ability to locally manage university processes and resources, which translate into benefits for the Commonwealth. Particularly in a period of constrained resources and growing fixed costs, the flexibility provided through Restructuring has allowed the university to continue to make progress in important strategic areas, and has become the standard operating environment at Virginia Tech. The benefits of the Restructuring Act permeate the operating culture of the university and facilitate decision-making at the ground level where the university can deploy efficient and specialized solutions to meet our management needs. Enhanced authority can continue and expand these existing benefits, specifically in the following operational areas:

- Talent recruitment and retention: increased flexibility over university management of compensation and benefit programs.
- Resource planning: Assurance that nongeneral fund balances (e.g., rate savings) will remain with Virginia Tech.
- Additional enhanced restructuring authority in two areas is specifically related to the proposed *Institutional Performance Partnership Agreement* and the advancement of state goals:

Expanded Management Authority over Academic Site Approval

For the fall 2019 and spring 2020 semesters, the university will temporarily utilize the Northern Virginia Center at Falls Church for instruction related to the Tech Talent Pipeline. Beginning in summer 2020, Virginia Tech needs to expand operations and student enrollment in the Alexandria area and utilize temporary space, proximate to the Innovation Campus site, until the state authorized Innovation Campus is constructed and online. In the interim, it is critical that Virginia Tech have the ability to identify and utilize temporary instructional space(s). In this context, the university needs the autonomous flexibility to provide instruction at temporary location(s) beyond the currently approved instructional sites until the state authorized Innovation Campus is online. As the Innovation Campus evolves, the university needs to be nimble in securing instructional space appropriate to

the student enrollment and academic offerings each semester in order to deliver the state objective in the most timely and efficient manner.

Expanded Management Authority Regarding Enrollment Management

Increased flexibility on the fixed enrollment cap of non-resident undergraduates would allow the university to strengthen revenues without significant resident tuition rate increases while assuring the delivery of a high-quality education to an increasing number of Virginia students. In addition to supporting Virginia undergraduate enrollment, this authority can allow the university to meet demand from nonresidents, support the commonwealth's talent workforce needs, mitigate the impact of the projected flattening of high school graduates, and provide much needed resources to support two critical university priorities: 1) talent recruitment and retention, and 2) Virginia undergraduate student financial aid. Both of these programs are inadequately resourced and the university is challenged to find funding. Measured growth of nonresidents, in light of agreed upon resident enrollment, provides an innovative opportunity for a win-win for the state and Virginians to solve challenging problems that deliver higher value for the Commonwealth.

Section H. Performance Pilots (optional): For this topic, any institution that wishes to include a Performance Pilot and provided notification by April 1 to relevant parties, should select one or more of the strategies presented in the institution's Academic and Financial plan (PART 3) and General Fund Request (PART 4) that constitute(s) "one innovative proposal" as defined in subsection F of § 23.1-306. Describe the proposal, the proposed performance measures and the requested authority or support from the Commonwealth.

RESPONSE:

In accordance with the state timeline, Virginia Tech notified state officials of its intent to submit an innovative performance pilot. Consistent with this, the university's Six-Year plan includes a package that will advance Virginia Tech's mission and address critical needs of the Commonwealth. These benefits are made possible through a renewed partnership with the Commonwealth; one that emphasizes affordability and developing human capital to position the Commonwealth and Virginia Tech for continued economic success. This proposal enhances both transparency and alignment to advance our shared goals. *Appendix 1* of this narrative includes the proposed Institutional Partnership Performance Agreement (IPPA) between Virginia Tech and the Commonwealth of Virginia.

Section I. Evaluation of Previous Six-Year Plan: Briefly summarize progress made in strategies identified in your institution's previous six-year plan. Note how additional general fund support and reallocations were used to further the strategies.

RESPONSE:

With the Commonwealth's continued support, the university was able to make progress towards several major initiatives outlined in our previous Six-Year Plan. Tuition and fees for in-state undergraduates were held to the planned 2.9% increase in 2018-19, and new General Fund support offset the need for a tuition increase for 2019-20. Additional General Fund investment for undergraduate student financial aid was leveraged with increased institutional support to expand access to low- and middle-income Virginia students. The university was also able to expand degree growth in Data Science and Technology and Science and Engineering. In addition, state support for faculty and staff salary increases allowed the university to maintain its position relative to our peer institutions regarding compensation. Finally, incremental General Fund support for the university's Corps of Cadets helped to ameliorate mandatory cost increases and address critical programmatic needs.

Other significant advancements include:

- The university successfully completed the integration of the Virginia Tech Carilion School of Medicine (VTSCOM), with the school becoming the university's ninth college on July 1, 2018. The VTSCOM and the Fralin Biomedical Research Institute at VTC continue to have a transformative impact on the Roanoke regional economy and support a wide array of interdisciplinary, groundbreaking research related to human health and disease.
- With the support of the Commonwealth, the university developed and delivered the Commonwealth Cyber Initiative Blueprint to the Virginia Research Investment Committee in December 2018. Virginia Tech is currently working through the implementation phase of the initiative, including the establishment of the Hub, the development of an internship program, and the recruitment of the Executive Director. Along with partner institutions, stakeholders are also establishing a process for the certification of CCI regional nodes.
- Enrollment Growth
 - In fall 2018, total enrollment included a record 19,745 Virginia undergraduates; an increase of over 4,500 students since 2004.
 - Demand for a Virginia Tech education continues to grow. For the second year in a row, the undergraduate applicant pool for fall 2019 exceeded 30,000.
 - Despite a nationwide decline in enrollment in public-sector postsecondary enrollment, the university is poised to admit its largest freshman class in fall 2019, including the most Virginia undergraduate freshmen in history.
 - In 2018-19, the university continues its successful Winter Session, offering additional degree credit opportunities for students during the winter break. The winter 2018 session delivered 9,327 student credit hours to 2,677 students.
- Research
 - Recognized by industry for its impact across several research areas, Virginia Tech's College of Engineering recorded one top-five and three top 10 placements in the 2020 U.S. News and World Report's graduate program rankings.
 - Working with its partners at the University of Virginia and Inova Health System, Virginia Tech, Carilion Clinic, and the Fralin Biomedical Research Institute at VTC

- secured at five-year \$23 million grant from the National Institutes of Health to accelerate new treatments and improve health care across the Commonwealth. This collaborative, cross-state partnership, known as the integrated Translational Health Research Institute of Virginia (iTHRIV), leverages data science expertise to streamline scientific workflows for clinical trials, develop innovative therapeutic advancements, and create more personalized approaches to healthcare.
- Virginia Tech's Office of the Vice President for Research and Innovation established a Faculty Fellows Program, which selects faculty leaders for up to three-year terms to contribute to the university's research and innovation infrastructure in targeted areas. This program will lead initiatives in shared research facilities and start-ups that are critical to research productivity and facilitating the movement of discovery from the lab bench to real-world applications.
 - Academic Initiatives
 - The university's Destination Areas bring together teams of faculty to address complex problems, including Coastal Mitigation, Infectious Disease, Rural Health, Security, and the Brain. Over the last two years, the university has made a significant investment in the Destination Areas initiative, hiring 31 faculty in FY18 and adding 8 more in FY19. These faculty expand instructional and research capabilities in growing academic domains that directly align with societal and industry needs. With its focus on transdisciplinary discovery and experiential learning, this initiative will expand the university's research capacity and provide students with the high-demand skills they will need to thrive in a dynamic, knowledge-based economy.
 - Under the leadership of the newly established Office of Learning Systems Innovation and Effectiveness, the university continues to implement curricular innovation, develop responsive learning systems, engage internal and external stakeholders in the learning process, workforce preparedness, and facilitate institutional effectiveness.

Section J. Economic Development Annual Report (Due October 1): Describe the institution's contributions to stimulate the economic development of the Commonwealth and/or area in which the institution is located.

RESPONSE:

Virginia Tech's mission is to "improve the quality of life and the human conditions throughout the Commonwealth." We contribute to economic development by facilitating the movement of new ideas to market and distributing the opportunity to broadly leverage those innovations. This activity grows our institution through partnerships and investments that strengthen regional economies across Virginia. We are able to make contributions to the pool of skilled talent across Virginia, foster innovation in partnership with industry, and support the development of vibrant places.

Virginia Tech was pleased to contribute to the decision of Amazon to bring HQ2 to Northern Virginia. This project, widely covered in the media, is considered by many to represent a turning point in corporate relocation decision-making for its focus on talent production and marshaling the resources to sustain talent benefiting not just Amazon but companies across Virginia's technology sectors. This includes support developing Virginia's Tech Talent pipeline increasing enrollment to 2,000 in our undergraduate computer science programs at our main campus in Blacksburg over the next eight years.

A) University-led or public-private partnerships in real estate and/or community development.

The flagship for the Amazon-tech talent pipeline initiatives is the \$1 billion Innovation Campus. This will triple the university's footprint in Northern Virginia and will be a magnet for leading tech talent, research, and education. It will include: 300,000 square feet of academic space and cutting-edge research-and -development facilities; 250,000 square feet of partner space dedicated to startups and corporate facilities; 350,000 square feet of housing space for students and faculty; and 100,000 square feet of retail and support spaces. The Innovation Campus will be located in the Alexandria portion of National Landing near Potomac Yard, about two miles from Amazon's new location in Arlington.

Elsewhere in the Commonwealth we partnered with Tech Center, a 100 acre \$450 million private-led project bringing new retail, residential, and office development to Center City Newport News. Developed in collaboration with the award-winning Virginia Tech Corporate Research Center, Tech Center includes a 50 acre research park anchored by federal research facilities like the Department of Energy's Jefferson National Lab and NASA-Langley, as well as leading firms like Canon. The first research building opened this summer at 100% occupancy and plans are underway for a second building.

B) State industries to which the institution's research efforts have direct relevance.

Virginia Tech's research in cybersecurity is one area of institutional strength with great relevance to industry. Virginia Tech is the first institution in the Commonwealth to be designated an NSA Center for Academic Excellence in Cyber Operations. It also operates a number of federally sponsored Industry/University Cooperative Research Centers that provide opportunities for industry leaders such as CACI, Northrup Grumman, Raytheon, and SAIC to connect with university researchers in areas including security and software engineering, broadband wireless access and applications, and high-performance configurable computing.

We leverage such research expertise to help the Commonwealth meet critical talent needs. For example, working with eight other public institutions of higher education across Virginia, Virginia Tech is leading an effort to create a state-of-the-art platform for cybersecurity education. The Virginia Cyber Range provides advanced cybersecurity training exercises for high-school and college students, revolutionize cybersecurity education within the commonwealth, and position Virginia to become a leading source of critical cybersecurity expertise for the nation.

- C) High-impact programs designed to meet the needs of local families, community partners, and businesses.

Virginia Tech has formed the College Access Collaborative to strengthen the university's existing commitment to increase access to higher education. Currently, Virginia Tech serves the Commonwealth of Virginia by partnering with communities that typically graduate a lower number of college-bound high school students. The Collaborative's outreach efforts are led by a newly created organizational unit with dedicated personnel and resources that will leverage current efforts and form new partnerships across the state. Such partnerships will involve a multipronged approach to provide support, outreach, and resources to students, parents, teachers, and counselors within identified schools. The Collaborative will provide a variety of services and activities, including seminars and advising on college preparation, teacher and counselor professional development workshops and mentorship, and student and parent visits to Virginia Tech.

- D) Business management/consulting assistance.

The Virginia Tech Catalyst program, funded in part by the US Economic Development Administration, brings together students, faculty, and regional companies for the purpose of research commercialization and proof of concept. Plans are underway for the Office of the Vice President for Research and Innovation to supplement this with a new proof of concept fund.

Companies and professors interested in technology commercialization in need of market analysis can turn to the 4094 Technology Commercialization class, cross listed between Management, Industrial Design, and Engineering. Outcomes from those classes have included the pursuit of new markets and novel applications for new or existing technologies. Companies pose direct challenges to students around product and market discovery. During the course of these challenges, students work with one another to create innovative solutions that are then pitched to the companies at the end of the challenges.

Companies may also engage in short to long-term research with select faculty and graduate students to move their technologies towards commercialization. For example, one local company who produces products for the Unmanned Aerial Systems industry cluster engaged two engineering faculty and one graduate student to test performance of a new product application. Upon completion of this research the company took this particular technology to market through a new spinout which will employ 50 people in Montgomery County.

Virginia Tech **COMMONWEALTH PARTNERSHIP**

A New Model for Virginia Leadership on Talent and Affordability

Preface

Virginia Tech submits this institutional partnership performance agreement (IPPA) proposal pursuant to the performance pilot legislation recently enacted by the General Assembly and approved by the Governor. We offer the proposal for two primary purposes: (i) to put forward significant and measurable ways that Virginia Tech can help the Commonwealth achieve its most important educational and economic priorities, and (ii) to help advance and refine the IPPA concept.

For both of these purposes, we offer a model that illustrates how a partnership agreement between the Commonwealth and one of its higher education institutions—a partnership grounded in clearly defined goals and dependable mutual performance—can lead to greater access, affordability, predictability, return on investment for Virginia students and their families, and to more systematic and successful recruitment, development, and retention of the talent needed to drive Virginia’s economy forward in the 21st century.

With a top-performing higher education system serving as a bridge to opportunity for many and a magnet for major business investment, Virginia enjoys a competitive advantage educationally and economically. A key source of that advantage is the variety of our educational institutions and their missions. Encouraged to grow entrepreneurially and accountably, these institutions have leveraged vital but limited state investment for maximum impact, producing top graduation rates, playing a central role in attracting the world’s leading business enterprises to the Commonwealth, and providing a return on the taxpayer and tuition-payer investment that is second to none.

The need to capitalize on this variety and advantage has never been more urgent. The competition for talent is intense, and will continue to build. For several years, Virginia has experienced a net outmigration of population, with many well-educated young people leaving the state in pursuit of better jobs elsewhere. Businesses large and small identify the difficulty of finding qualified workers as a primary obstacle to growth. Opportunity across the Commonwealth remains uneven, requiring creative new strategies on workforce development and job creation.

Appreciating that our nationally renowned higher education system sets the Commonwealth apart, Virginians across the political spectrum express strong confidence in the value of a college education here. Concerns over the cost of obtaining a higher education experience and uncertainty about the return on investment persist, however, requiring creative strategies for delivering quality and value, better communication, and new emphasis on practical pathways from learning to earning.

If ever there was a time when the Commonwealth, its higher education institutions, employers, and other key partners need to act in concert to leverage all available resources in the most efficient and productive way, it is now.

Moving Forward in Partnership

The animating vision for Virginia higher education in this dynamic new era must be one of *partnership*: partnerships between the Commonwealth and its individual colleges and universities; partnerships between higher education and business organizations; partnerships between colleges and communities; partnerships between higher and K-12 education providers; partnerships between our institutions of higher learning and the students and families we serve.

Because the very idea of *partnership* is grounded in mutual commitment and dependable follow-through, Virginia needs a process by which the Commonwealth, our higher education institutions, and key partners can reach agreement on strategic initiatives and investments and make solid commitments related to the state's most pressing educational and economic priorities.

Institution-specific, performance-based partnership agreements that focus on the Commonwealth's strategic priorities and on Virginia student affordability, access, and employment represent a logical next step in Virginia's ongoing higher education policy innovation. They also are an important step forward in Virginia's push to regain #1 status as the best state for business. Their promise in achieving the latter goal is evident from the strong support the concept and legislation received from the Virginia Business Higher Education Council, the Virginia Chamber of Commerce, and other respected business and community leaders across the Commonwealth, as well as the strong bipartisan support for passage of the legislation itself.

Advancing the Commonwealth's Priorities

To align proposed agreements with the Commonwealth's top priorities, the legislation directs institutions to consider major policies articulated in the Virginia Plan for Higher Education (SCHEV), the state's economic development strategy (VEDP), pertinent regional economic growth and diversification plans (GO Virginia), and pronouncements by the Joint Subcommittee on the Future Competiveness of Virginia Higher Education and the Governor. The statute also specifies more than a dozen categories of innovative policy initiative on which a performance pilot proposal may be based: "college access, affordability, cost predictability, enrollment management subject to specified commitments regarding undergraduate in-state student enrollment, alternative tuition and fee structures and affordable pathways to degree attainment, internships and work study, employment pathways for undergraduate Virginia students, strategic talent development, state or regional economic development, pathways to increase timely degree completion, or other priorities set out in the general appropriation act."

We explain in this document and look forward to discussing further during the forthcoming Six-Year Plan review process, our proposal for an innovative and integrated partnership performance agreement between the Commonwealth and Virginia Tech that addresses virtually all of the priority categories listed in the legislation. It also aligns closely with the educational and economic

strategy documents referenced above and with priorities articulated frequently by members of the Joint Subcommittee and by the Governor.

In short, this proposed partnership will help Virginia Tech better serve its students, but its primary purpose is to enable Virginia Tech to better serve the Commonwealth, and to do so in the specific ways that Virginia's forward-looking elected leaders and experienced educational and economic planners have urged.

Therefore, in accordance with Virginia Code § 23.1-306, paragraph F (Chapter 794 of the Virginia Acts of Assembly), Virginia Tech proposes the following Institutional Partnership Performance Agreement as part of our 2019 Six-Year Plan submission. We do so with the concurrence of the university's Board of Visitors, who at their June 3, 2019 meeting approved of the "strategies for the development of the Six-Year Plan and Institutional Performance Partnership Agreement proposal to advance shared goals." A final Six-Year Plan and IPPA will be taken to a subsequent meeting of the Board in fall 2019 for final approval.

The Virginia Tech *COMMONWEALTH PARTNERSHIP* Proposal

As a flagship university in Virginia's exceptional higher education system, and as a research land-grant institution committed to cultivating talent and creating opportunity for all, Virginia Tech takes its motto—*Ut Prosim* ("That I May Serve")—quite seriously. Virginia Tech's record demonstrates unwavering commitment to talent, innovation, and affordable opportunities for all Virginians. We are eager to work with the Commonwealth, other higher education institutions, and key public and private partners to take major strides forward in these areas and in the process improve the lives of thousands upon thousands of Virginians.

Virginia Tech has taken crucial actions in recent years to advance these priorities:

- To keep college affordable for Virginians, Virginia Tech held annual tuition increases for in-state undergraduates to 2.9% in 2017, 2018, and 2019—significantly lower than the statewide average increase in those years. With additional investment from the Commonwealth, Virginia Tech was able to maintain tuition and Education and General (E&G) fee charges at FY19 levels for in-state undergraduate students for the upcoming 2019-20 academic year. Our mandatory fees remain the lowest of the four-year institutions in the system.
- To expand access for Virginia undergraduates and meet the Commonwealth's need for more graduates in the high-demand STEM-H disciplines, since 2016 Virginia Tech has increased in-state undergraduate enrollment by nearly 1,200 students more than required under the state-funded enrollment growth initiative, without corresponding state support. (Since 2010, the unfunded enrollment growth total is 1,519 Virginia undergraduates.) For fall 2019, the university is poised to enroll its largest and most diverse class in our history: first-generation students are projected to increase by 48% and Pell-eligible students by 27%.
- Virginia Tech also has made strategic investments in student financial aid, including the recent expansion of the university's innovative "Funds for the Future" program that offsets tuition

increases for all students with a family household income up to \$100,000, effectively ensuring a four-year fixed price for students with financial need.

- Only 52% of the university's 2018 in-state graduates left with student loan debt, and their debt levels were below the national average. Owing to the employability of Virginia Tech graduates, the university's three-year cohort-default-rate is just 1.8%, meaning our graduates manage their debt better than most. And due to the university's focus on and investment in student financial aid, the average student debt for the 2018 class of Virginia undergraduates was a *full percent lower* than the class before it.
- To support Virginia's state and regional economic development efforts, we have created new academic programs and made strategic investments. Our central role in the Commonwealth's attraction of Amazon's historic "HQ2" investment and our transformational partnership with Carilion Clinic are just two notable examples.

While we are proud of these accomplishments, sustaining and building upon them in the years ahead will require a spirit of partnership and mutual commitment with the Commonwealth, including targeted, performance-based investments. Our partnership proposal is specific to Virginia Tech's mission, situation, students, partners, resources, and opportunities, and envisions leveraging those strengths through collaborations with other institutions of higher education on many of the initiatives. We offer this Virginia Tech *COMMONWEALTH PARTNERSHIP* proposal not only in a spirit of partnership with the Commonwealth, but in the hope and expectation that it also will open new avenues for collaboration with our colleagues at other institutions of higher education in Virginia.

Our proposal for a Virginia Tech *COMMONWEALTH PARTNERSHIP* agreement includes initiatives and commitments that simultaneously will advance the Commonwealth's talent and affordability objectives and will support both Virginia Tech's and the state. The partnership proposal consists of the six interrelated parts set out below. The first five sections address our proposed initiatives on Affordability, Talent, Innovation, Opportunity, and Performance. A sixth section addresses the Commonwealth's side of the partnership—our requests for state investment and managerial flexibility.

We look forward to discussing this proposal in the course of the Six-Year Plan review, and will be pleased to provide additional detail upon request.

1) AFFORDABLE Pathways to Degrees and Jobs

Our partnership commitment to Virginia students and their families

Provide Affordability and Predictability to Virginia's Students

With the Commonwealth's partnership and investment as proposed, we will:

- ✓ Limit undergraduate in-state tuition growth to the rate of inflation (CPI) for the next four years, with the potential for lower or no increases.

- ✓ Provide Virginia students and their families the option of a guaranteed four-year fixed tuition price.
- ✓ *Reduce* net tuition and mandatory fees—and resulting student loan debt—for low and middle income Virginia students with financial need and household incomes up to \$100,000 (represents 65% of Virginia households) through continued investment in the university's Funds for the Future program and other student financial aid programs.
 - Since 2006, Virginia Tech's "Funds for the Future" scholarship program has offset tuition and fee increases for undergraduates based upon a sliding scale of family income. To expand the reach of this program, the university enhanced the Funds for the Future program to cover undergraduates from families making up to \$100,000 per year, providing predictable pricing and reducing financial barriers for students from low and middle income families.
 - The university will commit to growing institutional student financial aid programs by 150 percent of the rate of any tuition increase. This commitment, if supported by the Commonwealth's partnership and investment as proposed below, will ensure that the buying power of our financial aid program will outpace the increase of tuition, thereby reducing student indebtedness caused by tuition for low and middle income Virginia residents.

Expand Access to High-Demand Programs for More Virginians

With the Commonwealth's partnership and investment as proposed, we will:

- ✓ Sustain existing enrollment of ~1,200 Virginia undergraduate students above 2016 funded levels for the next four years.
- ✓ Add 1,000 additional Virginia undergraduate students through fall 2023 in conjunction with the Tech Talent Pipeline (Amazon HQ2) initiative. (Through fall 2026, the Tech Talent Pipeline initiative will result in 1,500 more in-state undergraduate students enrolled in Virginia Tech in computer science and other high-demand fields.)
- ✓ Expand master's degree programs by 425 students through fall 2023 in high-demand disciplines as part of the new Innovation Campus, with 50% of these students being Virginia residents.
- ✓ Keep talented young Virginians from leaving the Commonwealth for college by expanding capacity in high-demand programs for which Virginia Tech's primary competition is highly ranked universities in other states.
- ✓ Utilize historical benchmarking and demographic segment analysis to target high-achieving, low- and middle-income, underrepresented students from both urban and rural communities of Virginia.
- ✓ Expand successful recruitment initiatives, such as a recent partnership with the online micro-scholarship platform RaiseMe, to facilitate the recruitment of students at Virginia high schools that receive free or reduced lunch.

- ✓ Recruit and retain high-performing transfer students from across the Commonwealth, leveraging existing state expenditures on community college education to increase degree attainment.

Implement the “Best State for Internships” Initiative

Virginia Tech’s strategic plan, “*The Virginia Tech Difference: Advancing Beyond Boundaries*,” identifies experiential learning as a key strategy to support our goal to advance the university’s regional, national, and global impact. The strategic plan commits the university to “ensure 100% of academic majors have a required experiential learning component by 2024.” In order to reach this goal, Virginia Tech is challenging our faculty to embed authentic, place-based learning into all degrees. For many majors, an internship or co-op will be the most appropriate form of experiential learning through which students will leverage their academic experiences to build professional competencies.

Virginia Tech’s 2017-2018 Post-Graduation Survey reported 58% of all graduates completed at least one paid-internship. This provides significant opportunity to increase participation. To build on this, the university must identify and remove barriers to internship completion, including developing year-round enrollment opportunities, both face-to-face and online, to ensure students have the flexibility to complete internships without slowing progress to degree. Virginia Tech is working with Ad Astra Platinum Analytics to maximize the efficiency of its course offerings based on student enrollments, degree requirements, and student academic plans.

In partnership with the Commonwealth, other universities, business organizations, and individual Virginia employers, and with modest state investment as proposed, we will help develop scalable internship models and promote their rapid regional and statewide deployment as part of a major initiative to brand Virginia nationally as the “Best State for Internships.” The initiative will:

- ✓ Implement a pilot internship program to enhance “sticky pathways” for Virginia students, particularly those from low and middle-income families, to gain valuable work experience with engaged Virginia employers. This initiative will provide meaningful and challenging experiences that result in a strong student-employer bond and high probability of post-graduation employment in the Commonwealth.
 - The university will initially target a cohort of up to 50 students, with envisioned growth of up to 250 students over several years.
 - Incremental resources from philanthropy, employers, and the Commonwealth will be used in the pilot program to provide scholarship support for living costs and mitigate the financial burden of participating in an internship.
- ✓ Facilitate on-time undergraduate degree completion and reduce the student’s net cost of education through the provision of financial aid for students with need and creative use of online and year-round enrollment.
- ✓ Provide learning experiences (e.g., team-based projects and oral and written communication skills development) across the curriculum and other preparatory services so students are positioned for success in the workplace.

- ✓ The university is also actively engaged in the development of a pilot internship program as part of the Commonwealth Cyber Initiative (CCI). The CCI CO-OP 2.0 Portal will engage multiple institutions and employers across the Commonwealth to allow full-time summer rotations off-campus and incorporate a part-time internship to ensure continuous experiential learning throughout the academic year. The outcomes of this pilot program will shape the development of a replicable, scalable approach to enhancing experiential learning across the commonwealth.

Develop Comprehensive Career Counseling and Placement Services

In partnership with the Commonwealth and in consultation with employers, Virginia Tech will provide students comprehensive career advising and placement services to help them find employment that uses their degree. In addition to our longstanding career counseling services, we will:

- ✓ Deliver individualized and data-driven advising on courses of study that lead to timely completion while incorporating internships and other job preparation activities.
- ✓ Engage employers and students systematically to create strong matches for internships and careers in the student's field of study upon graduation.
- ✓ Provide students, advisors, and academic program planners with data-driven information on employment demand, needed skillsets, and potential earnings by discipline.
- ✓ Provide financial counseling and financial aid assistance for students to reduce costs and minimize potential trade-offs of time spent on internships and other experiences versus time to degree.

2) The *TALENT* to Drive Virginia Forward

Our partnership plan to bring new talent to Virginia for education and work

Nationwide Marketing and Talent Recruitment

In partnership with the Commonwealth and with flexibility to manage enrollment consistent with the Virginia resident enrollment increase commitments set out in the preceding section, we will:

- ✓ Attract talented undergraduate students from across the country and enroll the majority in high-impact, high-demand degree programs such as engineering, data sciences, life sciences, and other emerging fields at the intersection of innovation, technology, and creativity. Recent enrollment trends show growing demand from outside Virginia for the university's highly ranked engineering programs, for example, which can be met by thoughtful expansion of enrollment in STEM-H areas, helping the university generate resources that directly contribute to the access and affordability of Virginia undergraduates.

- ✓ As a pipeline for talent deployment, the university's expanded internship capabilities will help retain graduates in Virginia by connecting them to post-graduate opportunities as part of their undergraduate experience. The compounding effect of this enrollment growth is the expansion of the university's talent pool in growth sectors that bolster the Commonwealth's capacity to meet the projected demand of Virginia's employers.
- ✓ Attract master's degree students in high-demand disciplines to Virginia Tech's new Innovation Campus (half of the 425 students through fall 2023 will be from Virginia and half from outside Virginia).
- ✓ Capitalize on the quality brand of Virginia Tech to market to and recruit talented students from other states to Virginia Tech, including the use of demographic analysis and individualized, data-driven direct marketing techniques to prospective students in fields in which Virginia Tech can compete with out-of-state institutions, bringing new talent to the Commonwealth.

Talent for Virginia's High-Growth Sector Initiatives

In support of the Commonwealth's economic development strategy for talent recruitment, development, and retention in targeted high-growth sectors, we will:

- ✓ Collaborate, partner, and, where appropriate, coordinate multi-institutional efforts to remedy current and projected talent gaps in specific sectors by recruiting Virginians and non-Virginians for degree programs, including internships, required by those sectors.
- ✓ Provide collaborative leadership at state request to meet targeted talent needs through the Commonwealth Cyber Initiative (CCI), Tech Talent Investment Program, and development of the Innovation Campus in Alexandria.

3) INNOVATION that Drives Growth

Our partnership strategy to increase research and new commercial ventures

Research in Virginia's Targeted Growth Sectors

In support of the Commonwealth's economic goals related to university-based research and commercialization in targeted industry sectors, we will:

- ✓ Increase competitive federal and private funding by more than 10% per year in targeted research areas that are aligned with the greatest opportunity for economic growth and societal impact in the Commonwealth.
- ✓ Continue to provide active support for the work of the Virginia Research Investment Committee (VRIC) and participate in its initiatives where Virginia Tech can add value, lend resources, and facilitate collaboration.

- ✓ Launch and grow the Commonwealth Cyber Initiative (CCI) translational research to commercialization (TR2C) hub in Northern Virginia and coordinate the statewide CCI network to focus on emerging cyber-physical system security at the intersection of data, autonomy, and communications.
- ✓ Serve as a leading contributor to establish one or more additional TR2C's that will support economic diversification and growth through industry-university research partnerships and start-ups in areas aligned with the greatest opportunity for commercialization in the Commonwealth.

Research Catalyst for Regional Growth

In partnership with the Commonwealth and regional stakeholders, and with additional state investment as proposed, we will:

- ✓ Expand the Fralin Biomedical Research Institute at the VTC Academic Health Center by up to 25 primary research teams; more than doubling the funding for biomedical research and startups in the Roanoke region in the next four years.
- ✓ Provide leadership and support to the Valley Innovation Council (VIC), which is serving as a quarterbacking organization for regional economic development and marketing in the Blacksburg-Roanoke-Lynchburg GO Virginia Region 2.
- ✓ Create a fully integrated regional innovation ecosystem that leverages Virginia Tech's new Discovery-to-Market platform, entrepreneurial educational programs, VTC startup seed and venture funds, and regional accelerators to increase the number and success of startups from university research.

4) A Commonwealth of *OPPORTUNITY* for All

Our partnership commitment to statewide and regional economic development

The Commonwealth's Lead Partner on Economic Development

- ✓ As with the Amazon HQ2 project, Virginia Tech is uniquely positioned and stands ready to partner with the Commonwealth on economic development initiatives that attract major business investment to Virginia, create valuable job opportunities for Virginians, and position the Commonwealth as a national and international leader in the major growth sectors of the new economy.

Support for GO Virginia and Other Regional Initiatives

- ✓ Virginia Tech will continue to play a primary role in the economic development of the New River and Roanoke Valleys and our larger region, including serving as a partner and material supporter of GO Virginia initiatives in Region 2 and expanding our successful partnership with Carilion Clinic.

Leading the Rural Virginia Initiative

- ✓ As a land-grant institution with a presence in each county of the Commonwealth, Virginia Tech will play an active leadership role in the Rural Virginia Initiative. We will work in partnership with the Commonwealth, higher education institutions, business, community organizations, and other stakeholders in rural Virginia to identify actionable strategies that bring long-term opportunity and improved quality of life to rural parts of our state.

5) Partners Committed to *PERFORMANCE*

Our partnership business model for efficient performance and accountability for results

Accountability for Results

- ✓ In recognition of state support for partnership initiatives and institutional flexibility, we will be accountable for results on all of the initiatives set out in this proposal. This includes establishing mutually agreed performance metrics and tying funding to outcomes where appropriate. While key initiatives in this proposal include numerically specific commitments, we look forward to jointly developing appropriate performance measures and reporting mechanisms for other initiatives as appropriate.
- ✓ Consistent with this results-based accountability, we will use existing and additional managerial flexibility to optimize our achievement of partnership goals, repurposing resources through continuous improvements in performance and improved alignment of institutional programs and partnership objectives.
- ✓ Virginia Tech will make an annual investment of \$5 million of incremental resources per year (of which \$1.5 million annually will be through reallocation and efficiencies) towards the initiatives described in this partnership proposal.
 - The university recently kicked off an “Administration and Operations Transformation” initiative to identify opportunities to create cost efficient and effective support structures that help bend the cost curve of administrative services. These efforts, and the university’s ongoing focus on cost containment, allow the repurposing of existing resources to the critical initiatives outlined in this agreement.

A Public-Private Partnership Model for the 21st Century University

- ✓ In fulfilling our land-grant university responsibilities, Virginia Tech will develop and expand broad-based connections to industry, government, and nongovernmental entities and maximize opportunities to cultivate a growing community of engaged philanthropists.
- ✓ By developing and expanding these pervasive external relationships and partnerships in advancing all aspects of its mission, Virginia Tech will lead development of a new business model for higher education that cultivates multifaceted business relationships in furtherance of institutional goals and the Commonwealth’s economic priorities, including creation of robust talent pipelines and the capacity to solve complex challenges.

Strategic Collaborations with Higher Education Institutions

- ✓ Virginia Tech's land-grant tradition and culture naturally draws us to engage in collaborations with other educational institutions, as our many existing relationships and initiatives demonstrate. The university will continue to seek additional collaborations where a commitment to trust and performance is shared by the participating institutions and where the Commonwealth's goals are advanced.

6) Counting on the *COMMONWEALTH*

Our partnership requests for state investment and managerial flexibility.

This partnership proposal provides a clear and achievable vision that will produce major strides forward on talent, affordability, economic growth, and job opportunities for Virginians. Success will depend on the ability of both the Commonwealth and Virginia Tech to count on each other for the duration of the four-year partnership period.

Throughout this document, we have described how Virginia Tech proposes to deliver on a range of initiatives and commitments aligned with top state priorities. In this final section, we summarize the commitments we need from the Commonwealth to make these possibilities a reality:

Annual Inflation Adjustment

- ✓ To help maintain our purchasing power during the partnership, we propose that the Commonwealth increase the university's General Fund base operating (E&G) appropriation annually at the rate of inflation (CPI). (\$5.4 million in 2019-20 dollars)
 - In exchange, the university commits to holding in-state undergraduate tuition and fees to no more than 2 percent above inflation in each year of the proposal.

Tuition Moderation Incentive Funding

- ✓ To help hold in-state undergraduate tuition to the rate of inflation while funding key partnership initiatives, we propose that the Commonwealth provide an appropriation equal to 2 percent of in-state undergraduate tuition rate increase per year. (\$4.6 million in 2019-20 dollars)
 - In exchange, the university further commits to holding in-state undergraduate tuition and fee increases to no more than inflation.
 - Alternatively, a lesser or greater amount of state support would produce a commensurate change in the University's commitment regarding annual tuition increases, up to and including General Fund support for freezing in-state tuition and fees.

Student Financial Aid

- ✓ To help reduce the net cost of attending Virginia Tech, lower student loan debt, and increase the return on investment for approximately 65% of Virginia households, we propose that the Commonwealth provide \$1 million in incremental General Fund

support each year for need-based student financial aid for Virginia undergraduates, particularly those from underserved communities in the Commonwealth.

- Prospective allocation of General Funds would be tied to targeted enrollment goals, with subsequent adjustments based on achievement to ensure university accountability.
- The university pledges to match this support with institutional funds while maintaining existing Student Financial Aid programs.

Enrollment Growth Funding

- ✓ To implement the 1,000-student enrollment increase associated with the Tech Talent Investment Program initiative during the four-year partnership period, the Commonwealth will provide \$8,500 per Virginia resident student as outlined in the university's Tech Talent Pipeline Memorandum of Understanding.

Enrollment Mix Authority

- ✓ To establish a sustainable revenue model that supports the university's strategic vision and the partnership commitments herein, including the specific actions to enhance access and affordability for Virginia resident students, we propose that the Commonwealth grant Virginia Tech additional flexibility over enrollment management as it relates to overall growth.
 - Any annual increase in nonresident enrollment would be tailored to market conditions and Virginia's talent needs, would be implemented only if enhanced Virginia resident access and affordability commitments continue to be met, and would not exceed 1% of total undergraduate enrollment annually.
 - Maintaining the existing Virginia undergraduate enrollment level, and growing Virginia enrollment as envisioned in this initiative, is a fundamental element of the university's mission.
 - Out-of-state students will be concentrated in high-demand programs such as computer science, data analytics, engineering, etc. that will help Virginia's employers meet their unmet talent needs.
 - Recruitment of out-of-state students will be combined with the previously described robust internship initiative, contributing to the state's talent pipeline.
 - Any potential enrollment of additional nonresidents would be assessed annually. Practical concerns such as space and instructional capability and the prospect of state support for resident enrollment growth would necessarily factor into any decisions regarding the overall mix.

Faculty Recruitment and Other Initiatives

- ✓ Recruiting talented faculty with demonstrated success to Virginia and the university requires competitive startup packages to equip research programs and position faculty for success. We propose incremental state support of \$1 million per year to partner with university resources to attract new faculty.

- ✓ To help fund the development and deployment of a scalable internship model that meets the needs of students and Virginia industry, we propose incremental state support of \$1 million per year over the four-year period to support student opportunities and fuel talent pipelines to Virginia's employers.

Research and Innovation

- ✓ To enable rapid expansion of Fralin Biomedical Research Institute research activity, we propose incremental state support of \$2 million per year over the four-year period.

Managerial Flexibility

- ✓ The Commonwealth has a long history of supporting common sense measures to lift burdensome administrative obstacles and ensure maximum efficiency of operations. To position Virginia Tech for optimal performance in this intensified results-based accountability environment, we propose that the Commonwealth:
 - Grant increased flexibility regarding academic program approval and site approval. This is especially critical in rapidly developing research and industry domains such as computer and data science and biomedical research. Our faculty are committed to delivering academic programs that meet the needs of students and employers, and any delay in the offering of these programs risks losing Virginia's competitive advantage in recruiting talented students and industry investment.
 - Provide increased flexibility over management of compensation and benefit programs.
 - Prevent state reversion of nongeneral fund balances (e.g., rate savings).
 - Adapt the state's Student Financial Aid model to provide a prospective allocation to institutions that commit to grow enrollment of underrepresented and underserved Virginians. The university would work with the Commonwealth to jointly develop an accountability metric that would account for the actual enrollment of students with need as well as a mechanism for addressing shortfalls in enrollment.

INSTRUCTIONS FOR SUBMITTING 2019 INSTITUTIONAL SIX-YEAR PLAN

Due Date: July 1, 2019

PLEASE READ INSTRUCTIONS CAREFULLY

Six-year Plan Requirement

The Higher Education Opportunity Act of 2011 (TJ21) requires Virginia's public institutions of higher education to prepare and submit six-year plans. (See below for complete code reference.) During the 2015 General Assembly session, joint resolutions approved by the House (HJR 555) and Senate (SJ 228) also require that the mission, vision, goals, and strategies expressed in the Virginia Plan, the statewide strategic plan, guide the development of the strategic plan and six-year plan at each public institution of higher education, as well as the agency plan for SCHEV, and that SCHEV report annually on the Commonwealth's progress toward achieving these goals and targets to the Governor, General Assembly, institutions of higher education and the public.

2019 Six-year Plan Format

The 2019 Six-Year Plan consists of a workbook and an accompanying narrative. The workbook has an Institution ID page, Instructions page and six parts/worksheets: Tuition and Fee Predictability Plan, Tuition and Other Nongeneral Fund Revenue, Academic-Financial, General Fund (GF) Request, Financial Aid, and Economic Development. **Note: Shaded cells contain formulas.** Instructions for the narrative are provided in a separate attachment. The Enrollment/Degree Projections are being developed in a separate process, but will be incorporated into the six-year plan review.

The 2019 Six-Year Plans are due July 1, 2019. The review group (referred to as Op Six) as outlined in § 23.1-306 - see section B below - will meet with each institution during the months of July and August to review the institution's plan and provide comments. If changes to the plans are recommended, revised institutional submissions are due no later than October 1 or immediately following an institution's Board of Visitors' meeting, if it is later than October 1.

INSTRUCTIONS FOR PARTS

1. Tuition and Fees Predictability Plan

There are two worksheets, Part 1A and Part 1B. Part 1A is for institutions without undergraduate tuition differentials. Part 1B is for institutions with undergraduate tuition differentials. Provide no less than three years (each worksheet allows for four years based on the biennial budget structure) of planned increases in in-state undergraduate tuition and mandatory E&G fees and mandatory non-E&G fees. The tuition and fee charges for in-state undergraduate students should reflect the institution's estimate of reasonable and necessary charges to students based on the mission, market capacity and other factors. Plans shall include a range of tuitions based on available state resources, but must contain a scenario that includes the assumption of no new state general fund support (SCENARIO 1). Add scenarios and tables, if more are needed, and provide brief information about the assumptions for each scenario. Include more detailed information about assumptions used to calculate increases in Section B of the Narrative document. Include anticipated tuition and fee charges affecting first-year students. For institutions that have differential tuition and fee charges by program or level, provide (a) anticipated tuition and fee charges for majority students; (b) a weighted average charge of all first-year students (with a detailed worksheet as attachment); and (c) additional spreadsheets with associated anticipated charges for all undergraduate students by program and level. (Please do not alter the shaded cells that contain formulas.)

2. Tuition and Other Nongeneral Fund Revenue

Based on enrollment changes and other institution-specific assumptions, provide the total revenue for educational and general (E&G) programs, by student level and domicile. Provide other anticipated NGF revenue, tuition used for financial aid (Program 108) and anticipated non-E&G fee revenue for in-state undergraduates and then all other students. (Please do not alter the shaded cells that contain formulas.)

3. Academic-Financial Plan

The Academic Plan, (3A), of this worksheet should contain academic (including faculty), finance, and support service strategies the institution intends to employ in meeting state needs/goals as found in the Virginia Plan. Information related to the Virginia Plan and more specific state priorities is provided below. Provide a short title for each strategy. Indicate the total amount for the strategy, any internal reallocation to support the strategy and the amount of tuition revenue that will be used to support the strategy. Provide a short description of the strategy, including a specific reference as to where more detailed information about the strategy can be found in the Narrative document, in column J. Provide any pertinent information for consideration in 2022 through 2026 in column K. **Strategies for student financial aid, other than those that are provided through tuition revenue, should not be included on this table; they should be included in Part 4 of the plan, General Fund Request.** Funding amounts in the first year should be incremental. However, if the costs continue into the second year, they should be reflected cumulatively. Institutions that submit strategies that reflect incremental amounts in both years will have their plans returned for revision. If you add rows for additional strategies, please update the total cost formulas. **Institutions should assume no general fund (GF) support in the Academic-Financial Worksheet. A separate worksheet (Part 4) is provided for institutions to request GF support.** *Special Notes: If an institution wishes to include any information about FTEs or fringe benefit adjustments (using DPB's FY2020 start-up instructions available by the end of May), it should list them as strategies in the Academic Plan not the Financial Plan.*

The Virginia Plan: In the column labeled "VP Goal," identify the goal of the The Virginia Plan (VP) that applies to each institutional strategy using the appropriate number (i.e., 1, 2, 3, or 4). The four VP goals are listed below. An institution must still submit strategies for TJ21 Objectives A through D (now § 23.1-306 D3, D5, D6, and D8 - please see code reference below) as per the Code of Virginia, but the corresponding VP goal is identified, not the TJ21 objective (please see the special note below). In the Narrative document (Section A), institutions should provide more detailed information.

The Virginia Plan has four major goals (more specific state priorities are included with the goals below):

1. Provide affordable access for all. (Access and enrollment, particularly for underrepresented students.)
2. Optimize student success for work and life. (Retention, completion and time to degree.)
3. Drive change and improvement through innovation and investment. (Affordability and funding.)
4. Advance the economic and cultural prosperity of the Commonwealth and its regions. (Workforce alignment, retention of graduates, and, if applicable, research.)

Special Note: Strategies also can cross several state goals, notably those related to improved two-year and four-year transfer, and should be included.

Additional Objectives (D3, D5, D6, and D8)

D3. Plans for providing financial aid to help mitigate the impact of tuition and fee increases on low-income and middle-income students and their families as described in subdivision 9, including the projected mix of grants and loans.

D5. Plans for optimal year-round use of the institution's facilities and instructional resources.

D6. Plans for the development of an instructional resource-sharing program with other public institutions of higher education and private institutions of higher education.

D8. The identification of (i) new programs or initiatives including quality improvements and (ii) institution-specific funding based on particular state policies or institution-specific programs, or both, as provided in subsection C of § 23.1-307.

Special Note: We recommend that any strategy related to D3 be coded as Goal 1 of the VP and strategies related to D5, D6 and D8 be coded as Goal 3 of the VP.

The Financial Plan, 3B, of this worksheet pertains to the 2020-22 biennium. Complete the lines appropriate to your institution. **As completely as possible, the items in the academic plan and financial plan should represent a complete picture of the institution's anticipated use of projected tuition revenues. For every strategy in 3A and every item in 3B of the plan, the total amount and the sum of the reallocation and tuition revenue should equal one another.** Two additional rows, "Anticipated Nongeneral Fund Carryover" and "Nongeneral Fund for Current Operations" are available for an institution's use, if an institution cannot allocate all of its tuition revenue to specific strategies in the plan. Given the long standing practice that agencies should not assume general fund support for operation and maintenance (O&M) of new facilities, O&M strategies should not be included in an institution's plan, unless they are completely supported by tuition revenue.

4. GF (General Fund) Request

Indicate items for which you anticipate making a request for state general fund in the 2020-22 biennium. The item can be a supplement to a strategy or item from the academic and financial plan or it can be a free-standing request for which no tuition revenue would be used. If it is a supplement to a strategy or item from the academic and financial plan, then describe in the Notes column how additional general fund will enhance or expand the strategy. Requests for need-based financial aid appropriated in program 108 should be included here. If additional rows are added, please update the total costs formulas.

5. Financial Aid

The Financial Aid worksheet is similar to previous versions, but it now collects four years instead of five years of data. Provide a breakdown of the projected source and distribution of tuition and fee revenue redirected to financial aid. To ensure compliance with the state prohibition that in-state students should not subsidize out-of-state students and to provide the review group with the scope of the strategy, projections must be made for each of the indicated categories. Please be aware that this data will be compared with similar data provided by other institutional offices in order to ensure overall consistency. (Please do not alter shaded cells that contain formulas.)

6. Economic Development Annual Report for 2018-2019 (See below for complete code references.)

This worksheet and the narrative piece serve as the required annual report. The reporting period is FY19. **THE REPORT IS NOT DUE UNTIL OCTOBER 1.** This worksheet contains a menu of items. Each institution is asked to provide information as it can and when applicable. There is also a separate narrative portion. The combination of the metrics and narrative portion captures report information as required by § 23.1-102 subdivision 2 and § 23.1-306 (A) of the Code of Virginia. In 2018 the Intellectual Property (IP) Worksheet data elements were integrated into the Economic Development Contributions Worksheet. Assignment of intellectual property interests to persons and nongovernmental entities and the value of funds from persons or nongovernmental entities to support intellectual property research, for the most recently ended fiscal year, are captured in the worksheet. The worksheet is structured to capture separate aggregate data on entities that have a principal place of business in Virginia and those with a principal place of business outside of Virginia. The IP information is required by § 23.1-102 subdivision 2 of the Code of Virginia.

Special Notes:

Enrollment/Degree Projections: Detailed six-year enrollment/degree projections are being collected through a separate process. These projections will be incorporated in the Six-Year Plan as part of the July and August institutional meetings with the Op Six.

BOV Approval: Final board approval of the Six-Year Plan should be done at the earliest possible fall meeting. HB 897 (2018) specified that initial plans do not get posted on the General Assembly's website and that final plans should be submitted to DLAS no later than December 1. However, we are requesting that institutions submit final plans with their responses to Op Six Comments on October 1 (or as soon after fall board meetings as possible) as has been done in the past. We post the responses and final plans for review by the Op Six for a period of time prior to posting to SCHEV's website.

Accessibility: All files need to be checked for accessibility prior to submitting them. Information on accessibility is provided at this link on SCHEV's website: <http://schev.edu/index/accessibility/creating-accessible-content>. The first link, "How to Make Your MS Office Documents Accessible" can be used to learn how to check documents. Only errors, not warnings, must be addressed.

Contacts for Questions:

General Questions - Jean Huskey (jeanmottley@schev.edu)

Academic - Beverly Rebar (beverlyrebar@schev.edu)

Finance - Yan Zheng (yanzheng@schev.edu)

Financial Aid - Lee Andes (leeandes@schev.edu)

Enrollment/Degree Projections - Tod Massa (todmassa@schev.edu)

Economic Development - Lynn Seuffert (lynnseuffert@schev.edu)

Legislative References:

§ 23.1 - 306. Institutional Six-Year Plans.

A. The governing board of each public institution of higher education shall (i) develop and adopt biennially and amend or affirm annually a six-year plan for the institution; (ii) submit such plan to the Council, the General Assembly, the Governor, and the Chairmen of the House Committee on Appropriations, the House Committee on Education, the Senate Committee on Education and Health, and the Senate Committee on Finance no later than July 1 of each odd-numbered year; and (iii) submit amendments to or an affirmation of that plan no later than July 1 of each even-numbered year or at any other time permitted by the Governor or General Assembly to the Council, the General Assembly, the Governor, and the Chairmen of the House Committee on Appropriations, the House Committee on Education, the Senate Committee on Education and Health, and the Senate Committee on Finance. Each such plan and amendment to or affirmation of such plan shall include a report of the institution's active contributions to efforts to stimulate the economic development of the Commonwealth, the area in which the institution is located, and, for those institutions subject to a management agreement set forth in Article 4 (§ 23.1-1004 et seq.) of Chapter 10, the areas that lag behind the Commonwealth in terms of income, employment, and other factors.

B. The Secretary of Finance, Secretary of Education, Director of the Department of Planning and Budget, Executive Director of the Council, Staff Director of the House Committee on Appropriations, and Staff Director of the Senate Committee on Finance, or their designees, shall review each institution's plan or amendments and provide comments to the institution on that plan by September 1 of the relevant year. Each institution shall respond to any such comments by October 1 of that year.

C. Each plan shall be structured in accordance with, and be consistent with, the objective and purposes of this chapter set forth in § 23.1-301 and the criteria developed pursuant to § 23.1-309 and shall be in a form and manner prescribed by the Council, in consultation with the Secretary of Finance, the Secretary of Education, the Director of the Department of Planning and Budget, the Director of the Council, the Staff Director of the House Committee on Appropriations, and the Staff Director of the Senate Committee on Finance, or their designees.

D. Each six-year plan shall (i) address the institution's academic, financial, and enrollment plans, including the number of Virginia and non-Virginia students, for the six-year period; (ii) indicate the planned use of any projected increase in general fund, tuition, or other nongeneral fund revenues; (iii) be based upon any assumptions provided by the Council, following consultation with the Department of Planning and Budget and the staffs of the House Committee on Appropriations and the Senate Committee on Finance, for funding relating to state general fund support pursuant to §§ 23.1-303, 23.1-304, and 23.1-305 and subdivision 9; (iv) be aligned with the institution's six-year enrollment projections; and (v) include:

1. Financial planning reflecting the institution's anticipated level of general fund, tuition, and other nongeneral fund support for each year of the next biennium;
2. The institution's anticipated annual tuition and educational and general fee charges required by (i) degree level and (ii) domiciliary status, as provided in § 23.1-307;
3. Plans for providing financial aid to help mitigate the impact of tuition and fee increases on low-income and middle-income students and their families as described in subdivision 9, including the projected mix of grants and loans;
4. Degree conferral targets for undergraduate Virginia students;
5. Plans for optimal year-round use of the institution's facilities and instructional resources;
6. Plans for the development of an instructional resource-sharing program with other public institutions of higher education and private institutions of higher education;
7. Plans with regard to any other incentives set forth in § 23.1-305 or any other matters the institution deems appropriate;
8. The identification of (i) new programs or initiatives including quality improvements and (ii) institution-specific funding based on particular state policies or institution-specific programs, or both, as provided in subsection C of § 23.1-307; and
9. An institutional student financial aid commitment that, in conjunction with general funds appropriated for that purpose, provides assistance to students from both low-income and middle-income families and takes into account the information and recommendations resulting from the review of federal and state financial aid programs and institutional practices conducted pursuant to subdivisions B 2 and C 1 of § 23.1-309.

E. In developing such plans, each public institution of higher education shall consider potential future impacts of tuition increases on the Virginia College Savings Plan and ABLE Savings Trust Accounts (§ 23.1-700 et seq.) and shall discuss such potential impacts with the Virginia College Savings Plan. The chief executive officer of the Virginia College Savings Plan shall provide to each institution the Plan's assumptions underlying the contract pricing of the program.

F. 1. In conjunction with the plans included in the six-year plan as set forth in subsection D, each public institution of higher education, Richard Bland College, and the Virginia Community College System may submit one innovative proposal with clearly defined performance measures, including any request for necessary authority or support from the Commonwealth, for a performance pilot. If the General Assembly approves the proposed performance pilot, it shall include approval language in the general appropriation act. A performance pilot shall advance the objectives of this chapter by addressing innovative requests related to college access, affordability, cost predictability, enrollment management subject to specified commitments regarding undergraduate in-state student enrollment, alternative tuition and fee structures and affordable pathways to degree attainment, internships and work study, employment pathways for undergraduate Virginia students, strategic talent development, state or regional economic development, pathways to increase timely degree completion, or other priorities set out in the general appropriation act.

2. A performance pilot may include or constitute an institutional partnership performance agreement, which shall be set forth in a memorandum of understanding that includes mutually dependent commitments by the institution, the Commonwealth, and identified partners, if any, related to one or more of the priorities set forth in subdivision 1 or set forth in a general appropriation act. No such institutional partnership performance agreement shall create a legally enforceable obligation of the Commonwealth.

3. No more than six performance pilots shall be approved in a single session of the General Assembly.

4. Development and approval of any performance pilot proposal shall proceed in tandem with consideration of the institution's six-year plan, as follows:

a. An institution that intends to propose a performance pilot shall communicate that intention as early as practicable, but not later than April 1 of the year in which the performance pilot will be proposed, to the reviewers listed in subsection B, the co-chairmen of the Joint Subcommittee on the Future Competitiveness of Virginia Higher Education, and the Governor. In developing a proposed performance pilot, the institution shall consider the Commonwealth's educational and economic policies and priorities, including those reflected in the Virginia Plan for Higher Education issued by the Council, the economic development policy developed pursuant to § 2.2-205, the strategic plan developed pursuant to § 2.2-2237.1, relevant regional economic growth and diversification plans prepared by regional councils pursuant to the Virginia Growth and Opportunity Act (§ 2.2-2484 et seq.), and any additional guidance provided by the Joint Subcommittee on the Future Competitiveness of Virginia Higher Education and the Governor.

b. An institution that submits a performance pilot shall include the one innovative proposal with clearly defined performance measures, and any corresponding authority and support requested from the Commonwealth, with its submission of the preliminary version of its six-year plan pursuant to clause (ii) of subsection A or with its preliminary amendment or affirmation submission pursuant to clause (iii) of subsection A.

c. The reviewers listed in subsection B, or their designees, shall review and comment on any proposed performance pilot in accordance with the six-year plan review and comment process established in subsection B and may expedite such review and comment process to facilitate the executive and legislative budget process or for other reasons. No later than October 15 of the relevant year, the reviewers shall communicate to the Governor and the Chairmen of the House Committee on Appropriations and the Senate Committee on Finance their recommendations regarding each performance pilot proposal. Such recommendations shall include the reviewers' comments regarding how the proposed performance pilots, individually and collectively, support the strategic educational and economic policies of the Commonwealth.

d. Each performance pilot proposal shall include evidence of its approval by the institution's governing board and, if accepted, shall be referenced in the general appropriation act.

§ 23-4.4 (B). Intellectual Property and Externally Sponsored Research

B. The president of each state-supported institution of higher education, including the chancellor of the Virginia Community College System, shall beginning with the fiscal year 2016, include in its six-year plan adopted pursuant to § 23-38.87:17 the following for the most recently ended fiscal year: (i) the assignment during the year of any intellectual property interests to a person or nongovernmental entity by the institution, any foundation supporting the intellectual property research performed by the institution, or any entity affiliated with the institution; (ii) the value of externally sponsored research funds received during the year from a person or nongovernmental entity by the institution, any foundation supporting the intellectual property research performed by the institution, or any entity affiliated with the institution; and (iii) the number and types of patents awarded during the year to the institution, any foundation supporting the intellectual property research funded by the institution, or any entity affiliated with the institution that were developed in whole or part from externally sponsored research provided by a person or nongovernmental entity. The plan shall report separate aggregate data on (a) those persons or nongovernmental entities that have a principal place of business in Virginia as reflected in the assignment agreement or awarding documents and (b) those persons or nongovernmental entities that do not have a principal place of business in Virginia as reflected in the assignment agreement or awarding documents.

2019 SIX-YEAR PLAN: 2020-22 through 2024-26

Due: July 1, 2019

Institution:

Institution UNITID:

Individual responsible for plan

Name:

Email address:

Telephone number:

Alternate Contact:

Email address:

Telephone number:

**Part 1A: Tuition and Fees Predictability Plans for Institutions without Undergraduate Tuition Differentials
Virginia Tech**

In-State Undergraduate Tuition and Fees Predictability Plans

Instructions: Provide no less than three years (the worksheet allows for four years based on the biennial budget structure) of planned increases in in-state undergraduate tuition and mandatory E&G fees and mandatory non-E&G fees. The tuition and fee charges for in-state undergraduate students should reflect the institution's estimate of reasonable and necessary charges to students based on the mission, market capacity and other factors. Plans shall include a range of tuitions based on available state resources, but must contain a scenario that includes the assumption of no new state general fund support (SCENARIO 1). Add scenarios and tables, if more are needed, and provide brief information about the assumptions for each scenario. Include more detailed information about assumptions used to calculate increases in Section B of the Narrative document. Include anticipated tuition and fee charges affecting first-year students. (Please do not alter the shaded cells that contain formulas.)

See 1B-T&F Predictability Plan

In-State Undergraduate Tuition and Mandatory E&G Fees

	2019-20	2020-21		2021-22		2022-23		2023-24	
	Charge	Charge	% Increase	Charge	% Increase	Charge	% Increase	Charge	% Increase
Scenario 1: No new GF			%		%		%		%
Scenario 2:			%		%		%		%
Scenario 3:			%		%		%		%

Assumptions for:

Scenario 2	
Scenario 3	

In-State Undergraduate Mandatory Non-E&G Fees

	2019-20	2020-21		2021-22		2022-23		2023-24	
	Charge	Charge	% Increase	Charge	% Increase	Charge	% Increase	Charge	% Increase
Scenario 1:			%		%		%		%
Scenario 2:			%		%		%		%

Assumptions for:

Scenario 1	
Scenario 2	

**Part 1B: Tuition and Fees Predictability Plans for Institutions with Undergraduate Tuition Differentials
Virginia Tech**

In-State Undergraduate Tuition and Fees Predictability Plans

Instructions: Provide no less than three years (the worksheet allows for four years based on the biennial budget structure) of planned increases in in-state undergraduate tuition and mandatory E&G fees and mandatory non-E&G fees. The tuition and fee charges for in-state undergraduate students should reflect the institution's estimate of reasonable and necessary charges to students based on the mission, market capacity and other factors. Plans shall include a range of tuitions based on available state resources, but must contain a scenario that includes the assumption of no new state general fund support (SCENARIO 1). Add scenarios and tables, if more are needed, and provide brief information about the assumptions for each scenario. Include more detailed information about assumptions used to calculate increases in Section B of the Narrative document. Include anticipated tuition and fee charges affecting first-year students. For institutions that have differential tuition and fee charges by program or level, provide (a) anticipated tuition and fee charges for majority students; (b) a weighted average charge of all first-year students (with a detailed worksheet as attachment); and (c) additional spreadsheets with associated anticipated charges for all undergraduate students by program and level. (Please do not alter the shaded cells that contain formulas.)

In-State Undergraduate Tuition and Mandatory E&G Fees

	2019-20	2020-21		2021-22		2022-23		2023-24		
	Charge	Charge	% Increase	Charge	% Increase	Charge	% Increase	Charge	% Increase	
Scenario 1: No new GF										
Majority First-Year Students	11,595	12,163	4.9%	12,759	4.9%	13,384	4.9%	14,040	4.9%	
All First-Year Students	12,513	13,126	4.9%	13,769	4.9%	14,444	4.9%	15,151	4.9%	
Scenario 2:										
Majority First-Year Students	11,595	11,931	2.9%	12,277	2.9%	12,633	2.9%	13,000	2.9%	
All First-Year Students	12,513	12,876	2.9%	13,249	2.9%	13,634	2.9%	14,029	2.9%	
Scenario 3:										
Majority First-Year Students	11,595	11,595	0.0%	11,595	0.0%	11,595	0.0%	11,595	0.0%	
All First-Year Students	12,513	12,513	0.0%	12,513	0.0%	12,513	0.0%	12,513	0.0%	

Assumptions for:

Scenario 2	General Fund to hold tuition increase to inflation - 2.9%
Scenario 3	General Fund to hold tuition increase to 0%

In-State Undergraduate Mandatory Non-E&G Fees

	2019-20	2020-21		2021-22		2022-23		2023-24	
	Charge	Charge	% Increase	Charge	% Increase	Charge	% Increase	Charge	% Increase
Scenario 1:	2,096	2,169	3.5%	2,245	3.5%	2,324	3.5%	2,405	3.5%
Scenario 2:			%		%		%		%

Assumptions for:

Scenario 1	Inflationary cost increase estimates to fee-supported student services.
Scenario 2	

**Part 1C: Tuition and Fees Predictability Plans for Institutions with Undergraduate Tuition Differentials - Detailed Backup
Virginia Tech**

Detailed In-state undergraduate tuition and mandatory E&G fees, including mandatory differential program fees in selected majors.

	College/Major	Fall 2018 FT ISUG Headcount		2019-20		
				Tuition/Tech/Lib	Program Fee	Total
Specialized Program Fee	Architecture and Design, Building Construction	829	4.3%	\$ 11,595	\$ 1,500	\$ 13,095
	College of Engineering	4,670	24.2%	11,595	2,000	13,595
	Pamplin College of Business	3,387	17.6%	11,595	1,613	13,208
	College of Agriculture & Life Sciences	2,201	11.4%	11,595	750	12,345
No fee	All Other	8,197	42.5%	11,595	-	11,595
	Total	19,284		<i>Weighted Average</i>		\$ 12,513

Part 2: Tuition and Other Nongeneral Fund (NGF) Revenue Virginia Tech

Tuition and Fee Increases and Nongeneral Fund (NGF) Revenue Estimates Based on the Assumption of No New General Fund (GF)

Instructions: Based on enrollment changes and other institution-specific assumptions, provide the total revenue for educational and general (E&G) programs, by student level and domicile. Provide other anticipated NGF revenue, tuition used for financial aid (Program 108) and anticipated non-E&G fee revenue for in-state undergraduates and then all other students. (Please do not alter the shaded cells that contain formulas.)

Items	2018-2019 (Estimated)	2019-2020 (Estimated)	2020-2021 (Planned)	2021-2022 (Planned)
	Total Revenue	Total Revenue	Total Revenue	Total Revenue
E&G Programs				
Undergraduate, In-State	\$217,706,720	\$219,926,146	\$229,648,721	\$239,346,600
Undergraduate, Out-of-State	\$229,349,474	\$236,702,714	\$244,348,624	\$250,630,538
Graduate, In-State	\$16,532,398	\$17,620,320	\$18,565,815	\$19,513,007
Graduate, Out-of-State	\$32,974,907	\$32,270,795	\$34,179,038	\$36,320,439
Law, In-State	\$0	\$0	\$0	\$0
Law, Out-of-State	\$0	\$0	\$0	\$0
Medicine, In-State	\$3,171,573	\$3,463,720	\$3,550,313	\$3,639,071
Medicine, Out-of-State	\$5,511,258	\$5,488,664	\$5,625,881	\$5,766,528
Dentistry, In-State	\$0	\$0	\$0	\$0
Dentistry, Out-of-State	\$0	\$0	\$0	\$0
PharmD, In-State	\$0	\$0	\$0	\$0
PharmD, Out-of-State	\$0	\$0	\$0	\$0
Veterinary Medicine, In-State	\$7,240,985	\$7,065,920	\$7,242,568	\$7,423,632
Veterinary Medicine, Out-of-State	\$8,055,466	\$8,097,600	\$8,300,040	\$8,507,541
Other NGF	\$83,724,710	\$87,579,462	\$93,256,500	\$100,051,444
Total E&G Revenue - Gross	\$604,267,491	\$618,215,342	\$644,717,500	\$671,198,801
Total E&G Revenue - Net of Financial Aid	\$597,964,120	\$610,291,514	\$636,543,070	\$662,765,313
Tuition used for Financial Aid (Pgm 108)				
	\$6,303,371	\$7,923,828	\$8,174,430	\$8,433,488
Non-E&G Fee Revenue				
In-State undergraduates	\$40,303,239	\$42,473,765	\$43,960,347	\$45,498,959
All Other students	\$25,767,644	\$27,155,358	\$28,105,795	\$29,089,498
Total non-E&G fee revenue	\$66,070,883	\$69,629,123	\$72,066,142	\$74,588,457

Part 3: ACADEMIC-FINANCIAL PLAN
Virginia Tech

Academic and Financial Plan

3A: Six-Year Plan for Academic and Support Service Strategies for Six-year Period (2020-2026)

Instructions for 3A: In the column entitled "Academic and Support Service Strategies for Six-Year Period (2020-2026)," please provide short titles to identify institutional strategies associated with goals in the Virginia Plan. Provide a concise description of the strategy in the Description of Strategy column (column J). Within this column, provide a specific reference as to where more detailed information can be found in the Narrative document. Note the goal(s) with which the strategy is aligned with the Virginia Plan (in particular, the related priority areas) in the VP Goal column and give it a Priority Ranking in column A. Additional information for 2022-2026 should be provided in column K (Two Additional Biennia). Strategies for student financial aid, other than those that are provided through tuition revenue, should not be included on this table; they should be included in Part 4, General Fund Request, of the plan. If an institution wishes to include any information about FTEs or fringe benefit adjustments (using DPB's FY2020 start-up instructions available by the end of May), it should list them as strategies in the Academic Plan not the Financial Plan. Funding amounts in the first year should be incremental. However, if the costs continue into the second year, they should be reflected cumulatively. Additional rows for strategies must be added before the gray line. Please update total cost formulas if necessary. **ASSUME NO ADDITIONAL GENERAL FUND IN THIS WORKSHEET.**

SECTION A: ACADEMIC AND SUPPORT SERVICE STRATEGIES FOR SIX-YEAR PERIOD (2020-2026)										
Priority Ranking	Strategies (Short Title)	VP Goal	Biennium 2020-2022 (7/1/20-6/30/22)						Description of Strategy	Two Additional Biennia
			2020-2021			2021-2022				
			Total Amount	Reallocation	Amount From Tuition Revenue	Total Amount	Reallocation	Amount From Tuition Revenue		
			Concise Information for Each Strategy							
3	Develop "Destination Areas" that differentiate Virginia Tech and advance regional, national, and global impact	3,4	\$3,804,200	\$0	\$3,804,200	\$7,385,323	\$0	\$7,385,323	Invest in Strategic Market-Centered Instruction and Research including Adaptive Brain and Behavior, Data Analytics and Decision Sciences, Global Systems Science, Integrated Security, and Intelligent Infrastructure for Human Centered Learning Communities	Initial phase of strategy deployment will be complete in FY22. Assessment of future opportunities to maximize benefits of collaborative instruction and research will be continued.
4	Expand access for low and middle-income Virginia families (IPPA Initiative)	1	\$1,000,000	\$0	\$1,000,000	\$2,000,000	\$0	\$2,000,000	Expand efforts to lower net costs for Virginia residents from low- to middle-income families, especially those from underrepresented and underserved communities.	Further reduce student financial need and mitigate student loan debt as resources allow.
5	Expand degree completion, pathway opportunities, VT-shaped transdisciplinary learning, and student advising	1,2,3	\$423,971	\$0	\$423,971	\$848,971	\$0	\$848,971	Improve completion through data-driven approaches to student learning, course design, and academic and career advising.	Continued identification of opportunities to offer Virginia Tech education to all qualified individuals.
6	Be a destination for talented faculty, staff, and students in increasingly competitive markets	1,3,4	\$820,191	\$0	\$820,191	\$1,620,191	\$0	\$1,620,191	Enhance recruitment capabilities, hiring and employment management software, and retention resources.	Develop and attract talent across all roles of the university.
7	Support faculty startup packages (IPPA Initiative)	4	\$750,000	\$0	\$750,000	\$1,500,000	\$0	\$1,500,000	Enhance the university's ability to attract and retain top faculty and compete for extramural research funding through investment in advanced facilities and equipment.	Continued support of faculty recruitment through competitive startup offerings.
8	Advance institutional excellence through organizational effectiveness and efficiency	3	\$1,283,622	\$0	\$1,283,622	\$2,483,622	\$0	\$2,483,622	Support continuous improvement process of administrative functions and operations through review and implementation of efficient and effective service strategies.	Continued deployment of best practices and identification of cost-savings strategies.
9	Increase graduate enrollment in strategic areas	2,4	\$683,623	\$0	\$683,623	\$1,419,802	\$0	\$1,419,802	Advance university priorities in innovation, technology development, and entrepreneurship with an emphasis on increasing graduate enrollment in STEM-H disciplines.	Continued growth of graduate programs in high-demand disciplines to support market needs.
10	Reallocation of existing resources to support university priorities	3		\$1,468,242	-\$1,468,242		\$2,628,478	-\$2,628,478	Implement strategic reallocation of existing resources and identified cost-savings to support university strategic priorities.	Continued redeployment of existing resources to high priority needs.
Total 2020-2022 Costs (Included in Financial Plan *Total Additional Funding			\$8,765,607	\$1,468,242	\$7,297,365	\$17,257,909	\$2,628,478	\$14,629,431		

3B: Six-Year Financial Plan for Educational and General Programs, Incremental Operating Budget Need 2020-2022 Biennium

Instructions for 3B: Complete the lines appropriate to your institution. As completely as possible, the items in the Academic Plan (3A) and Financial Plan (3B) should represent a complete picture of the institution's anticipated use of projected tuition revenues. For every strategy in 3A and every item in 3B of the plan, the total amount and the sum of the reallocation and tuition revenue should equal one another. Two additional rows, "Anticipated Nongeneral Fund Carryover" and "Nongeneral Fund Revenue for Current Operations" are available for an institution's use, if an institution cannot allocated all of its tuition revenue to specific strategies in the plan. Also, given the long standing practice that agencies should not assume general fund support for operation and maintenance (O&M) of new facilities, O&M strategies should not be included in an institution's plan, unless they are completely supported by tuition revenue. **Please do not add additional rows to 3B without first contacting Jean Huskey.**

Assuming No Additional General Fund		2020-2021			2021-2022		
Items	Total Amount	Reallocation	Amount From Tuition Revenue	Total Amount	Reallocation	Amount From Tuition Revenue	
Total Incremental Cost from Academic Plan¹	\$8,765,607	\$1,468,242	\$7,297,365	\$17,257,909	\$2,628,478	\$14,629,431	
1 Increase T&R Faculty Salaries (\$)	\$7,687,263	\$0	\$7,687,263	\$15,584,880	\$0	\$15,584,880	
T&R Faculty Salary Increase Rate(%) ²	2.80%		2.80%	2.80%		2.80%	
1 Increase Admin. Faculty Salaries (\$)	\$3,224,493	\$0	\$3,224,493	\$6,539,466	\$0	\$6,539,466	
Admin. Faculty Salary Increase Rate (%) ²	2.80%		2.80%	2.80%		2.80%	
Increase Classified Staff Salaries (\$)	\$0	\$0	\$0	\$0	\$0	\$0	
Classified Salary Increase Rate (%) ²	0.00%		0.00%	0.00%		0.00%	
2 Increase University Staff Salaries (\$)	\$1,487,165	\$0	\$1,487,165	\$3,004,073	\$0	\$3,004,073	
University Staff Salary Increase Rate (%) ²	2.00%		2.00%	2.00%		2.00%	
12 O&M for New Facilities	\$2,343,590	\$0	\$2,343,590	\$4,209,649	\$0	\$4,209,649	
8 Add'l In-State Student Financial Aid from Tuition Rev	\$78,395	\$0	\$78,395	\$160,334	\$0	\$160,334	
8 Add'l Out-of-State Student Financial Aid from Tuition Rev	\$172,207	\$0	\$172,207	\$349,325	\$0	\$349,325	
Anticipated Nongeneral Fund Carryover	\$0	\$0	\$0	\$0	\$0	\$0	
13 Nongeneral Fund for Current Operations	\$2,711,680	\$0	\$2,711,680	\$5,506,300	\$0	\$5,506,300	
11 Library	\$500,000	\$0	\$500,000	\$1,000,000	\$0	\$1,000,000	
14 Utility Cost Increase	\$1,000,000	\$0	\$1,000,000	\$2,000,000	\$0	\$2,000,000	
Total Additional Funding Need	\$27,970,400	\$1,468,242	\$26,502,158	\$55,611,937	\$2,628,478	\$52,983,459	

Notes:
(1) Please ensure that these items are not double counted if they are already included in the incremental cost of the academic plan.

Part 3: ACADEMIC-FINANCIAL PLAN

Virginia Tech

Academic and Financial Plan

3A: Six-Year Plan for Academic and Support Service Strategies for Six-year Period (2020-2026)

Instructions for 3A: In the column entitled "Academic and Support Service Strategies for Six-Year Period (2020-2026)," please provide short titles to identify institutional strategies associated with goals in the Virginia Plan. Provide a concise description of the strategy in the Description of Strategy column (column J). Within this column, provide a specific reference as to where more detailed information can be found in the Narrative document. Note the goal(s) with which the strategy is aligned with the Virginia Plan (in particular, the related priority areas) in the VP Goal column and give it a Priority Ranking in column A. Additional information for 2022-2026 should be provided in column K (Two Additional Biennia). Strategies for student financial aid, other than those that are provided through tuition revenue, should not be included on this table; they should be included in Part 4, General Fund Request, of the plan. If an institution wishes to include any information about FTEs or fringe benefit adjustments (using DPB's FY2020 start-up instructions available by the end of May), it should list them as strategies in the Academic Plan not the Financial Plan. Funding amounts in the first year should be incremental. However, if the costs continue into the second year, they should be reflected cumulatively. Additional rows for strategies must be added before the gray line. Please update total cost formulas if necessary. **ASSUME NO ADDITIONAL GENERAL FUND IN THIS WORKSHEET.**

SECTION A: ACADEMIC AND SUPPORT SERVICE STRATEGIES FOR SIX-YEAR PERIOD (2020-2026)										
Priority Ranking	Strategies (Short Title)	VP Goal	Biennium 2020-2022 (7/1/20-6/30/22)						Description of Strategy	Two Additional Biennia
			2020-2021			2021-2022				
			Total Amount	Reallocation	Amount From Tuition Revenue	Total Amount	Reallocation	Amount From Tuition Revenue		
			Concise Information for Each Strategy							

(2) If planned, enter the cost of any institution-wide increase.

(3) Represents the nongeneral fund cost (61%) of increasing faculty salaries 4.6% per year, targeting the 60th percentile of peer faculty salaries over six years.

Incremental E&G Revenue from "Tuition Revenue" tab:	26,502,158	52,983,459
Reallocation	1,468,242	2,628,478
Surplus/(Shortfall)	(0)	0

**Part 4: General Fund (GF) Request
Virginia Tech**

Requesting General Fund Support

Instructions: Indicate items for which you anticipate making a request for state general fund in the 2020-22 biennium. The item can be a supplement to a strategy or item from the academic and financial plan or it can be a free-standing request for which no tuition revenue would be used. If it is a supplement to a strategy or item from the academic and financial plan, then describe in the Notes column how additional general fund will enhance or expand the strategy. Requests for need-based financial aid appropriated in program 108 should be included here. If additional rows are added, please update the total costs formulas.

Priority Ranking	Initiatives Requiring General Fund Support						Notes
	Strategies (Match Academic-Financial Worksheet Short Title)	VP Goal	Biennium 2020-2022 (7/1/20-6/30/22)				
			2020-2021		2021-2022		
			Total Amount	GF Support	Total Amount	GF Support	
1	Provide Inflationary Increase to Base E&G General Fund Budget	1,2	5,346,248	5,346,248	10,847,538	10,847,538	IPPA Component
2	Extend Access for Low and Middle-Income Families by Continuing to Expand Need-Based Financial Aid to Undergraduate Students	1,2	2,000,000	1,000,000	4,000,000	2,000,000	IPPA Component
3	Develop and Deploy Scalable Internship Program to Expand Experiential Learning and Enhance Workforce Development	2,4	1,000,000	1,000,000	2,000,000	2,000,000	IPPA Component
4	Support Faculty Startup Packages, Particularly for New Faculty in the STEM-H fields, Including Equipment and Lab Renovation	2,3,4	1,750,000	1,000,000	3,500,000	2,000,000	IPPA Component
5	Leverage Partnerships to Further Expand Research Programs in Roanoke Region	3,4	2,000,000	2,000,000	4,000,000	4,000,000	IPPA Component
6	Cultivate Groundbreaking Research through Expansion of University Research Capabilities	3,4	1,500,000	1,500,000	3,000,000	3,000,000	
7	Provide Incremental General Fund to Moderate In-State Undergraduate Tuition (From 4.9% to 2.9%)	1,2	4,623,812	4,623,812	9,474,192	9,474,192	IPPA Component
8	Provide Further Incremental General Fund to Freeze In-State Undergraduate Tuition (From 2.9% to 0.0%)	1,2	6,704,527	6,704,527	13,737,578	13,737,578	IPPA Component
9	Increase Support for Unique Military Activities	2,4	193,215	193,215	386,430	386,430	

Total \$ 25,117,803 \$ 23,367,803 \$ 50,945,738 \$ 47,445,738

Part 5: Financial Aid Plan
Virginia Tech

FINANCIAL AID PLAN

Instructions: Provide a breakdown of the projected source and distribution of tuition and fee revenue redirected to financial aid. To ensure compliance with the state prohibition that in-state students not subsidize out-of-state students and to provide the review group with a scope of the strategy, projections must be made for each of the indicated categories. Please be aware that this data will be compared with similar data provided by other institutional offices in order to ensure overall consistency. (Please do not alter shaded cells that contain formulas.)

Note: If you do not have actual amounts for *Tuition Revenue for Financial Aid* by student category, please provide an estimate. If values are not distributed for *Tuition Revenue for Financial Aid*, a distribution may be calculated for your institution.

Allocation of Tuition Revenue Used for Student Financial Aid

*2018-19 (Estimated) Please see footnote below.

T&F Used for Financial Aid	Gross Tuition Revenue	Tuition Revenue for Financial Aid (Program 108)	% Revenue for Financial Aid	Distribution of Financial Aid
Undergraduate, In-State	\$217,706,720	\$197,840	0.1%	\$197,840
Undergraduate, Out-of-State	\$229,349,474	\$4,715,590	2.1%	\$4,715,590
Graduate, In-State	\$16,532,398	\$51,088	0.3%	\$51,088
Graduate, Out-of-State	\$32,974,907	\$12,853	0.0%	\$12,853
First Professional, In-State	\$10,412,558	\$546,000	5.2%	\$546,000
First Professional, Out-of-State	\$13,566,724	\$780,000	5.7%	\$780,000
Total	\$520,542,781	\$6,303,371	1.2%	\$6,303,371
Total from Tuition & Other NGF Revenue worksheet	\$604,267,491	\$6,303,371	1.0%	
In-State Sub-Total	\$244,651,676	\$794,928	0.3%	\$794,928

2019-20 (Planned)

T&F Used for Financial Aid	Gross Tuition Revenue	Tuition Revenue for Financial Aid (Program 108)	% Revenue for Financial Aid	Distribution of Financial Aid
Undergraduate, In-State	\$219,926,146	\$1,347,000	0.6%	\$1,347,000
Undergraduate, Out-of-State	\$236,702,714	\$5,232,028	2.2%	\$5,232,028
Graduate, In-State	\$17,620,320	\$30,000	0.2%	\$30,000
Graduate, Out-of-State	\$32,270,795	\$0	%	\$0
First Professional, In-State	\$10,529,640	\$495,688	4.7%	\$495,688
First Professional, Out-of-State	\$13,586,264	\$819,112	6.0%	\$819,112
Total	\$530,635,880	\$7,923,828	1.5%	\$7,923,828
Total from Tuition & Other NGF Revenue worksheet	\$618,215,342	\$7,923,828	1.3%	
In-State Sub-Total	\$248,076,107	\$1,872,688	0.8%	\$1,872,688
Additional In-State	\$3,424,431	\$1,077,760	31.5%	\$1,077,760

2020-21 (Planned)

T&F Used for Financial Aid	Gross Tuition Revenue	Tuition Revenue for Financial Aid (Program 108)	% Revenue for Financial Aid	Distribution of Financial Aid
Undergraduate, In-State	\$229,648,721	\$1,413,003	0.6%	\$1,413,003
Undergraduate, Out-of-State	\$244,348,624	\$5,383,757	2.2%	\$5,383,757
Graduate, In-State	\$18,565,815	\$30,000	0.2%	\$30,000
Graduate, Out-of-State	\$34,179,038	\$0	%	\$0
First Professional, In-State	\$10,792,881	\$508,080	4.7%	\$508,080
First Professional, Out-of-State	\$13,925,921	\$839,590	6.0%	\$839,590
Total	\$551,461,000	\$8,174,430	1.5%	\$8,174,430
Total from Tuition & Other NGF Revenue worksheet	\$644,717,500	\$8,174,430	1.3%	
In-State Sub-Total	\$259,007,418	\$1,951,083	0.8%	\$1,951,083
Additional In-State	\$10,931,311	\$78,395	0.7%	\$78,395
Additional In-State from Financial Plan		\$78,395	#DIV/0!	

2021-22 (Planned)

T&F Used for Financial Aid	Gross Tuition Revenue	Tuition Revenue for Financial Aid (Program 108)	% Revenue for Financial Aid	Distribution of Financial Aid
Undergraduate, In-State	\$239,346,600	\$1,482,240	0.6%	\$1,482,240
Undergraduate, Out-of-State	\$250,630,538	\$5,539,886	2.2%	\$5,539,886
Graduate, In-State	\$19,513,007	\$30,000	0.2%	\$30,000
Graduate, Out-of-State	\$36,320,439	\$0	%	\$0
First Professional, In-State	\$11,062,703	\$520,782	4.7%	\$520,782
First Professional, Out-of-State	\$14,274,069	\$860,580	6.0%	\$860,580
Total	\$571,147,357	\$8,433,488	1.5%	\$8,433,488
Total from Tuition & Other NGF Revenue worksheet	\$671,198,801	\$8,433,488	1.3%	
In-State Sub-Total	\$269,922,310	\$2,033,022	0.8%	\$2,033,022
Additional In-State	\$10,914,893	\$81,939	0.8%	\$81,939
Additional In-State from Financial Plan		\$160,334	#DIV/0!	

* Please note that the totals reported here will be compared with those reported by the financial aid office on the institution's annual S1/S2 report. Since the six-year plan is estimated and the S1/S2 is "actual," the numbers do not have to match perfectly but these totals should reconcile to within a reasonable tolerance level. Please be sure that all institutional offices reporting tuition/fee revenue used for aid have the same understanding of what is to be reported for this category of aid.

Part 6: Economic Development Annual Report for 2018-19

Virginia Tech

ECONOMIC DEVELOPMENT: CONTRIBUTIONS (HB515; which was enacted as Chapter 149, Virginia Acts of Assembly, 2016 Session)

Requirement: As per § 23.1-306 (A) of the Code of Virginia each such plan and amendment to or affirmation of such plan shall include a report of the institution's active contributions to efforts to stimulate the economic development of the Commonwealth, the area in which the institution is located, and, for those institutions subject to a management agreement set forth in Article 4 (§ 23.1-1004 et seq.) of Chapter 10, the areas that lag behind the Commonwealth in terms of income, employment, and other factors.

Instructions: The reporting period is FY19. **THE REPORT IS NOT DUE UNTIL OCTOBER 1.** The metrics serve as a menu of items that institutions should respond to as applicable and when information is available to them. Leave fields blank, if information is unavailable. (Please do not alter shaded cells that contain formulas.) Please note the narrative question at the bottom of the page. The response should be provided in the separate Narrative document, Section J.

6A: Provide information for research and development (R&D) expenditures through June 30, 2019 by source of fund with a breakdown by Science and Engineering (S&E) specific and non-S&E. (Definition: The response is an unaudited version of the data to be submitted to the NSF Higher Education R&D [HERD] Survey in early 2020.)

VA PLAN Strategy Reference	6A: Research and Development (R&D) Expenditures by Source of Fund	*S&E	Non S&E	Total
	Source of Funds			
4.3	Federal Government	\$ 205,200,000	\$ 4,000,000	\$ 209,200,000
	State and Local Government	53,350,000	1,000,000	54,350,000
	Institution Funds	215,500,000	4,000,000	219,500,000
	Business	45,900,000	200,000	46,100,000
	Nonprofit Organizations	6,200,000	100,000	6,300,000
	All Other Sources	4,500,000	200,000	4,700,000
	Total	\$ 530,650,000	\$ 9,500,000	\$ 540,150,000

Virginia Tech note: These figures are preliminary estimates. Final figure

6B: For the following items, provide responses in appropriate fields. Insert an X for yes/no responses. Use Number/Amount field for other information. A Comments field has been provided for any special information your institution may want to provide.

VA PLAN Strategy Reference	6B: General Questions	Yes	No	Number/Amount	Comments
4.1	1. Does your institution offer an innovation- or entrepreneurship-themed student living-learning community (student housing)?	X			see: https://www.apex.vt.edu/innovate-living-learning-community/
4.1	2. Does your institution offer startup incubation/accelerator programs? If yes, please comment if people/companies external to the institution can access them and, if so, how. (Definition: Incubation or accelerator programs are structured multi-week or multi-month programs for which a cohort of start-up companies are chosen; includes mentoring and connections to investors)	X			see: https://www.apex.vt.edu/kickstart-vt/
4.2	3. Does your institution have an entrepreneurship center? If yes, please comment if people/companies external to the institution can access it and, if so, how.	X			see: www.apex.vt.edu
4.2	4. Does your institution use Entrepreneur(s)-in-Residence? (Definition: EIRS are usually experienced founders of high-growth start-up companies who partner with a university to explore active research projects and seek out opportunities to commercialize the products of research; alternatively, an EIR could be a grad student, post-doc, business major, etc., who assists to evaluate IP and provide assessments of market pull potential, business planning, etc.)		X		VT does not have an EIR program.
4.1	5. Number of students paid through externally funded research grants or contracts.			1176	
4.1	6. Please answer Yes if (i) your institution's written tenure policy specifically mentions the development of intellectual property and/or the commercialization of research; or (ii) the policies of any schools or other divisions mention IP and/or commercialization as a consideration for promotion and tenure; or (iii) the instructions for compiling a P&T portfolio include providing information about patents, licenses, and other commercialization activities? If Yes, please provide a brief explanation in the comments field. If No, use the comments field to describe other ways a promotion and tenure committee might value those contributions, if any.	X			Tenure requirements include citation of: "Economic contributions and entrepreneurship" including start-up businesses, commercialization of discoveries, and other evidence of entrepreneurship; and "Intellectual properties" including software, patents, and disclosures.
4.2	7. Does your institution or an affiliated entity offer translational research and/or proof of concept funding? If yes, please provide the dollar amount awarded in FY19 in the number/amount field. In the comments field, please provide the number of grants awarded; additional comments can also be entered if needed.	Yes		The VT Catalyst program provided 16 awards totaling \$109,550 in FY 19.	New university funding was identified to support proof of concept activities with an implementation plan anticipated in FY 20.
4.2	8. Does your institution or an affiliated entity offer a seed fund or venture capital fund that awards money to start-ups? If yes, please comment on whether it awards funding only to university-based start-ups or to the general public as well? If yes, please provide dollar amount awarded in FY19 in the number/amount field and the number of awards made in the comments field.	Yes		VTC Seed Fund: \$525k across 3 companies. VTC Innovation Fund: \$2,924,066 across 5 companies.	The Virginia Tech-Carilion (VTC) Seed Fund and the VTC Innovation Fund (venture capital fund) invest capital in start-ups. These investments are available to university startups and the general public, regionally or with a meaningful connection with Virginia Tech and/or Carilion).

6C: Provide information for federal research and commercialization grants by type, number, and dollar value with a breakdown by college and department. If additional rows are needed, please contact Jean Mottley (jeanmottley@schev.edu) for assistance.

VA PLAN Strategy Reference	6C: Research and Commercialization Grants	No.	\$ Value	College	Department
4.3	SBIR - Small Business Innovation Research	2	\$362,975	Engineering	Aerospace and Ocean Engineering
		1	\$30,000	Engineering	Civil & Environmental Engineering
		1	\$200,501	Engineering	Electrical and Computer Engineering
		3	\$164,318	Engineering	Mechanical Engineering
		2	\$97,500	Science	Chemistry
		1	\$51,433	Science	Mathematics
		1	\$134,902	VP for Research	Fralin Biomedical Research Institute
		3	\$201,122	Engineering	Aerospace and Ocean Engineering
		1	\$83,503	Engineering	Biomedical Engineering & Mechanics
		1	\$174,000	Engineering	Civil & Environmental Engineering
	STTR - Small Technology Transfer Research	1	\$37,500	Engineering	Dean - Engineering
		3	\$374,719	Engineering	Electrical and Computer Engineering
		1	\$33,241	Engineering	Industrial and Systems Engineering
		1	\$60,000	Engineering	Mechanical Engineering
		1	\$62,500	Science	Chemistry
		1	\$19,996	Science	Physics
		1	\$58,730	Veterinary Medicine	Vet Med Research & Graduate Studies
		1	\$20,000	VP for Research	Hume Center

6D: The Intellectual Property (IP) section captures information on disclosure, patent, and licensing activities. It is divided into three tables. Tables 1 and 2 capture information regardless of source of funds or nature of entity to whom IP is transferred. Table 3 is required by § 23.1-102 subdivision 2 of the Code of Virginia. It details assignment of IP interests to persons or nongovernmental entities and the value of externally sponsored research funds received during the year from a person or nongovernmental entity by the institution, any foundation supporting the IP research performed by the institution, or any entity affiliated with the institution. Information is sought on research that yields IP regardless of the project's intent. Information is sought about IP transferred as a result of either basic or applied research. Tables 2 and 3 capture separate aggregate data on entities that have a principal place of business in Virginia and those with a principal place of business outside of Virginia.

VA PLAN Strategy Reference	6D: Table 1 - All Activity for FY 2018-19	No.
4.2	1. Number of Intellectual Property disclosures received	148
	2. Number of Provisional Patent Applications filed during the year	47
	3. Number of Patent Applications filed during the year (by type)	
	Design	0
	Plant	3
	Utility	73
	Total	76
	4. Total number of Patent Applications pending (by type)	
	Design	0
	Plant	3
	Utility	748
	Total	751
	5. Number of Patents awarded during the year (by type)	
	Design	0
	Plant	0
	Utility	51
	Total	51

VA PLAN Strategy Reference	6D: Table 2 - All Activity for FY 2018-19	Principal Place of Business in VA	Principal Place of Business Outside VA
4.2	1. Total number of intellectual property licenses executed in FY18-19	4	14
	2. Number of start-ups created through IP licensing in FY18-19	4	1
	3. Amount of licensing revenue in FY18-19 resulting from all intellectual property licenses	\$131,916	\$1,403,909
	4. Number of jobs created as a result of university start-ups	4	10

VA PLAN Strategy Reference	6D: Table 3 - Research Supported by Persons or Nongovernmental Entities	Principal Place of Business in VA	Principal Place of Business Outside VA
4.2	1. Value of funds received (not expended) from persons or nongovernmental entities to support research	\$34,002,306	\$33,140,911
	2. Number of patents awarded during the year (by type) developed in whole or part from research projects funded by persons or nongovernmental entities:	This is a subset of Table 1, #5.	
	a. Design Patent	0	0
	b. Plant Patent	0	0
	c. Utility Patent	2	16
	d. Total	2	16
	3. Number of assignments of intellectual property interests to persons or nongovernmental entities (definition: "assignment" is the outright conveyance, sale and transfer of the IP, in contrast to "license" of IP rights, which is the contractual permission given to another party to use the IP)	0	0

6E: These items are VCCS specific. Please provide responses in appropriate fields. A Comments field has been provided for any special information the VCCS may want to provide.

VA PLAN Strategy Reference	6E: General Questions - VCCS Specific	Number	Comments
4.1	1. Number of training programs leading to workforce certifications and licensures.		
	2. Number of students who earned industry recognized credentials stemming from training programs.		
	3. Number of industry-recognized credentials obtained, including certifications and licenses.		
	4. Number of Career/Technical Education certificates, diplomas and degrees awarded that meet regional workforce needs.		

NARRATIVE REQUIREMENT (Section J):

Contributions to Economic Development – Describe the institution’s contributions to stimulate the economic development of the Commonwealth and/or area in which the institution is located. *If applicable*, the information should include:

- a. University-led or public-private partnerships in real estate and/or community redevelopment.
- b. State industries to which the institution’s research efforts have direct relevance.
- c. High-impact programs designed to meet the needs of local families, community partners, and businesses.
- d. Business management/consulting assistance.