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BACKGROUND AND PURPOSE OF THE REPORT

The Virginia Plan for Higher Education, now in its sixth year, charts a course to make Virginia the best-educated state by 2030. Its pillars of access, affordability, success, innovation and prosperity form the statewide foundation upon which Virginia’s excellent colleges and universities serve their students, communities and the Commonwealth.

The State Council of Higher Education for Virginia developed The Virginia Plan as part of its statutory role to “advocate for and promote the development and operation of an educationally and economically sound, vigorous, progressive, and coordinated system of higher education in the Commonwealth.” It provides a cohesive strategy to ensure that initiatives and programs work together efficiently while maintaining the independence, mission and culture of every institution. It also serves as a framework for the Council’s budget and policy considerations.

As the decade draws to a close, Virginia’s baccalaureate colleges and universities serve more students and graduate more students than ever before. Virginia’s community colleges remain vital engines of opportunity and growth despite falling enrollments since the end of the Great Recession.

During this period of sustained growth, however, policy makers and institutions must prepare for a potential economic slowdown, fewer high school graduates entering college, a changing student profile and more limited public resources. At the same time, colleges and universities must reach new students, many from different backgrounds, and prepare them for the challenges ahead. Academic leaders and faculty must look to the “future of work” to ensure students reap the rewards of their education and training and can lead prosperous lives despite the debt that many will incur.

Students of all ages and backgrounds need more information, advice and counseling so they can weigh the plethora of options that will guide their futures. In this new environment, policy makers and institutional leaders will make decisions based on an evolving and diversifying student body – one that is more likely to be financially independent, to be the first in the family to attend college, to be from a low-income household and more racially and ethnically diverse.
This annual report is the final one of this six-year strategic plan. The Council reviewed The Virginia Plan’s goals, strategies, measures and priority initiatives, and will make adjustments in early 2020. This report identifies past progress and future trends that the Commonwealth must address if it is to prosper and succeed in the next decade.

In the coming year, the updated Virginia Plan will continue to serve as a vision for the Commonwealth and a common framework. This framework is built on the premise that Council will serve as the steward of this visionary effort to become the best-educated state in the nation and that all partners in higher education must work together to promote a sound and vigorous Commonwealth.
FINDINGS FOR 2019

The following findings discuss Virginia’s progress toward its best-educated state objective. The findings examine educational attainment and the four goals of The Virginia Plan for Higher Education: affordable access; student success; innovation and investment; and economic and cultural prosperity. They are based on analysis of measures and related indicators provided in appendix B of this report along with ongoing stakeholder feedback through the year.

Staff identified strengths (✓) and areas of improvement (✗) for the overall objective of 70% attainment in the four goal areas, that need to be met in order to help ensure that Virginia becomes the best-educated state by 2030. Additional details of each measure are in Appendix A.

Virginia’s Status Toward Becoming Best-Educated State by 2030

✓ The rate of Virginians with a postsecondary degree or credential rose to 54%. More working age Virginians (25-64 years-old) had a college degree or workforce credential (based on 2017 census data), a two-percentage-point increase from the previous year. Virginia ranks 6th in the nation. This ranking remains unchanged over the last four years.

✗ Gaps in educational attainment remain by region and by race/ethnicity. While Virginia’s attainment rates are high compared to other states, significant gaps (averaging 20 to 30 percentage points) remain in rural versus urban areas and between minority and non-minority individuals.

Access and Affordability

✓ Tuition held flat for 2019-20 and financial aid increased over the biennium. Tuition and mandatory educational and general (E&G) fees (those fees related to instruction and supported by the state) did not increase for the majority of in-state undergraduate students, primarily as a result of additional state funding. In addition, the state also provided additional financial funding for low- and middle-income families to further reduce costs.

✗ Tuition as a percentage of family income went up. After accounting for overall costs, state and federal aid and expected family contribution, the average unmet need (what a student still needs to pay) remained relatively stable and below the target of 50%. Tuition and fees as a percentage of family income also increased, particularly for low-income students.
Student Success

✓ Students earned a record number of awards (degrees, certificates and credentials) last year. During 2018-19, students earned 122,168 awards, the highest number ever in a single year. While SCHEV estimates the Commonwealth is on track to meet the estimated 1.5 million degrees and certificates needed by 2030 to meet the overall 70% attainment goal, staff plans to reassess this estimate in 2020 as newer data indicate this amount may fall short.

✗ Success gaps for underrepresented students remain. At both four-year and two-year institutions, the gap in the success rate between underrepresented students (those who are minority race, low-income, adults 25 and older or from areas of the state with low attainment rates) and non-underrepresented students declined in 2019, but the gaps are still wider than they were a few years ago.

Innovation and Investment

✓ Virginia’s degrees cost less than other states. A report published in 2019 found that Virginia’s institutions are relatively cost-efficient, producing degrees at lower costs (total-of tuition and state support) than national and regional averages and Virginia’s neighboring and peer system states.

✗ Virginia families still pay the majority of educational costs. Despite overall efficiency, in-state students contribute 52% of the educational related costs of college, well above the state’s goal of 33%.

Economic and Cultural Prosperity

✓ Earnings increased slightly for those with a degree or credential. The percentage of graduates earning sustainable wages three years after graduation increased from 73% to 74%. In addition, median graduate earnings three years after graduation also increased.

✗ Virginia’s ranking in annual research expenditures compared to other states remains flat. While Virginia invested more recently in research expenditures, the Commonwealth remains below its target of increasing its share of national research expenditures by 30%. 
RECOMMENDATIONS FOR 2020

Based on the findings for 2019, SCHEV staff developed recommendations aligned with the four goals of The Virginia Plan for Higher Education. To increase educational attainment rates in the coming years, the Commonwealth should focus on improving enrollment and completion rates for underrepresented populations, including minority race/ethnicity students, those from regions of the state with low educational attainment (primarily rural), low-income students and adult students.

The success of higher education in Virginia requires a shared commitment by all stakeholders, including policymakers, institutions and businesses. As a result, SCHEV developed recommendations for each stakeholder group.

**Policymakers and policy influencers:** Policymakers and influencers include executive and legislative branch elected officials and staff, and organizations that support education policy. These groups have the ability to make policies and provide funding to higher education; they can also assist and influence policymakers as they study higher education policy and how to fund it. SCHEV recommends that these groups:

- **Support funding and initiatives for higher education that make college more affordable and predictable, increase talent in high demand areas and support institutional quality and excellence.** In fall 2019, SCHEV provided budget recommendations totaling $212.6 million in additional investment for 2020-22. In addition to supporting access, affordability and quality, the recommendations include efforts to promote talent development, review efficiencies and effectiveness and focus on improving equity for populations with traditionally low enrollment, completion and attainment rates.

- **Adjust the financial aid funding model to support additional aid to low- and middle-income students.** During the 2019 General Assembly session, SCHEV requested and was tasked with reviewing the state financial aid program. SCHEV staff and representatives from various levels of state government and public institutions reviewed the state’s need-based financial aid program, the Virginia Student Financial Assistance Program (VSFAP). Staff reviewed the current model for allocating state aid to institutions, the “Partnership Model”, and recommended revisions to the allocation methodology. The new allocation model uses two criteria: (1) the average unmet need of the institution, and (2) the number of students with a low expected family contribution, which recognizes and encourages enrollment of low-income students. In addition to
the funding recommendations, SCHEV will continue to work with stakeholders to explore reforming the award process, how tuition is used for financial aid and access programs.

- **Adopt strategies that further align funding with the needs of the Commonwealth.** This fall, SCHEV published a Strategic Finance Plan for Virginia, in partnership with HCM Strategists, a national higher education consultancy group supported by the Lumina Foundation. As part of its annual budget and policy recommendations, SCHEV requested funding and included sample budget language to support a review of alternative cost models, measures of efficiency, and expected outcomes for the use of state funds to further align with state needs.

- **Increase information and resources available for students in secondary education to help raise awareness of postsecondary opportunities.** To reach the state’s 70% attainment goal by 2030, higher education must be accessible to all students, and stakeholders must support them as they complete their programs. To do this, SCHEV’s proposal, The Guidance to Postsecondary Success (GPS), part of its 2020-22 budget recommendations, focuses on enhancing existing efforts. The [1-2-3 Go!](#) program supports college awareness campaigns and events by coordinating professional development for secondary and access-provider staff, increasing advising capacity in underserved high schools, supporting early college testing for high school students, and improving financial aid application completion activities.

- **Invest in the technology talent pipeline and other high demand areas in cooperation with institutions and businesses.** With the current and expected growth in information technology jobs, the state will need to support development of programs, internships, and research to meet workforce demands. In addition, while the growth of technology jobs is an important element of Virginia’s economy, support is needed for other areas with critical shortages, including teaching and healthcare.

- **Develop affordable pathway programs that are proven to increase educational attainment.** Programs such as a clearly defined transfer process from associate to bachelor’s degree reduce the cost of postsecondary education. Promise programs that offer free or discounted tuition for qualified students who agree to meet certain requirements are another example of pathway programs that offer lower-cost degree opportunities.
• **Encourage agencies and regions to set shared goals for educational attainment.** Increasing attainment rates across educational sectors requires a shared commitment by policymakers, education providers and communities. Creating a shared commitment allows organizations and regions to identify problems, define strategies and set tailored attainment goals that align with the populations they serve.

**Institutions:** Deliver instruction and services to students so they can receive a quality education and graduate with the skills to succeed in work and life. SCHEV recommends that they:

• **Review-efforts to ensure that all students, including those who are underrepresented, have an opportunity to enroll and succeed.** While many institutions have conducted such reviews, leadership is encouraged to continue identifying opportunities to close the gaps in enrollment and completion for underrepresented students. In addition, institutions should identify strategies for students who leave early-to return and obtain a degree, either through reverse transfer or through alternative degree completion efforts. Virginia’s recent award of the Talent Innovation and Equity (TIE) grant by the Lumina Foundation will raise-further awareness about socio-economic stratification at the state, regional and-institutional level.

• **Continue to develop programs and initiatives that support-workforce alignment, including the technology talent pipeline, other high demand areas and experiential learning.** To address the growing need for graduates in high demand fields, institutions should develop programs, research, internships and career placement, in partnership with businesses.

• **Continue to identify promising practices and opportunities for efficiencies while maintaining excellence in education.** Investigate new and innovative ways to save and reallocate resources to keep tuition increases to a minimum while maintaining quality.

**Business and community organizations:** Businesses benefit by employing graduates of Virginia’s colleges and universities, investing in and profiting from research conducted at the state’s institutions of higher learning, and gaining perspective and insight through partnerships with colleges and universities, their staff and students. In addition, many community organizations provide support services to students
and parents and communicate with them on regular basis. SCHEV recommends that Business and community organizations:

- **Increase internships and work-based learning opportunities.** Businesses that provide work opportunities to undergraduates can help young people learn critical skills before they seek full-time work. Internships and similar opportunities can benefit businesses, organizations and students.

- **Invest in research and commercialization.** Virginia rates low in private research support. Greater business investment in research and commercialization can support economic growth.

- **Support educational opportunities for employees and communities.** Supporting postsecondary education in the workplace through flexible work schedules and educational assistance programs provides greater opportunities for individuals. In addition, businesses and organizations that communicate and support the value of postsecondary education in their communities help regions prosper.

Education in all its forms has transformative powers. It is a public and a private good. The growing importance of higher education crucial for sustainable employment and prosperity—imposes an ever-greater responsibility on the Commonwealth to ensure that its higher-education system remains viable-and vibrant.
OTHER NOTABLE PROGRESS IN 2019

In addition to these broad findings, SCHEV recently published two reports relevant to the Commonwealth’s long-term strategy for higher education. They and other notable achievements are summarized below:

- **Virginia receives a $500,000 Lumina Foundation grant to help close gaps in educational attainment.** A $500,000 educational equity grant by Indianapolis-based Lumina Foundation will help the Commonwealth increase educational achievement for students of color by 5 percentage points over the next four years. SCHEV plans to use the grant to invest in leadership and culture, advance equity initiatives, improve communications about equity challenges and solutions and provide subgrants to institutions.

- **SCHEV completes review of financial aid.** SCHEV published a *Review of Financial Aid Funding Formulas and Awarding Practices*, a comprehensive study of the Commonwealth’s need-based financial aid program that provides approximately $223 million annually to in-state students at public institutions. The study found that while low-income students receive the majority of state aid and have higher average awards than middle-income students, their amount of remaining need after accounting for the additional financial aid support remains higher than middle-income students. SCHEV adjusted its formula for calculating institutional financial aid and recommended an increase in financial aid of $45 million for the upcoming biennium. Staff plans to continue to review the financial aid program in the coming year, focusing on awarding practices and how institutions account for financial aid awards.

- **Strategic finance plan to align funding with state goals.** In cooperation with HCM Strategists and Lumina Foundation’s Strategy Labs, SCHEV published a *Strategic Finance Plan for Virginia: Aligning Higher Education Finances and Strategies*. The findings from this report informed SCHEV’s recent 2020-22 budget and policy recommendations. As a result of this analysis, the recommendations included an increased focus on investments in associate and certificate programs at the community colleges, increasing need-based aid for students and continuing to support institutional operations that reduce the size of tuition and fee increases.
• **Historic investment in Tech Talent Investment Pipeline.** Governor Ralph Northam announced that Virginia will invest in a tech talent pipeline. Its goal is to create 31,000 new computer science graduates over 20 years, under agreements signed with 11 universities. The Tech Talent Investment Program will benefit students and tech employers in every corner of the Commonwealth. It grew out of Virginia’s winning proposal to Amazon, which chose to locate its second headquarters in Northern Virginia.
APPENDIX A: VIRGINIA’S PROGRESS TOWARD BEST-EDUCATED STATE RANKING BY 2030

Virginia ranks sixth in the nation based on the number of working-age people who have a degree or certificate. Data from the Lumina Foundation and the 2017 American Community Survey show that about 54% of Virginians age 25-64 population hold a degree or certificate, an increase of two percentage points from the previous year. While this percentage has increased in the last decade, other states also are focused on improving education levels as part of their economic-development efforts.

![Postsecondary attainment rate (25-64) by state (2017)](chart)

Virginia’s current rank: 6th

While Virginia ranks high in the category of working-age residents ages 25-64 who hold a degree or certificate, additional analysis of 25-34-year-olds with an associate degree or higher indicates that Virginia’s ranking could decline as the population ages. Virginia ranks seventh by this measure. Virginia’s educational attainment rate of its 25-34-year-old population is similar to the larger 25-to-64-year-old group with an associate degree or better (54%). However, New York, New Jersey, North Dakota and New Hampshire have higher rates of educational attainment for their 25-34-year-old population, despite having a lower ranking than Virginia for the total working-age (25-64 years old) population. As a result, these four states may have a better-educated workforce moving forward, and Virginia’s ranking could fall as people retire.
While Virginia’s rank rose from eleventh (based on 2016 census data) to seventh (based on 2017-census data), efforts to increase educational attainment should remain a focus in the coming year.

Although Virginia’s national ranking in educational attainment rates is high, statewide gaps in education-attainment rates remain, based on race and ethnicity. Gaps among in rural areas of the state and minority populations when compared to the statewide attainment rate. The communities of Arlington and Falls Church have attainment rates of 80%, yet Sussex and Greensville counties have rates closer to 15%. African American and Latino Virginians have attainment rates around 20 percentage points below white Virginians.
Population with Associate Degree or Higher by Race & Ethnicity (2017)

<table>
<thead>
<tr>
<th>Race / Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latino or Hispanic</td>
<td>31%</td>
</tr>
<tr>
<td>American Indian</td>
<td>33%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>34%</td>
</tr>
<tr>
<td>Statewide</td>
<td>49%</td>
</tr>
<tr>
<td>White</td>
<td>52%</td>
</tr>
<tr>
<td>Asian &amp; Pacific Islander</td>
<td>68%</td>
</tr>
</tbody>
</table>

Source: http://strongernation.luminafoundation.org/report/2019/7nation
APPENDIX B: PROGRESS ON MEASURES AND TARGETS

To track progress toward becoming the best-educated state, the Council developed six measures and targets that align with the goals and strategies of the plan. These measures serve as a baseline for future reports as data becomes available. Currently, only two measures are progressing toward their target; others are not progressing toward the target or are below their annual commitment.

Awards

Target: Grant 1.5 million awards by 2030, including those that close the gap in unfilled jobs.

On track, but new assessment indicates a need to review this measure: In 2018-19, Virginia’s public and private nonprofit institutions issued 91,037 undergraduate degrees, certificates and workforce credentials. Including graduate degrees, students earned 122,168 total awards, the most ever. Cumulatively, Virginia students have earned 445,851 undergraduate degrees or certificates since 2014, approximately 30% of the way to the target of 1.5 million.

Data are not included for private for-profit institutions as they are not collected by SCHEV. In 2017, data for workforce credentials were added from information gathered through the New Economy Workforce Credential Grant. SCHEV also continues to monitor the number of graduate-level degrees awarded.

SCHEV staff estimates Virginia will meet the target of 1.5 million awards by 2030 (See following chart.) While the measure and target were developed in 2014, a recent review of the assumptions that predict the number of awards needed to meet the-best-educated state goal indicates that this target may need to be adjusted. These assumptions include updates on migration patterns, the number of awards earned per individual and the addition of workforce credential data. More information on awards is available through the SCHEV College Completion Scorecard:

http://research.schev.edu/completions/completion_scorecard.asp
**Success**

*Target:* Annually improve completion rates that close the gap between underrepresented populations and traditional students by 2030.¹

*Not on track:* Success rates for underrepresented populations improved at four-year institutions, and the gap between underrepresented and non-underrepresented students closed slightly. However, the gaps are wider than they were five years ago. There was little change at two-year institutions, where the gap also remains wider than it was five years ago.

For Virginia to continue to produce the awards needed to be the best-educated state, it must close the gaps in educational success attainment. Using the SCHEV-calculated

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¹ Underrepresented students are minority race or ethnicity, receive Pell grants, are 25 or older or represent regions of the state with lower education-attainment rates.
student success index\(^2\), success rates for the 2013-14 cohort increased for underrepresented students at public four-year institutions, and because success rates increased more slowly for non-underrepresented students, the gap between these two groups decreased. Currently, the gaps in completion between these student groups is 11 percentage points in each sector. While the annual improvement is encouraging, this 11-point gap is wider than it was 2009-10, when the gap for each sector was nine points.

**Success Index for Public Institutions**

<table>
<thead>
<tr>
<th></th>
<th>Non-underrepresented</th>
<th>Underrepresented</th>
<th>GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-Year Public</td>
<td>50.7%</td>
<td>39.3%</td>
<td>11.4</td>
</tr>
<tr>
<td>Four-Year Public</td>
<td>77.1%</td>
<td>66.4%</td>
<td>10.7</td>
</tr>
</tbody>
</table>

Underrepresented populations include those who are minority race/ethnicity, students ages 25 and older, low-income or from areas of the state in the lowest quintile for postsecondary attainment. Completion is measured by the student success index which includes students who graduate or remain enrolled at any Virginia institution within the measurement timeframe.

Source: [http://research.schev.edu//gradrates/success_index.asp](http://research.schev.edu//gradrates/success_index.asp). 2013-14 for 4-year and 2015-16 for 2-year within 100% timeframe.

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\(^2\) The student success index is a broader measure than traditional graduation rates as it includes all students, including full-time, part-time, transfer and first-time college students. In addition, success is counted by students who either graduate from their institution or another institution or remain enrolled after the measurement time period.
Additional data by specific underrepresented populations (Pell status, age and race) are available on the SCHEV research website:
http://research.schev.edu/enrollment/DistUnder_RepPop.asp

Success Index for Four-Year Public Institutions

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-underrepresented</th>
<th>Underrepresented</th>
<th>GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>66%</td>
<td>77%</td>
<td>11</td>
</tr>
<tr>
<td>2012-13</td>
<td>63%</td>
<td>75%</td>
<td>12</td>
</tr>
<tr>
<td>2011-12</td>
<td>65%</td>
<td>76%</td>
<td>11</td>
</tr>
<tr>
<td>2010-11</td>
<td>63%</td>
<td>73%</td>
<td>10</td>
</tr>
<tr>
<td>2009-10</td>
<td>63%</td>
<td>72%</td>
<td>9</td>
</tr>
<tr>
<td>2008-09</td>
<td>63%</td>
<td>71%</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: http://research.schev.edu/graduates/success_index.asp
Success Index for Two-Year Public Institutions

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-underrepresented</th>
<th>Underrepresented</th>
<th>GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>39%</td>
<td>51%</td>
<td>11</td>
</tr>
<tr>
<td>2014-15</td>
<td>39%</td>
<td>52%</td>
<td>13</td>
</tr>
<tr>
<td>2013-14</td>
<td>38%</td>
<td>50%</td>
<td>12</td>
</tr>
<tr>
<td>2012-13</td>
<td>35%</td>
<td>47%</td>
<td>12</td>
</tr>
<tr>
<td>2011-12</td>
<td>36%</td>
<td>47%</td>
<td>11</td>
</tr>
<tr>
<td>2010-11</td>
<td>37%</td>
<td>47%</td>
<td>10</td>
</tr>
<tr>
<td>2009-10</td>
<td>38%</td>
<td>47%</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: [http://research.schev.edu/gradrates/success_index.asp](http://research.schev.edu/gradrates/success_index.asp)

**Affordability**

**Target:** Meet half of the cost of attendance for low- and middle-income students through expected family contribution and state and federal grant aid by 2030.

**Not on track:** Only 11% of low-income students and 41% of middle-income students have half of their financial need met by federal and state grants and expected family contributions. Both of these rates have steadily declined over time and continued to decline last year.
Virginia falls short (and has always fallen short) of the affordability goal at two-year and four-year institutions. Only 9% of low-income students have half their financial need met at four-year institutions. For middle-income students, it is 36%. Looking at the public two-year institutions, 17% of low-income students have half their need met, and 67% of middle-income students have half their financial need met.

SCHEV’s recent review of financial aid funding and awarding practices identified a similar disadvantage for low-income students. They receive the majority of state financial aid funds, which in part contributes to lower net prices for these students, but face unmet need more than $1,000 greater than middle-income students in the four-year system, and more than $2,000 greater in the two-year system. The review also identified the relationship between unmet need and completion.

This decline in students with half their need met is explained by several factors, including:

- The number of students demonstrating financial need quadrupled over the past 25 years (35,544 students demonstrating need in 1992-93; 144,155 students demonstrating need in 2017-18).
As the cost of college has risen, the proportion of middle- and high-income students demonstrating need also has increased. In 1992-93, students coming from families earning more than $100,000 made up only 0.4% of all students demonstrating financial need. By 2017-18, the proportion of high-income students grew to 12.8%. In the same period, the number of middle-income students in need of financial aid rose from 13.8% to 24.5%. Not surprisingly, the share of state aid received by middle- and high-income students also increased, eroding the share received by low-income students. In 1992-93, low-income students received 94% of total state aid. In 2017-18, that rate dropped to 66%.

Despite recent investments, state funding to support the costs of higher education has declined. In 2004, the state set a goal to meet 67% of the cost of education, but currently, state support is about 19 percentage points less, at 48% of the cost of education. As a result, institutions have increased tuition and fees for to make up the difference. In the last two budget cycles, when state funding for higher education rose, tuition increases were the lowest in 15 years.

In addition to declining state funding, institutional fees for non-education-related activities, including athletics, student services and transportation, also increased, leading to higher costs for students. The growth rate of these increases has slowed in recent years. Upon SCHEV’s recommendation, the General Assembly reduced the cap in growth rate from 5% to 3% in 2019-2020.
Research

Target: Increase Virginia’s research expenditures as a percentage of national totals by 30% by 2030.

Not on track: Virginia increased its research expenditures in 2018, but has not made any progress toward increasing its proportion of national expenditures. Currently, Virginia’s research investments make up 2.12% of national expenditures, the same rate as the first year SCHEV began tracking the metric in 2013. The target of this measure is to increase this share to 2.75% by 2030.

Increases in academic research and development have meaningful consequences for the health and well-being of citizens and for the economy. Public investment in research at colleges and universities spurs development of scientific and medical discoveries, new medicines and treatments, and myriad innovations and inventions, which lead to patents, licenses and the commercialization of results.

While federal funding for research has remained relatively flat in recent years, this goal focuses on increasing the total share of research funding compared to other states. In federal fiscal year 2018, Virginia ranked 14th nationally in annual expenditures on research and development in higher education; this position has remained relatively unchanged since the mid-2000s even as the total dollar amount has doubled. The Commonwealth’s total share of expenditures compared to the national total was 2.12%, an increase of .06% from the previous year.

The National Science Foundation annually updates data reported by institutions on all research expenditures (federal, state, private, institution, etc.). This information is available at http://www.nsf.gov/statistics/herd/.
Increase in Virginia's Research Expenditures as a Percentage of National Totals

<table>
<thead>
<tr>
<th>Year</th>
<th>Virginia Research Expenditures</th>
<th>% Share National Expenditures</th>
<th>Increase in % Share (from baseline 2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>$1.42 Billion</td>
<td>2.12%</td>
<td>Baseline</td>
</tr>
<tr>
<td>2014</td>
<td>$1.38 Billion</td>
<td>2.06%</td>
<td>-3%</td>
</tr>
<tr>
<td>2015</td>
<td>$1.41 Billion</td>
<td>2.06%</td>
<td>-3%</td>
</tr>
<tr>
<td>2016</td>
<td>$1.46 Billion</td>
<td>2.04%</td>
<td>-4%</td>
</tr>
<tr>
<td>2017</td>
<td>$1.55 Billion</td>
<td>2.06%</td>
<td>-3%</td>
</tr>
<tr>
<td>2018</td>
<td>$1.68 Billion</td>
<td>2.12%</td>
<td>0%</td>
</tr>
<tr>
<td>2030</td>
<td></td>
<td>2.75%</td>
<td>30% (Target)</td>
</tr>
</tbody>
</table>


Price

Target: Keep undergraduate net tuition and fees as a percentage of family income lower than the national average and less than 10% of low- and middle-income students’ incomes.

Not on track: Tuition and fees as percent of family income increased for both low- and middle-income students, and remain above the national average.

Keeping undergraduate tuition and fees affordable for all families provides greater access to higher education. Measuring how Virginia compares as a percentage of the national average allows the Commonwealth to track how tuition and fees may impact potential students and families. It also recognizes that Virginia families, on average, have higher incomes and can afford higher-than-average tuition and fees.

In 2018-19, Virginia’s percentage of family income for in-state undergraduate tuition and fees was 11.3% compared to the national average of 9.9%. The impact of tuition and fees is greater for individuals who are low-income. The percentage of family income
needed for in-state tuition and fees, net of Pell grants, was 14.5% for low-income students and 10.8% for middle-income students — above the target of staying below 10%.

Virginia has remained above the national average for the past six years. In addition, tuition growth has had a greater impact on low- and middle-income students and families. From 2013-14 to 2018-19, the percentage of family income needed for tuition and fees grew from 10.1% to 14.5% for low-income students and 8.7% to 10.8% for middle-income families.

As mentioned in the affordability target, this growth is impacted by declining state investment in public higher education (currently at 48% of the cost compared to the state’s goal of 67%) and rising costs in non-education-related fees at institutions, which result in higher tuition and fees. In addition, Virginia’s rank remains low compared to other states in investment in higher education per student (39th at $5,701 per student), more than $2,151 below the 2018 national average of $7,853. States whose funding is low frequently have higher tuition and fees. As a result, Virginia ranks 15th in the nation in average tuition and fees per student.

Tuition and fees as a percentage of family income, 2018-19

![Chart showing tuition and fees as a percentage of family income for Virginia and the national average, with low-income and middle-income categories.]

Source: SCHEV staff analysis.

Over the past six years, the increase in tuition and fees in Virginia has been higher than the national average, creating a greater impact on low- and middle-income students and families. Since 2013-14 tuition and fees as percentage of family income has grown by 4.4 percentage points for low-income students and 2.1 percentage points for middle-income students.
Economic Returns

Target: Ensure that 75% of graduates earn sustainable wages three years after graduation.

On track: More Virginians earned sustainable wages three years after graduation, resulting in a rate of 74%, only one point below the target.

While attaining a credential has been shown to improve an individual’s earning over his/her lifetime, an important aspect of higher education is to ensure that graduates earn sustainable wages. This amount currently is based on earnings at or above 200% of the federal poverty level. For a single-member household this is estimated to be $25,750 per year. Approximately 74% of graduates in 2013-14 earned sustainable wages in 2016 (three years after graduation). This estimate includes all graduates of associate and bachelor’s degree programs.

Virginia progressing towards 75% of graduates earning sustainable wages after three years.

Source: http://research.schev.edu//eom/strategicplan5.asp
Wage outcomes vary by degree level. Associate-transfer degrees tend to have low wages in the five years following completion; however, at 10 years post-completion, their earnings are equivalent to associate occupational/technical degrees and nearly equivalent to the earnings of bachelor’s-degree holders 20 years post-graduation. Earnings also are impacted by major and not just degree; some degree majors have a larger earnings premium than others. More than 75% of graduates with associate technical and bachelor’s degrees have earnings greater than the sustainable-wage target within three years.