Maryland Ready

2013 - 2017
Maryland State Plan for Postsecondary Education

MHEC
MARYLAND HIGHER
EDUCATION COMMISSION

MARYLAND HIGHER EDUCATION COMMISSION MEMBERS

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PREAMBLE

The Maryland Higher Education Commission is pleased to present *Maryland Ready*, the State's Plan for Postsecondary Education, which is designed to guide future postsecondary endeavors through 2017. *Maryland Ready* aptly captures the present status of the State's postsecondary system and outlines a vision for the future. Our system is strong and noted as a national exemplar. *Maryland Ready* affirms our commitment to exploring innovative learning and teaching approaches; maintaining collaborative and productive relationships with the Governor, the General Assembly, and other state agencies; and working cooperatively across segments of postsecondary education and with our PreK-12 colleagues to achieve positive outcomes for Maryland students and to advance the long- and short-term goals of the State.

Since the 2009 State Plan was adopted, Maryland has been lauded for: 1) being one of the first states to adopt a college completion goal and 2) being the leading state in moderating tuition rates during the most crippling economic recession in recent history. In fact, while many other states curtailed their support for higher education, Maryland, made unprecedented investments. These investments allowed students and their families to benefit from a tuition freeze for four consecutive academic years from 2006-2007 through 2009-2010.

While we have accomplished much and are proud of the achievements that have been gained thus far, our title, *Maryland Ready*, reflects the present reality that there is still much more to be done and that key stakeholders, ranging from policymakers to campus leaders to our PreK-12 partners, stand poised to take on the challenges that lie ahead. *Maryland Ready* is an action statement that signals our willingness to take the necessary steps that will make our already noteworthy system all the more remarkable. *Maryland Ready* captures our commitment to progressive thinking, resiliency, responsiveness, inclusiveness, and thoughtfulness as we move forward during an era of rapid and unparalleled change for higher education.

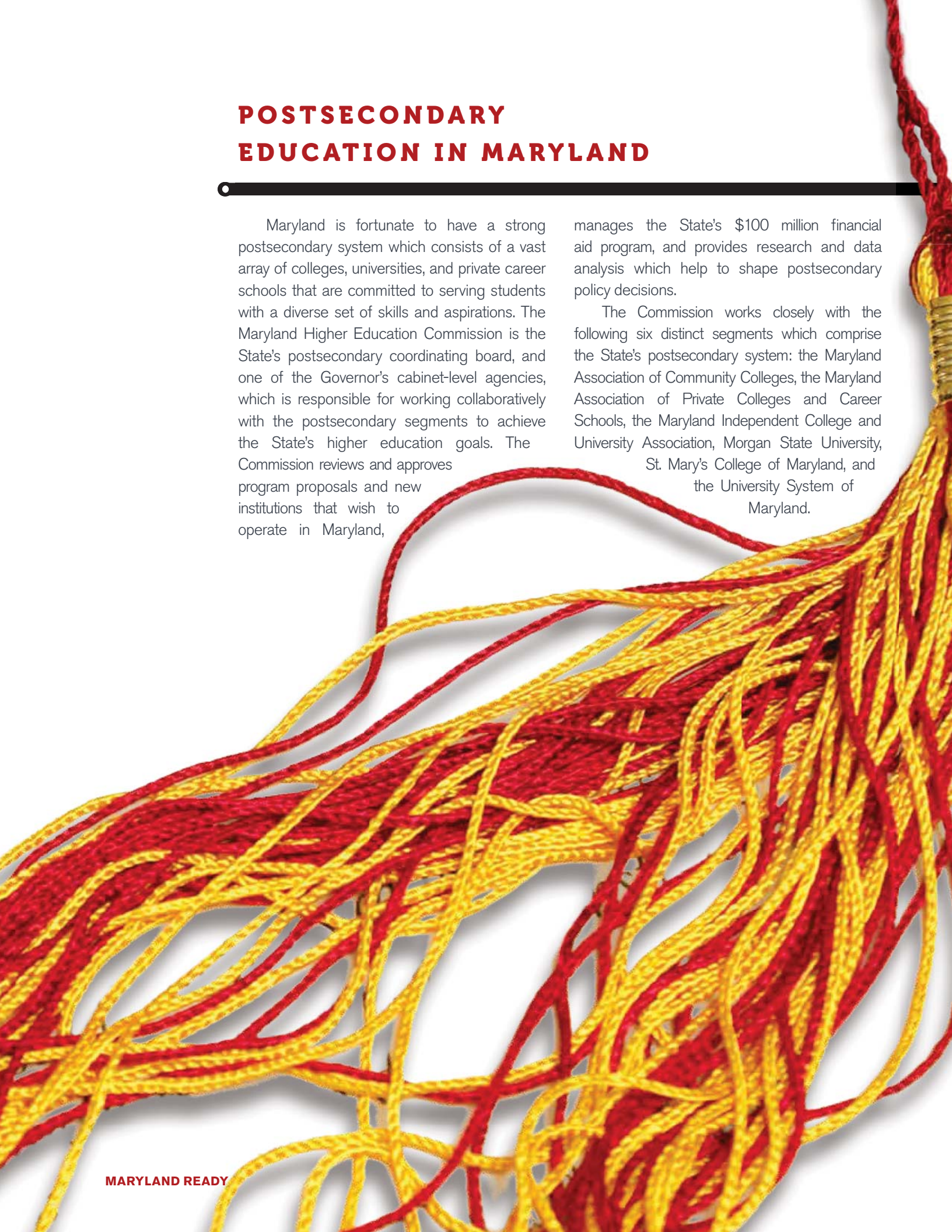
As a course is charted for the years ahead, there are problems of great significance that must be addressed. Postsecondary leaders must work closely with colleagues from elementary and secondary schools to ensure that students are prepared to succeed when they arrive on Maryland campuses. Furthermore, we must press ourselves to think differently about students (many of whom were once considered nontraditional but now represent a growing majority) and how practices can be adjusted to meet their needs. Finally, we must continue to examine the integral role that postsecondary education and training play in maintaining our State's competitive workforce and thriving economy. We must be willing to modify and realign our efforts, with respect to this important role, in order to meet Maryland's changing needs.

It is our sincere belief that the key tenets of *Maryland Ready*, if supported by all members of the postsecondary community and other partners and stakeholders, will move the State toward enrolling and graduating more Maryland residents who are seeking world-class training and educational opportunities. If the goals stated herein are applied and implemented, Maryland will also make further progress toward becoming the destination of choice for students from other states and countries seeking educational experiences of the highest caliber.

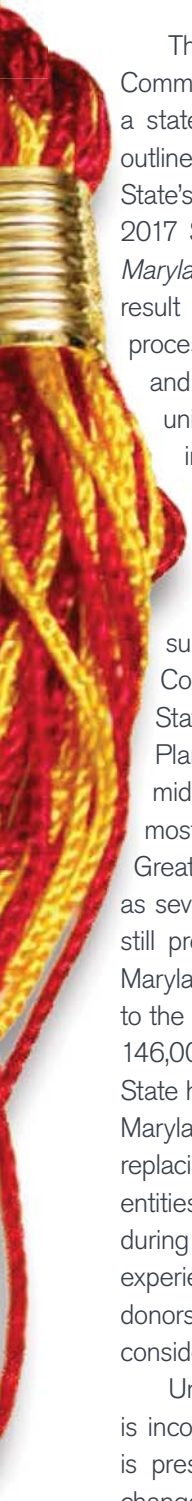
POSTSECONDARY EDUCATION IN MARYLAND

Maryland is fortunate to have a strong postsecondary system which consists of a vast array of colleges, universities, and private career schools that are committed to serving students with a diverse set of skills and aspirations. The Maryland Higher Education Commission is the State's postsecondary coordinating board, and one of the Governor's cabinet-level agencies, which is responsible for working collaboratively with the postsecondary segments to achieve the State's higher education goals. The Commission reviews and approves program proposals and new institutions that wish to operate in Maryland, manages the State's $100 million financial aid program, and provides research and data analysis which help to shape postsecondary policy decisions.

The Commission works closely with the following six distinct segments which comprise the State's postsecondary system: the Maryland Association of Community Colleges, the Maryland Association of Private Colleges and Career Schools, the Maryland Independent College and University Association, Morgan State University, St. Mary's College of Maryland, and the University System of Maryland.



INTRODUCTION



The Maryland Higher Education Commission (MHEC) is charged with producing a statewide plan every four years that clearly outlines the priorities and major goals for the State's postsecondary system. The 2013 – 2017 State Plan for Postsecondary Education, *Maryland Ready* , fulfills this charge and is the result of a year-long, collaborative planning process that involved MHEC Commissioners and staff members; leaders from colleges, universities, and private career schools, including faculty, staff, and students; colleagues from other state agencies; representatives from the business community; and other key stakeholders.

The landscape has changed substantially since June 2009 when the Commission released the last Maryland State Plan for Postsecondary Education. That Plan was developed and published during the middle of the Great Recession, the nation's most substantial economic downturn since the Great Depression. Maryland was not affected as severely as other states, but the impact was still profound and extremely difficult for many Maryland residents and businesses. According to the U.S. Census Bureau, the State lost nearly 146,000 jobs during the recession. Although the State has not fully recovered, as of March 2013, Maryland had made considerable progress, replacing 96.7% of jobs lost. Like other State entities, colleges and universities also suffered during the economic downturn. Many institutions experienced declines in financial gifts from donors, and the value of endowments decreased considerably as the market plummeted.

Understanding that the economic recovery is incomplete, MHEC believes *Maryland Ready* is presented during a period of extraordinary change in postsecondary education, where Institutions are expected to do more with less while being held accountable for their efficient use of State funds. Accomplishing this formidable challenge is possible but will require institutions to reexamine their philosophies, practices, and policies, instituting change where it is warranted.

The first section of *Maryland Ready* presents seven significant issues that the State has identified as both challenges and opportunities that must be addressed in the ensuing years. This section is followed by a discussion of six overarching goals, which provide direction for moving the postsecondary community forward over the next four years. The goals articulated in *Maryland Ready* are:

- Quality and Effectiveness
- Access, Affordability, and Completion
- Diversity
- Innovation
- Economic Growth and Vitality
- Data Use and Distribution

These goals have been constructed broadly so that every postsecondary institution in the State – regardless of mission, sector, student population, or location – can see itself reflected therein. At the same time, however, the goals contain the level of specificity necessary to gain traction on these most important issues. This is evidenced by the action recommendations and implementation measures that follow the narrative for each goal.

While *Maryland Ready* is the State's plan for postsecondary education, and calls on institutions, policymakers, and campus leaders to take specific actions, the Plan, at its core, is about supporting opportunities, pathways, and policies that will allow more students to succeed in postsecondary education and in the workforce of the 21st century. This fundamental principle should guide the efforts of those who will be working throughout the next four years to bring this Plan to life.

SIGNIFICANT ISSUES

The State has identified several critical challenges and opportunities that must be acknowledged, prioritized, and aggressively confronted if the goals articulated in *Maryland Ready* are to be accomplished. Many of these issues are longstanding, intertwined in various ways, and closely aligned with the goals discussed in this Plan. Clearly, finding long-term, systemic solutions will be difficult and progress will take time. Nevertheless, failure to begin addressing these challenges with targeted diligence will prevent the State from becoming a national and international leader in postsecondary education moving forward in the 21st century.

DEMOGRAPHY

In the 8th edition of the Western Interstate Commission on Higher Education's (WICHE) *Knocking at the College Door: Projections of High School Graduates*, it is noted that after a substantial increase in the production of high school graduates between the early 1990s and 2008, the number of high school graduates in Maryland is expected to decline by as much as 10% during the remainder of the decade (Prescott & Bransberger, 2012). This decline may already be influencing postsecondary enrollment in the State. Fall 2012 marked the first decline after 15 consecutive years of enrollment growth. However, some of this decrease should also be attributed to the economic recovery, which is likely attracting potential students toward an improving job market and away from postsecondary education.

The State anticipates that more potential students in the college pipeline will come from lower socioeconomic backgrounds. Data from the Annie E. Casey Foundation (2012) show there is an increasing proportion of children living below or near the poverty line in Maryland. According to data from the Maryland State Department of Education (MSDE), in school year 2012-2013, 43% of Maryland PreK-12 students were approved for the National Free and Reduced-Price Meal Program, compared to 31% in 2002-2003 and 27% in 1992-1993 (MSDE, 2012). In the coming years, many of these students will matriculate through Maryland's PreK-12 system, and seek some form of postsecondary training, credential, or degree, and need considerable amounts of financial aid to do so. Given the State's already burdened financial aid programs, however, Maryland may face challenges in providing students with the financial support needed to accomplish their postsecondary aspirations. This is something the State must address during the tenure of this Plan.

In addition to a growing number of children living in poverty, the racial/ethnic composition of the State continues to shift. According to WICHE's projections, the number of white recent high school graduates is expected to decline while the number of racial/ethnic minorities is anticipated to increase over the next several decades. Maryland's evolving demography poses potential challenges for postsecondary institutions, since the fastest-growing and largest (but still growing) minority groups in the State have not historically fared well with respect to critical postsecondary outcomes when compared to their peers.

The fastest-growing group in the State is the Hispanic population. Despite currently comprising approximately 8.5% of Maryland residents (U.S. Census Bureau, 2013), the

Hispanic population grew nearly 107% during the previous decade (U.S. Census Bureau, 2011). The surge in the Hispanic population is also affected by growth in immigrants from other nations whose primary language is not English. It is expected that this rapid growth will continue in the next several decades. Institutions will need to expand their support for English for Speakers of Other Languages (ESOL) to meet the needs of this growing population and to allow Maryland to be a national leader in providing educational opportunity and supporting diversity.

The African American population is not growing as rapidly as other racial/ethnic minority groups but remains, by far, the largest racial/ethnic minority group in the State, approximating 30% of Maryland residents (U.S. Census Bureau, 2013). Census data show that between 2000 and 2010, the African American population increased by roughly 15%, and projections suggest that this group will continue to grow in coming years (U.S. Census Bureau, 2011).

CITIZENS WITH COLLEGE DEGREES ARE NEEDED IN ORDER FOR THE STATE TO REMAIN GLOBALLY COMPETITIVE IN AN EVER-EVOLVING, KNOWLEDGE-BASED ECONOMY.

The State's changing demography influences most of the goals included in *Maryland Ready*. These changes will force the State and all Maryland postsecondary institutions to examine their outreach and recruitment strategies, teaching and instruction methods, financial aid systems, academic support services, and use of technology. In many ways the State's future social and economic outlook is dependent upon how well postsecondary institutions adapt to the changing demography and educate and support these populations. It is critical that Maryland colleges and universities adjust current philosophies, practices, and policies to accommodate students who are less white, less affluent, and of nontraditional age.

COLLEGE COMPLETION

For the past several years, college completion has been a primary focus of postsecondary education in Maryland. Understanding the critical importance of degree attainment to both individuals and the State, Governor Martin O'Malley established a goal in 2009 that by 2025, 55% of Maryland residents ages 25 to 64 will have a college degree. For individuals, a college degree can provide employment stability and financial security. Increased degree attainment also benefits the State by increasing citizen engagement in activities such as voting and volunteering, and by reducing crime, poverty, and reliance on public assistance. Additionally, citizens with college degrees are needed in order for the State to remain globally competitive in an ever-evolving, knowledge-based economy where employment opportunities will increasingly require some form of postsecondary credential.

The completion of workforce training programs, credentials, and certifications holds tremendous value for those who complete them. By 2020, roughly 66% of all jobs and new employment opportunities in Maryland will require some form of postsecondary training beyond high school, according to the Georgetown University Center on Education and the Workforce (2012). However, only 45% will require a college degree. Therefore, it is critical that the State continue to offer a diverse array of high-quality postsecondary opportunities for Maryland residents, while ensuring that students are provided the financial, social, and academic supports needed to complete a postsecondary degree, certificate, or training program. It will be difficult for the State to continue to attract high-quality jobs if Marylanders do not have the requisite skills desired by employers.

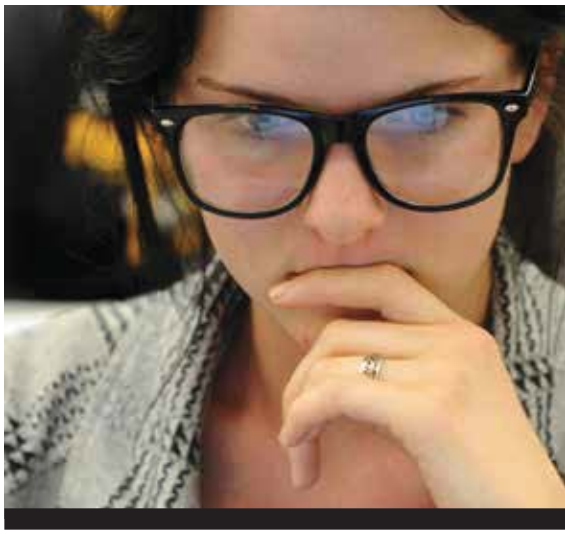
Maryland must strengthen its commitment to improving college retention, transfer,

and graduation rates. Currently, 45.4% of Marylanders hold a college degree (U.S. Census Bureau, 2012), and in order to reach the 55% goal, Maryland postsecondary institutions would need to increase degree production by approximately 2.25% annually, according to MHEC projections. These annual increases would result in Maryland colleges and universities awarding nearly 55,000 degrees per year by 2025 – an additional 10,500 degrees above 2011-2012 levels. The State's future will be closely wedded to its higher education system's ability to ensure that growing numbers of students are equipped with the knowledge and skills needed to keep the State economically competitive well into the 21st century.

CLOSING ACHIEVEMENT GAPS

In higher education, the term achievement gap has traditionally been used to describe notable inequities and disparities between groups on important outcomes, such as transfer, retention, and graduation. Reducing the achievement gap is an important goal not only because it helps to remedy persistent social inequalities, but also because it improves the overall educational attainment of the State's population. Although the achievement gap is not a new issue within the State, Maryland remains committed to improving outcomes for groups that have historically lagged behind those of their peers. Chief among these groups are: 1) African Americans, roughly 30% of all Marylanders and the State's largest racial/ethnic minority group; 2) Hispanics, the State's fastest-growing minority population; and 3) Pell Grant recipients (i.e., low-income students), approximately 30% of all undergraduate students in Maryland.

In addition to closing gaps in performance among student populations, there is also a commitment to narrowing disparities that exist among postsecondary institutions in the State. Specifically, Maryland must focus on narrowing the retention and graduation gaps that exist between the State's historically black colleges and universities (HBCUs) and its traditionally white institutions (TWIs). Understanding that HBCUs are more likely than other four-year, residential, traditionally white campuses to serve academically underprepared and lower income students, tit is not expected that HBCU graduation rates will be equivalent to those at TWIs. However, the State does not believe that commitments to access and academic excellence are mutually exclusive, and is therefore dedicated to working with all of Maryland's HBCUs to narrow institutional gaps in student retention and graduation. A more expansive discussion on the achievement gap is included in Goal 3.



COLLEGE AND CAREER READINESS

Nearly 60% of recent high school graduates who enroll in Maryland public colleges and universities are assessed to need some form of developmental instruction (i.e., remediation) before taking credit-bearing college courses (MHEC, 2013a). Developmental education is designed to provide basic instruction in mathematics, English, and reading for students who are not prepared to engage in a collegiate curriculum immediately upon enrollment. Developmental education poses a problem for some students since remedial courses do not count toward a college certificate or degree, even though students spend time and money on these classes. Additionally, remedial instruction at the postsecondary level represents inefficient use

of State resources: first resources are used for instruction at the PreK-12 level, and then additional resources are used for instruction in the same subjects at the postsecondary level.

With the hope of improving the college and career readiness of high school graduates, Maryland was one of the first states to adopt the Common Core State Standards in English language arts and mathematics in the spring of 2010. Coordinated by the National Governors Association and the Council of Chief State School Officers, the Common Core State Standards are designed to establish goals and expectations for what students should learn in grades PreK-12 to be prepared for success in college or the workforce after completing high school. These new standards will be implemented during the 2013-2014 school year.

To assess systematically what students learn under the Common Core State Standards curriculum, Maryland also joined the Partnership for the Assessment of Readiness for College and Careers (PARCC). PARCC is a consortium of 22 states working collaboratively to develop a series of computer-based K-12 assessments that are aligned with the Common Core State Standards and measure higher-order skills such as critical thinking and problem solving. To date, all Maryland community colleges and the University System of Maryland have committed to participate in PARCC, to help develop the college-ready assessments, and ultimately, to use the assessment scores to help determine if students are ready for entry-level, credit-bearing college courses. In addition, 11 independent colleges and universities in Maryland are participating in the development of the assessments, which will be implemented during the 2014-2015 school year.

In time, the State believes the Common Core State Standards will help improve college readiness and substantially reduce the need for developmental education for recent high school completers. However, in the short term, students who have not benefitted from many years of instruction under the Common Core State Standards may have difficulty demonstrating college readiness given the rigor of the PARCC assessments. If this proves true, the State must be prepared to meet the developmental education needs of more students during the next few years. Although it might be ideal to eliminate all developmental education, it is likely that some form of remediation will always be necessary, particularly for adult students returning to pursue a college degree after years away from formal education setting.

COLLEGE AFFORDABILITY

Keeping college affordable is a key State policy priority. The price of a college education is often the most dominant factor affecting students' decisions to attend college, persist from year-to-year, or leave postsecondary education altogether. Without question, a college degree is a valuable commodity worthy of a personal investment of financial and other resources, but the State must ensure that the opportunity to attain a college credential or degree is reasonably priced and affordable for all Marylanders, regardless of their personal or family income.

College affordability can be maintained in two ways. One way is to control tuition. During

Governor Martin O'Malley's tenure, Maryland moved from being the seventh most expensive state to the 27th most expensive state for resident undergraduate students at public four-year institutions. This was largely a result of a tuition freeze initially implemented during the 2006-2007 academic year. Although a tuition freeze was not established for community colleges, tuition and fees at these institutions went from eighth most expensive to 19th most expensive among all states (College Board, 2012).

A second way to ensure college remains affordable is to provide students with financial aid. Although the State has done an excellent job of controlling tuition during times of great economic difficulty, it was only able to maintain financial appropriations for student financial aid (i.e., grants and scholarships). This level of funding, however, did not keep pace with the significant increase in student demand for financial aid. While funding was maintained for State programs, financial aid applications for Maryland students increased from 109,314 in FY 2009 to almost 179,000 in FY 2013, a 63% surge. As a result, the financial aid waitlist grew from 5,000 to 36,000 students during this time, and many students with significant financial need – many of whom were eligible for the Pell Grant – were unable to receive educational grants from the State.

The lack of financial aid forced many low-income and moderate-income students to increase their reliance on loans to meet their postsecondary education costs. Moving forward, the State must examine its portfolio of financial aid programs to determine how aid can be provided to students in ways that incentivize success and completion, while simultaneously enhancing access by keeping college affordable for all Marylanders. This will be especially critical as more low-income students seek postsecondary credentials and degrees in the coming years.

AWARDING CREDIT FOR LEARNING

For the State to develop a seamless, student-friendly system of postsecondary education, it is necessary for Maryland colleges and universities to reexamine the ways students earn certificates and degrees and accumulate academic credit. Traditionally, colleges and universities have provided students with awards based upon the cumulative amount of "seat time" devoted toward earning a postsecondary credential. Learning is assessed at the course level but rarely in any standardized fashion. At many institutions, instructors teaching the same course are covering different content, emphasizing the importance of different skills and competencies, and requiring students to demonstrate mastery of different learning outcomes. It is assumed that once a student spends a predetermined amount of time (e.g., 30, 60, or 120 credit hours) navigating this system that the student has learned what is necessary to receive a certificate or a degree from that institution. However, in reality, the competencies and skills a student develops can vary significantly depending on the professors a student encounters and the core and elective courses a student chooses.

The current system places a premium value on seat time instead of focusing on the mastery of specific learning outcomes. Academic credit should be awarded based upon the demonstration of pre-identified learning outcomes, no matter how, where, or when learning occurs. If learning is the central focus, the postsecondary institution where the credits are earned should be of lesser importance and clear, defined pathways for

transferring credit from institution to institution should be developed.

Rethinking the traditional system of awarding credits, credentials, and degrees will require institutions to expand or begin their experimentation with nontraditional instructional approaches, such as accelerated learning models that are often self-paced and competency-based courses that are developed around predefined outcomes. Additionally, efforts to expand prior-learning assessment models that recognize and reward demonstration of learning from life, workplace, military, vocational, and other experiences should be developed. This issue is examined more fully in Goal 4.

SCIENCE, TECHNOLOGY, ENGINEERINGAND MATHEMATICS (STEM)

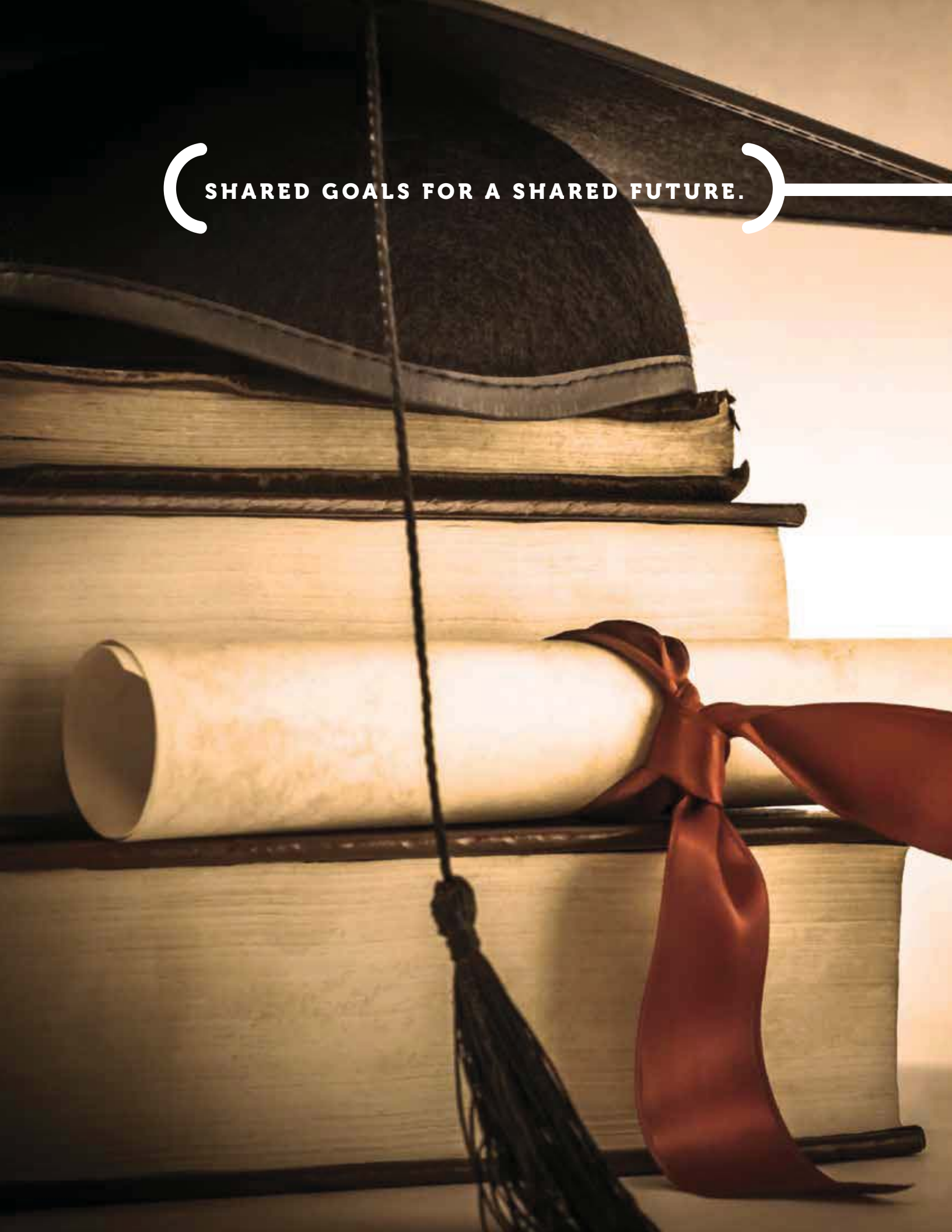
Increasing the number of STEM degrees awarded to students is another key goal for Maryland postsecondary education. STEM-related occupations are critical because they are closely tied to technological innovation, economic growth, and increased productivity. Currently, workers with STEM competencies and degrees are in high demand. Data from the Georgetown University Center for Education and the Workforce (2011) rank STEM jobs as the second fastest-growing occupational category in the nation, behind health care.

SINCE 2006-2007, MARYLAND'S PRODUCTION OF STEM DEGREES HAS INCREASED OVER 26%, FROM NEARLY 9,000 TO APPROXIMATELY 11,300.

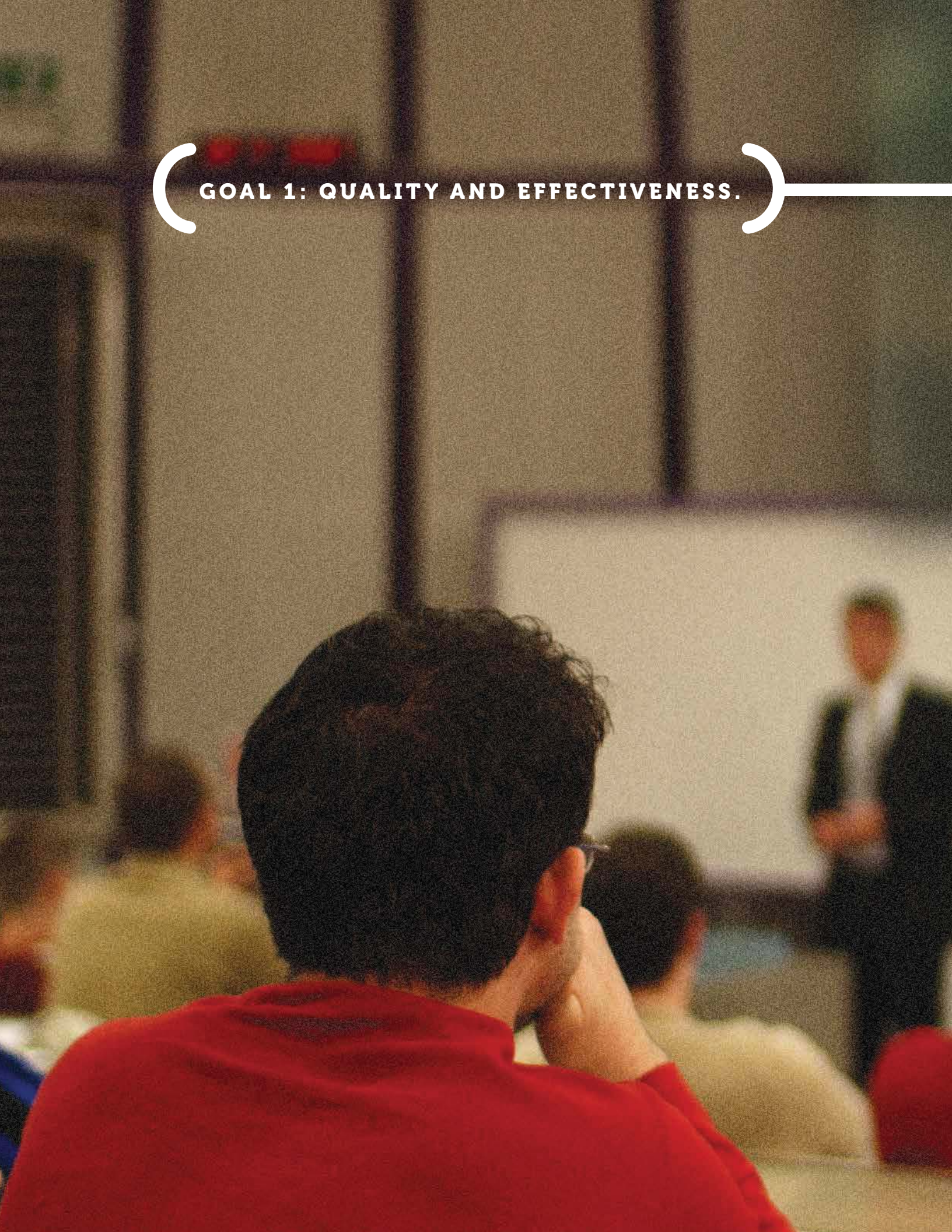
Since 2006-2007, Maryland's production of STEM degrees has increased over 26%, from nearly 9,000 to approximately 11,300 in 2011-2012 (MHEC 2007; MHEC 2012). To continue this trend, postsecondary institutions will need to become more adept at attracting, retaining, and graduating a more diverse population of students in these critical disciplines. College and university faculty must help to cultivate, develop, and support the STEM interests of more women and racial/ethnic minorities. Additionally, postsecondary institutions must adequately prepare high-quality STEM teachers who will help educate the STEM collegians of the future.

CONCLUSION

The seven topics detailed in this section do not provide a comprehensive summary of all the challenges the State must confront in the coming years, but, instead, they offer background and insight on recurring themes that appear throughout many of the goals in *Maryland Ready*. Certainly, these issues pose great challenges, but they also present many opportunities for progress and success. Diligently tackling these obstacles and finding longstanding solutions to these problems will strengthen and solidify the State's future while ensuring Maryland's system of postsecondary education is among the best in the world.


SHARED GOALS FOR A SHARED FUTURE.

01
QUALITY AND EFFECTIVENESS.
02
ACCESS, AFFORDABILITY,
AND COMPLETION.
03
DIVERSITY.
04
INNOVATION.
05
ECONOMIC GROWTH
AND VITALITY.
06
DATA USE AND DISTRIBUTION.



GOAL 1: QUALITY AND EFFECTIVENESS.

MARYLAND WILL ENHANCE ITS ARRAY OF POSTSECONDARY EDUCATION INSTITUTIONS AND PROGRAMS, WHICH ARE RECOGNIZED NATIONALLY AND INTERNATIONALLY FOR ACADEMIC EXCELLENCE, AND MORE EFFECTIVELY FULFILL THE EVOLVING EDUCATIONAL NEEDS OF ITS STUDENTS, THE STATE, AND THE NATION.

GOAL 1: QUALITY AND EFFECTIVENESS.

Maryland Ready's first goal centers on maintaining and improving the quality and effectiveness of postsecondary institutions and the postsecondary sector. This goal incorporates several of the central objectives of *Maryland Ready* as described in the Preamble and Significant Issues sections of this Plan, including the need to enhance college readiness, improve degree progress and degree completion, and serve newly emerging populations in the State. This goal statement defines the concepts of quality and effectiveness as they apply to postsecondary education and highlights the diverse missions of Maryland's postsecondary institutions. It also includes a description of the institutional characteristics needed to ensure that quality and effectiveness can be sustained, a discussion of how faculty and staff contribute to quality and effectiveness, and an examination of the overlapping objectives of preparing students for academic success, degree progress, and degree completion. Finally, this goal statement considers the link between resources and a quality postsecondary system in Maryland, the need for institutions to develop additional resources, and the ways that the State can promote effectiveness in its operations.

QUALITY AND EFFECTIVENESS

The concepts of quality and effectiveness relate to the ways that postsecondary institutions work to achieve their missions. Quality refers to the degree to which an institution successfully achieves its goals, while effectiveness refers to the extent to which an institution's structures and processes are arranged to support the achievement of that goal. For example, at a research university, one indicator of quality might be the number of technological innovations that are successfully developed into practical applications. Indicators of effectiveness might include the processes for hiring and rewarding faculty who conduct research and develop applications; the planning, building, and budgeting processes that ensure the construction and operation of high-quality research spaces; and the curricular structures that encourage students to develop the skills to carry out research with the potential for transfer. However, an institution focused on undergraduate education might adopt a set of indicators that tracks the number of faculty who are recognized as excellent teachers, supports a budgeting process that promotes innovative instruction, or establishes administrative structures that facilitate student progress.

Obviously, each institution will have different indicators of quality and effectiveness, and these terms should be broadly defined so that Maryland's diverse array of colleges, universities and private career schools can see themselves reflected in this important goal. Each institution must identify measures of quality that are aligned with its mission, and should then work to develop processes and systems that will allow it to meet those benchmarks.

MAINTAINING AND IMPROVING QUALITY AND EFFECTIVENESS FOR INSTITUTIONS

In order to maintain and improve quality and effectiveness, institutions and their leaders must have the flexibility and resilience to address the changing needs of the State and its citizens. Each of the topics described in the Significant Issues section of this Plan represent challenges for institutions. To meet these challenges, institutions must build on their strengths, but

must also be open to adapting these strengths in versatile ways to serve students. They must embrace change and actively seek to respond to evolving conditions, rather than relying on what has been successful in the past.

Institutions must also acknowledge that they have many different roles and responsibilities in terms of educating their students, which include: facilitating lifelong learning, preparing students to enter the workforce and advance in their careers, fostering cultural understanding, emphasizing ethical principles and practices in personal and professional interactions, and conveying the importance of contributing to the common good as a citizen of the local, national, and global communities. The extent to which institutions are able to fulfill these responsibilities is closely aligned with Maryland's ability to meet its short- and long-term educational goals.

QUALITY AND EFFECTIVENESS THROUGH FACULTY AND STAFF

Regardless of its mission, sector, or student population, no postsecondary institution is able to fulfill its responsibilities or meet the goals of quality and effectiveness without capable and committed faculty and staff. High-caliber faculty members noted for distinguished teaching, research, and service are at the core of the academic enterprise. Faculty must be equipped with the resources necessary to deliver exemplary education, including systems of institutional self-examination, assessment, and benchmarking; access to optimal use of technology in support of teaching and learning; and continuing instructional enhancement, curricular innovation, and program development to prepare students for an evolving, global society.

During the last few decades, institutions in Maryland, like those throughout the nation, have become more reliant on adjunct faculty to deliver instruction. Working professionals who serve as adjunct faculty teaching in their area of expertise can provide invaluable benefits to students and fellow faculty alike, and adjunct faculty can also allow institutions to offer certain kinds of specialized instruction. In addition, the use of adjunct faculty can allow institutions to respond rapidly to changing student enrollment demands. However, excessive use of adjunct faculty can have disruptive consequences for both students and faculty. Because many adjunct faculty are unable to return to the institution from one term to the next, they are often unable to provide the long-term supportive relationships that allow students to thrive, and unable to participate in initiatives and programs to improve institutional effectiveness. In addition, a disproportionate number of adjunct faculty can raise serious challenges to the ability of faculty to participate in effective shared governance. The use of adjunct faculty at all institutions should be considered carefully in order to ensure that it does not impede instruction or student persistence and degree completion.

Knowledgeable staff and robust student support services are also essential to a high-quality education. As the needs of students change, institutions must modify their services to meet those needs. For example, colleges and universities that have primarily used residence

halls to develop a sense of community among students and to convey important information to them may need to modify their approach to better serve adult learners and other non-residential students. Faculty and staff should be aware of the ways in which they both support the educational mission of the institution and should work in partnership to serve students. Staff and faculty alike – including adjunct faculty – must have opportunities for professional development to ensure that students receive high-quality instruction and service.

In addition, institutions should examine their structures and processes to ensure that they promote effectiveness for all faculty and staff. All faculty and staff members should understand how their work supports the institutional mission, and their promotion and reward systems should be closely aligned with this mission. Moreover, institutions must ensure that all processes are adapted to bolster the mission. For example, a research university might educate its custodial staff so that it develops expertise and responsibility in maintaining leading-edge research facilities, while a residential college might see that each residence hall has its own custodial team that can be integrated into the communal life of each building. Again, each institution must commit itself to identifying the best ways to promote effectiveness consistent with its mission.

PREPARATION FOR STUDY AND DEGREE COMPLETION

Notwithstanding their diverse missions, all institutions share the goals of educating students and ensuring that they earn credits and degrees. Institutions must make a special effort to help students set academic goals, achieve related milestones, and complete degree and certificate programs.

College completion begins with college readiness. As Maryland has adopted the Common Core State Standards, college and university leaders support the alignment of K-12 standards with postsecondary readiness criteria. Postsecondary institutions that offer instruction leading to teacher certification have also committed to modifying their curricula to ensure that new teacher candidates are well qualified to educate K-12 students according to the Common Core State Standards. Moreover, many postsecondary institutions offer programs designed to increase college readiness for students of all ages and grade levels. These activities include camps that introduce students to math, science, and other academic subjects; workshops that guide academic preparation for college; and events that familiarize students and families with financial aid and the college application process. These activities should be continued and expanded.

Additionally, new student populations are entering postsecondary education. These include students who are the first in their families to attend college and adult students seeking additional training or credentials. Some of these students will have had little or no preparation for college. Institutions will have to be more proactive in providing support and guidance for a greater variety of students making transitions into postsecondary education.

Another increasingly common kind of transition is transfer among institutions. While Maryland's postsecondary system has long valued and promoted the transfer of students from community colleges to four-year institutions, students are transferring among institutions using different paths. Systems designed to facilitate one particular kind of

transfer may not be adequate to ensure that students pursuing alternate transfer paths are able to achieve their educational goals. While postsecondary institutions must establish their own standards for accepting transfer credit, they also have a responsibility to ensure that the transfer process is as seamless as possible and reduces or eliminates obstacles for incoming students. The development of statewide transfer articulation agreements, in addition to the Associate of Arts in Teaching and the Associate of Science in Engineering degrees, would help to create a less burdensome transition for students. Additionally, all institutions should expand their transfer services so that students clearly understand options and requirements and are equipped to succeed at the transfer institution.

Maryland Ready means that postsecondary institutions must ensure that they are equipped to educate all students, and that they will work to improve the degree to which students are prepared to succeed in postsecondary education. In order to ensure that students meet their academic goals, institutions must do more than offer high-quality coursework. They must also provide a range of services that are continuously assessed to ensure that they are supporting students in earning their degrees or achieving other academic objectives.

STATE INVESTMENT AND STATE ROLE

For its part, the State has an essential role to play in maintaining and improving quality and effectiveness in higher education. Most obviously, it provides a large share of funding for colleges and universities. While the recent recession accelerated a long-term decline in funding for postsecondary education in many states, Maryland maintained a strong level of support for its institutions. As the economy continues to recover, it is important for the State to retain its commitment to investing in postsecondary education so that the primary tenets of this goal – quality and effectiveness – can be preserved and strengthened.

FOR ITS PART, THE STATE HAS AN ESSENTIAL ROLE TO PLAY IN MAINTAINING AND IMPROVING QUALITY AND EFFECTIVENESS IN HIGHER EDUCATION.

The postsecondary segments themselves must also continue to seek multiple sources of funding. Most institutions seek grants to support faculty research, and still others seek support from foundations and other organizations to sustain and improve student outcomes. These efforts should continue and expand. In addition, some public colleges and universities have begun to cultivate philanthropic support through endowment and annual giving. Institutional endowment, which represents investments comprised of accumulated private support, generates income that provides an important stream of revenue for operating purposes every year. Annual giving includes current gifts that support both the institution's current expenses and the permanent endowment. While most private colleges and universities have a long-established tradition of philanthropic support, many public institutions

lack this history and will need time to develop the necessary infrastructure to support a sophisticated advancement operation. Nevertheless, colleges and universities should begin or continue to cultivate their efforts in this area.

Finally, the State should explore structural changes that could improve the effectiveness of its own policies. For example, operational funding for higher education has traditionally been calculated on the basis of student enrollment alone, rewarding institutions for providing access to education. The State has begun to consider new methods of funding that are designed to connect funding to other policy goals such as degree completion. This is a commendable development. At the same time, the State must proceed carefully to avoid creating perverse incentives – for example, a funding formula tied to graduation rates might encourage institutions to limit access to those students most likely to graduate. Thus, the State must develop new structures to promote its policy goals.

In addition, the State should continue to evaluate its student financial aid programs to ensure that they provide appropriate incentives for students to pursue educational opportunities well suited to their goals as well as the needs of the State. For example, some financial aid programs offer loan forgiveness for graduates who work in high-need, public sectors. These programs can be very attractive to individuals who have already chosen to enter these fields. However, they may be less effective at increasing the number of postsecondary students initially entering these fields. For instance, loan forgiveness programs may not seem particularly attractive or meaningful to students who need significant scholarship support early in their studies, or to students considering fields requiring lengthy and expensive educational preparation. The State should work to ensure that these and other State policies are arranged to promote an optimal level of quality and effectiveness within and among institutions.

GOAL 1: ACTION RECOMMENDATIONS

THE STATE WILL CONTINUE TO SUPPORT THE DEVELOPMENT AND RETENTION OF OUTSTANDING AND DIVERSE FACULTY CAPABLE OF EXCEPTIONAL TEACHING, RESEARCH, AND SERVICE.

IMPLEMENTATION MEASURES/STRATEGIES:

- The Commission, in consultation with colleges and universities, will examine the feasibility of establishing or reinstituting programs designed to support the recruitment and retention of talented faculty, such as the Southern Regional Education Board's Doctoral Fellows Program.
- The Commission, in partnership with colleges and universities, will develop strategies to encourage and support ongoing development for all faculty and staff that leads to improvements in educational technology, learning assessment, student support services, and instruction and pedagogy.
- The Commission, in consultation with colleges and universities, will provide information and conduct studies, within its existing reports or stand-alone reports, to examine whether the use of adjunct faculty has any effects on student progression and to encourage explicit standards for the strategic use of adjunct faculty.
- The Commission, in consultation with postsecondary institutions, will provide information, within its existing reports or stand-alone reports, about institutional initiatives and other practices designed to expose more students to research skills and experiences that are relevant to their fields of study and future career goals.

THE COMMISSION AND MARYLAND POSTSECONDARY INSTITUTIONS WILL STRENGTHEN EFFORTS TO PREPARE AND SUPPORT STUDENTS MAKING TRANSITIONS INTO AND WITHIN POSTSECONDARY EDUCATION.

IMPLEMENTATION MEASURES/STRATEGIES:

- In preparation for the 2016-2017 academic year, the Commission will assist the Maryland State Department of Education (MSDE) with the development of transition courses and other instructional opportunities for 12th grade students who have not achieved college and career readiness by the end of the 11th grade.
- The Commission, in consultation with postsecondary institutions, will develop reports on best practices and other initiatives to encourage institutions to expand and strengthen programs supporting student populations undergoing critical transitions, including new and transfer students, first-generation students, and adult students entering or reentering postsecondary education.

THE COMMISSION, ALONG WITH MARYLAND COLLEGES AND UNIVERSITIES, WILL CONTINUE TO ADVOCATE FOR APPROPRIATE AND SUSTAINABLE FUNDING LEVELS IN ORDER TO BUILD THE HIGHEST QUALITY POSTSECONDARY SYSTEM POSSIBLE.

IMPLEMENTATION MEASURES/STRATEGIES:

- The Commission and the segments of postsecondary education will continue to support the annual progression of funding for all public four-year institutions toward the attainment of the funding guideline by FY 2018.
- The Commission and the segments of postsecondary education will continue to support the annual progression toward restoring full statutory funding of the formula-aided segments of postsecondary education by FY 2018.
- The Commission and the segments of postsecondary education will continue to support the annual progression toward full implementation of the funding strategy for regional higher education centers by FY 2018.
- The Commission and the segments of postsecondary education will continue to explore the possible development and implementation of a performance-based funding system for postsecondary education by FY 2018.
- The Commission and the segments of postsecondary education will explore the possible development and implementation of initiatives to support philanthropic giving to colleges and universities.
- The Commission, in consultation with the segments of postsecondary education, will review and revise the capital planning guidelines to ensure that colleges and universities make the most use of space, that State resources can be directed to support the most essential instructional and research needs, and that the priorities of Plan Maryland – Smart Growth are incorporated into capital planning.

GOAL 2: ACCESS, AFFORDABILITY, AND COMPLETION.

MARYLAND WILL ACHIEVE A SYSTEM OF POSTSECONDARY EDUCATION THAT ADVANCES THE EDUCATIONAL GOALS OF ALL BY PROMOTING AND SUPPORTING ACCESS, AFFORDABILITY AND COMPLETION.

GOAL 2: ACCESS, AFFORDABILITY, AND COMPLETION.

Postsecondary education access, affordability, and completion are the linchpins for an educated citizenry and an innovative and productive workforce for the State's 21st century knowledge-based economy. *Maryland Ready*'s Goal 2 outlines a plan of action for access, affordability, and completion over the next four years to ensure that Maryland and its citizens continue to excel in all ways. Each of these terms

is defined within the context of Maryland's current postsecondary education milieu and with the anticipated needs of the State and its citizens in mind. The meaning of access, to include preparation, outreach, and financial literacy, is discussed. The importance of increasing academic preparation in STEM (science, technology, engineering, and mathematics) is also highlighted. Affordability, an important condition for access, is described in terms of the postsecondary education costs for students and their families, and the important role of the State's financial assistance programs. The completion discussion includes information about statewide policies, pathways to credential attainment, and new initiatives to increase completion rates. Goal 2 concludes with a series of action items that are intended to move its primary tenets from conception to implementation.

ACCESS

Maryland Ready recognizes that access is the first step in ensuring that all Marylanders who can benefit from and are willing to engage in postsecondary education have the opportunity to do so. To make the most of postsecondary learning options, students need to have a level of academic preparation that will allow them to be deemed "college ready." It is particularly important to ensure that students have a sound knowledge-base in the STEM disciplines, as Maryland will have a continued demand for highly-educated and well-trained workers in these areas. Academic preparation, however, is not sufficient to ensure access. Students and families must be aware of postsecondary education opportunities and options and have the financial literacy skills necessary to secure funding to support enrollment.

Preparation for Postsecondary Learning

Maryland seeks to create the conditions necessary for its residents to successfully transition into postsecondary education and to take advantage of the careers for which they have received adequate preparation and training. In order for this type of learning environment to exist, students must experience a seamless transition from secondary to postsecondary

level coursework. Additionally, options that allow returning adult learners and underprepared high school students to refresh their academic knowledge and skills must be made available. Three current efforts which focus on the implementation of the Common Core State Standards, the redesign of developmental (remedial) courses, and the expansion of early college access opportunities, particularly in STEM disciplines, are promising initiatives to achieve improved academic readiness for college-level work. To ensure that more students are prepared to be successful when they enroll in their first college course, achievement gaps between groups must be attended to as early as possible.

Maryland's recent adoption of the Common Core State Standards (introduced in the Significant Issues section of *Maryland Ready*) is a noteworthy reform effort which aims to prepare high school graduates for success in college and careers. However, underprepared high school students and returning adult learners may still need to improve their reading, English, and mathematics skills before they are able to begin college-level coursework. Developmental courses are designed to help students who may need considerable preparation or just an academic refresher before they can move on to more rigorous classes. These courses may be noncredit or provide credits that do not count toward a degree. Developmental classes increase the cost and amount of time required to earn a degree or credential, and many students who take these courses become discouraged and do not make adequate progress. Several new initiatives to redesign developmental courses are underway at Maryland institutions. In 2011, the Commission, with support from Complete College America, embarked on a statewide effort to redesign developmental mathematics courses, given data which showed that these classes often serve as significant barriers to academic progression. Preliminary results from the pilot courses suggested that, in most cases, there was an increase in the percentage of students who successfully completed the redesigned course. Results will be studied over time as these pilot courses are expanded to include more sections. Additionally, data collected by the Maryland Association of Community Colleges (MACC) show that community college students who successfully complete developmental education are more successful in persisting, transferring, or graduating than their peers who were deemed college-ready when they initially enrolled (MACC, 2013).

Academic preparation in STEM disciplines is of particular interest to the State. Maryland has the second highest concentration of STEM jobs in the nation, and is adding employment opportunities in these areas faster than all but five other states (U.S. Chamber of Commerce, 2013). Simply stated, the State needs more college and university graduates who are prepared for STEM careers. The Maryland State Department of Education (MSDE), in consultation with the Commission, is administering the Early College Innovation Fund. This competitive grant program, which is based upon partnerships between local education agencies and postsecondary institutions, supports the creation and expansion of early college access programs that provide accelerated pathways for students interested in STEM credentials and careers.

GOAL 2: ACCESS, AFFORDABILITY, AND COMPLETION.

THE ROLE OF OUTREACH AND FINANCIAL LITERACY.

As a precursor to postsecondary education enrollment, students and families need to understand what postsecondary education opportunities exist. They must also have the financial knowledge and skills to fund their education. Outreach is an especially important access strategy to inform low income, minority, first-generation, and other underrepresented student populations about college readiness, the cost of attendance, academic expectations, and career pathways. The Commission, other State agencies, postsecondary institutions, and nonprofit organizations currently engage in outreach efforts across the State to convey this message. The Commission's outreach programs, supported by federal grants, include participation in college fairs, financial aid presentations at secondary schools, and events and forums in community and faith-based organizations. While these efforts have been successful, the Commission must continue to work to develop a statewide outreach brand and collaborate with like-minded State agencies, institutions, and nonprofits to distribute this information more broadly. The action items for Goal 2 lay out a plan to expand current outreach efforts so that they are more deliberately targeted to PreK-12 students and families earlier in the college planning process, and are more inclusive of adult learners in accordance with the recent College and Career Readiness and College Completion Act of 2013. The Commission is also determining how to effectively use its relatively new social media presence and increase the use of its web resources for this purpose.

BETWEEN 2005 AND 2013, RESIDENT UNDERGRADUATE TUITION AT MARYLAND PUBLIC FOUR-YEAR COLLEGES AND UNIVERSITIES WENT FROM SEVENTH TO 27TH MOST EXPENSIVE IN THE NATION

Financial literacy in the postsecondary education context means that students and families are provided with timely and easy-to-understand information about the cost of attendance to include "sticker price" versus net cost; financial planning options such as 529 College Savings Plans; and state and federal financial aid application processes, timelines, and programs. Maryland is working to provide early information to families and students regarding financial planning and assistance for postsecondary education. As such, the Commission collaborates with MSDE to ensure that the PreK-12 financial literacy curriculum includes grade appropriate information about paying for college.

AFFORDABILITY

Affordability is defined as the extent to which Marylanders are ready to pay for and manage the costs of enrolling in postsecondary education while supporting themselves, and in some cases, their families. The State and the postsecondary education segments support affordability by limiting tuition and fee increases; developing ways to control the cost of textbooks, software, and other associated expenses; and providing financial aid to low- and moderate-income students.

Tuition and Other Costs of Attendance

Over the last several years, Maryland has made significant strides toward making public higher education more affordable. Since 2007, public colleges and universities have received substantial support in the form of tuition stabilization funds. As a result of these investments, between 2005 and 2013, resident

undergraduate tuition at Maryland public four-year colleges and universities went from seventh to 27th most expensive in the nation (College Board, 2013). During this same time period, tuition and fees at Maryland community colleges went from eighth to 19th most expensive in the nation (College Board, 2013).

Additionally, both public and independent institutions in Maryland have worked to reduce the amount that students are required to pay for course materials such as textbooks and computer software, and several programs have been implemented to save students money. For example, at many campuses students are notified earlier of required course materials so that they can "shop around" and purchase books from a wider variety of sources at the lowest prices. Institutions have also developed textbook rental programs, and have begun to use the same book edition for multiple years so that students have the opportunity to purchase less expensive used books.

STATE FINANCIAL ASSISTANCE PROGRAMS

In spite of State efforts to stabilize and moderate tuition increases, many students and families still find it difficult to pay for college and postsecondary training. Need-based financial aid is a critical source of support through which students of low to moderate means afford education beyond high school. While the State's signature need-based financial aid program, the Howard P. Rawlings Educational Excellence Awards (EEA), was protected from reductions during the recent recession, student financial aid applications also increased dramatically during that time period. In 2009, the Commission was able to provide financial assistance to students with an expected family contribution (EFC) of up to $10,300; however, by 2013, only students with an EFC of $2,000 or lower received need-based awards from the State. Additionally, the need-based financial aid wait list increased by 93% (more than 17,000 eligible students) between 2011 and 2013. The Maryland Department of Legislative Services, estimated that the amount of State funding for the EEA program would need to nearly double in order to provide support to all eligible students. Some colleges and universities have helped to mediate the increased demand for need-based financial aid by providing additional institutional financial assistance. Nonetheless, the adequacy of State support for student financial assistance, given the significantly increased demand by students with the greatest financial need, should be evaluated.

GOAL 2: ACCESS, AFFORDABILITY, AND COMPLETION.

COMPLETION

Maryland Ready acknowledges that access and affordability alone are insufficient to ensure that Marylanders are able to fully enjoy the benefits of postsecondary education: academic success which leads to credential completion is the true promise of access fulfilled. Governor O'Malley has established a completion goal which posits that 55% of Marylanders will hold an associate's or bachelor's degree by 2025. In order to meet this ambitious goal, the State must narrow disparate outcomes among different populations, and identify and prepare students who will earn

certificates and degrees in high-demand fields.

Maryland must also be mindful of the types of degrees necessary to support the State's knowledge-based economy and to meet regional workforce needs. To this end, colleges and universities should continue to prepare students for careers in high-demand, cutting-edge industries such as biotechnology, cyber security, and sustainable energy. Special efforts to increase STEM graduates, including teachers who can provide high-quality STEM instruction at the PreK-12 level, are needed to meet employment projections.

The State, postsecondary leaders, faculty, staff and students each play an important role in ensuring the 2025 completion goal is attained, and must work together to create educational environments that support student success. Colleges and universities must respond to shifts in the student population and pursue policies that are reflective of these changes and support student-centered learning. Students must be prepared to work toward achieving and completing their goals, whether they be licensure, workplace certification, a credit certificate, transfer to another institution, or an associate's, bachelor's, master's, doctoral, or professional degree.

STATEWIDE POLICIES TO ENCOURAGE COMPLETION

The State continues to establish educational and fiscal policies that facilitate postsecondary completion. These policies address college readiness and pathways to degree completion, and support State-funded initiatives to encourage completion. The most notable State law regarding completion is the recently enacted College and Career Readiness and College Completion Act of 2013. This Act establishes a number of key requirements designed to promote student success and provides a framework for collaboration across

the P-20 education spectrum for achieving college readiness and completion. The Commission and MSDE are in the beginning phases of implementing this new law.

Education funding policies also play an important role in encouraging the completion of postsecondary credentials. The State's postsecondary education funding model is under review for the possible inclusion of a performance-based funding component. Under performance-based funding, institutions would receive a portion of their State appropriations based upon outcomes that are aligned with the State's postsecondary goals, such as the percentage of students making progress toward a credential or degree completion. Maryland's current enrollment-focused funding formula links funding for all postsecondary segments to enrollments at selected public four-year institutions. Changes to this approach should be carefully considered and should continue to foster collaboration among Maryland's postsecondary segments.

PATHWAYS TO COMPLETION

The State, high schools, and postsecondary education institutions need to ensure that structural or policy barriers that inadvertently impede student progress are identified and removed. Students need a clear pathway to degree completion that includes early college access opportunities and timely and effective academic advising. Early college access refers to opportunities for high school students to enroll in college courses. Students may be "dually enrolled" in both high school and college (usually community colleges) by taking classes at both places. In some instances, credits earned may apply toward both high school and college graduation requirements. Other early college access models provide students with the opportunity to enroll in college courses taught at high schools by postsecondary faculty (also known as "middle college" programs), or to take online college courses. Early college access programs show promise for improving college completion and time-to-degree rates.

Once enrolled in a postsecondary institution, when students develop a clear degree plan, with the support of a skilled academic advisor, they increase their chances of earning a credential, and of doing so in a timely manner. The degree planning process allows students to visualize their plan of action for each individual semester and over their entire program of study simultaneously. Students who participate in early degree planning and regularly review their plans with advisors tend to stay on track toward graduation, and are less likely to accumulate excess credits.

POSTSECONDARY EDUCATION INITIATIVES TO INCREASE COMPLETION

The Commission and postsecondary education institutions have embarked on two new and important initiatives to increase degree completion rates in Maryland. The Associate Degree Award for Pre-degree Transfer Students (ADAPTS) with One Step Away, the State's near completers initiative, are designed to increase the number of degrees awarded each year.

ADAPTS provides opportunities for Maryland community college transfer students, who move on to a four-year college or university before earning a degree, to still obtain an associate's degree using credits accumulated at the four-year institution. The "reverse

transfer" of the credits earned at the four-year institution may allow the student to meet the degree requirements for an associate's degree. A statewide reverse transfer program will not only advance efforts to reach the 55% college completion goal, but will equitably and consistently reward community college transfer students for their achievements. Grants to the Commission from Complete College America and USA Funds are allowing ADAPTS to be brought to scale and implemented throughout the State.

In November 2012, the Commission launched the One Step Away program. The purpose of this competitive State-funded program is to increase college completion rates by providing bachelor's degree-granting institutions with funds to identify, re-engage, re-enroll, and graduate students who left the institution when they were close to completing their degrees. Near-completers are defined as students who have earned a significant number of credits toward an associate's or bachelor's degree, or may have enough credits for a degree but have stopped out or dropped out for more than twelve months without obtaining the credential. Eight Maryland institutions have received One Step Away grants and are in the process of implementing their near-completer programs.

The access, affordability, and completion agendas set forth in *Maryland Ready* serve as a guide to move the State toward its 2025 completion goal and to enhance the economic vitality and quality of life for all Marylanders. An increased focus on outreach, including the strategic use of the Internet and social media, and plans to reach traditional-age students as well as returning students and adult learners will help to improve access. A review and rethinking of financial aid deployment in the State will help to maximize resources to support Maryland students. Innovative programs such as early college access, performance-based funding, reverse transfer initiatives, and near-completers will help the State improve college retention and completion rates.

GOAL 2: ACTION RECOMMENDATIONS

THE COMMISSION WILL EXAMINE THE ADEQUACY OF THE STATE'S NEED-BASED FINANCIAL ASSISTANCE PROGRAMS. IT WILL CONSIDER THE RECOMMENDATIONS OF THE COMMISSION TO DEVELOP THE MARYLAND MODEL FOR FUNDING HIGHER EDUCATION IN ITS ANALYSIS AND MAKE RECOMMENDATIONS ON HOW FINANCIAL ASSISTANCE SHOULD BE DISBURSED TO BEST MEET STUDENT NEEDS.

IMPLEMENTATION MEASURES/STRATEGIES:

- The Commission will review the Howard P. Rawlings Educational Excellence Awards – the State's Guaranteed Access Grant and Educational Assistance Grant programs – and propose changes to maximize limited financial resources. A report will be published by October 15, 2014.
- The Commission will review initial and renewal financial aid eligibility criteria, such as the definition of a full-time student, and examine how changes to this definition may incentivize on-time completion. Findings will be published by October 15, 2014.
- The Commission will develop a budget proposal for FY 2016 that maximizes limited resources and eliminates or significantly reduces the waitlist that currently exists within the Educational Excellence Awards program.

CURRENT OUTREACH ACTIVITIES TO STUDENTS AND FAMILIES WILL BE EXPANDED TO INCLUDE A WIDER RANGE OF TRADITIONAL STUDENTS AND ADULT LEARNERS.

IMPLEMENTATION MEASURES/STRATEGIES:

- During FY 2014, the Commission will enhance its current outreach portal (MdGo4It!) to appeal to both traditional and adult learners with the goal of assisting students, families, veterans, near-completers, and other students with preparing for college, applying to college, and paying for college.
- During FY 2014, the Commission will develop and implement a statewide marketing campaign, targeting adult learners and near-completers, aimed at improving degree attainment within the State.
- By 2015, the Commission will develop and implement an online communication campaign through the MHEC and MDGo4It! websites and the use of social media.
- In FY 2015, the Commission will convene statewide stakeholders to identify best practices in college preparation and intervention services for middle school students.
- In FY 2016, the Commission will expand best practices in college preparation and intervention programs to underserved geographic regions of the State to increase postsecondary attendance.

THE STATE WILL CONTINUE TO MAKE PROGRESS TOWARD ACHIEVING ITS COLLEGE COMPLETION GOAL WHICH POSITS THAT 55% OF ADULT MARYLANDERS WILL HOLD AT LEAST AN ASSOCIATE'S DEGREE BY 2025.

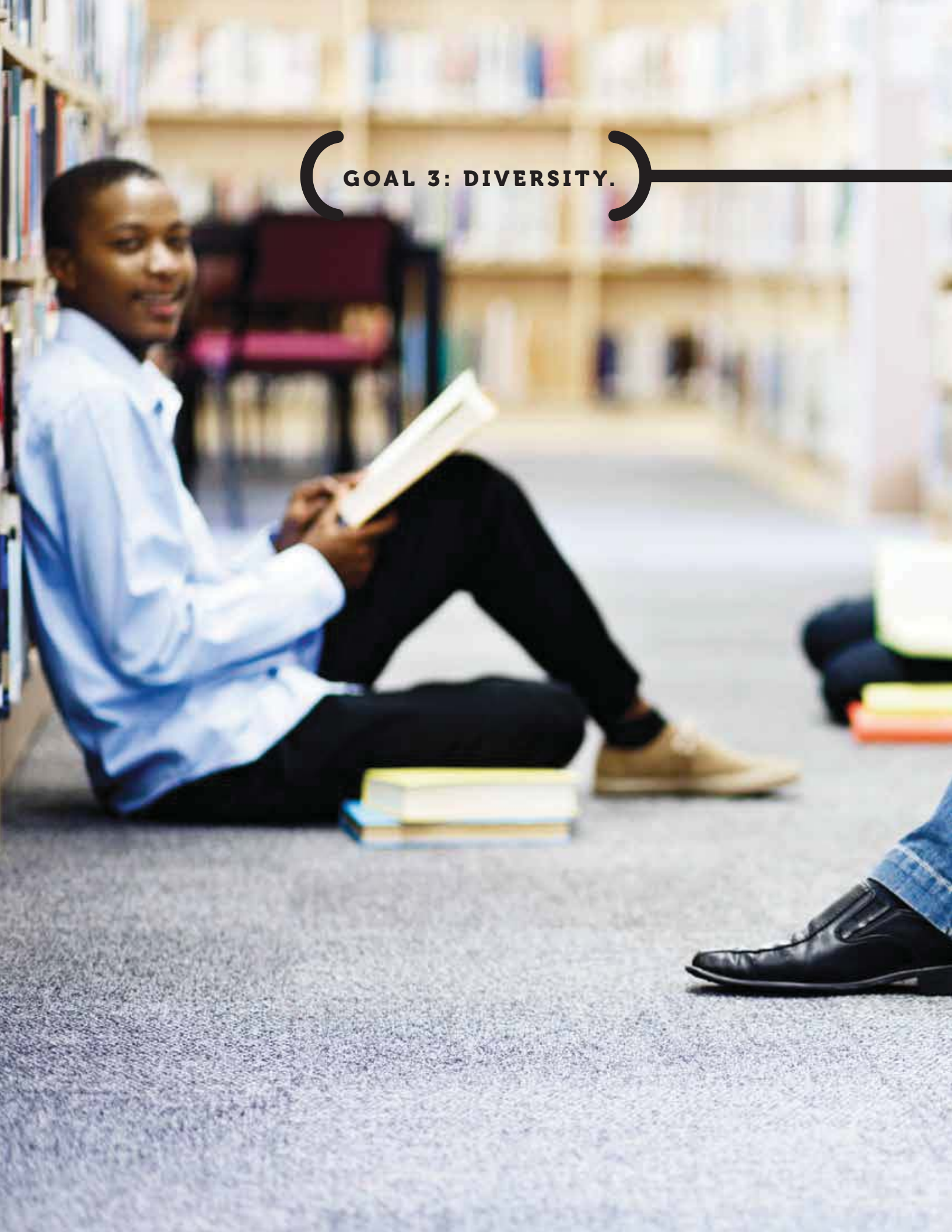
IMPLEMENTATION MEASURES/STRATEGIES:

- In accordance with the 2012 Joint Chairmen's mandate, the Commission will continue to track the State's progress toward the 55% attainment goal and annually publish the findings.
- By FY 2018, the Commission and segments of postsecondary education will narrow the outcome gaps in retention and graduation rates that exist between African American and Hispanic students and the overall student population.

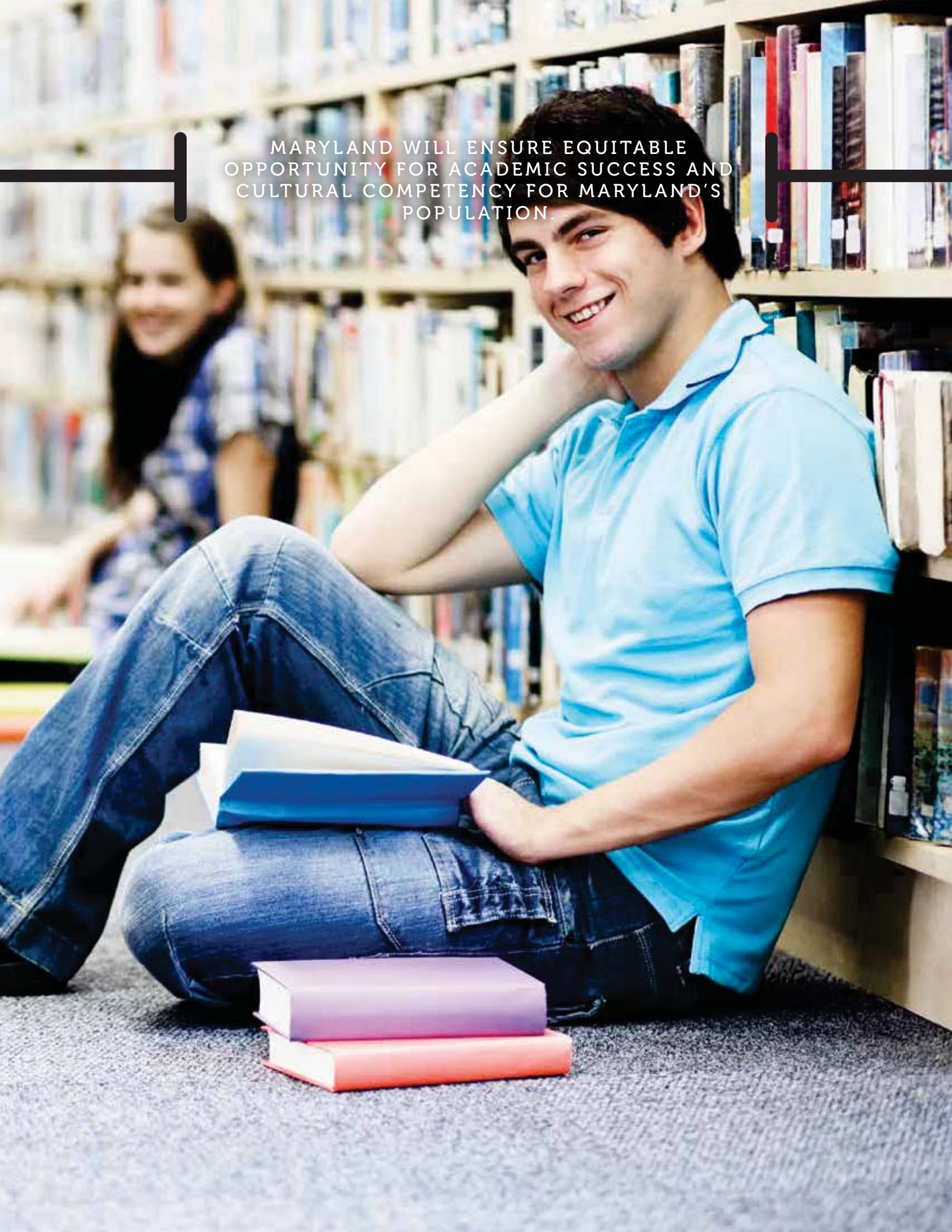
THE COMMISSION WILL CONTINUE TO SEEK RESOURCES THAT WILL HELP MAINTAIN AND EXPAND CURRENT INITIATIVES, AS WELL AS DEVELOP NEW PROGRAMMATIC INTERVENTIONS DESIGNED TO ADVANCE THE MARYLAND COLLEGE COMPLETION AGENDA.

IMPLEMENTATION MEASURES/STRATEGIES:

- Through FY 2017, the Commission, in collaboration with the segments of postsecondary education, will continue to redesign developmental mathematics and gateway courses in order to increase student success rates, improve consistency and quality of instruction, infuse technology into instruction, and reduce costs.
- By July 1, 2016, the Commission in collaboration with Maryland public colleges and universities will create and implement a Statewide reverse transfer agreement where at least 30 credits earned toward a bachelor's degree at a public, four-year institution in the State can be automatically transferred to any community college in the State for credit towards an associate's degree.
- The Commission, in collaboration with the segments of postsecondary education, will continue to develop and implement Statewide efforts to encourage near-completers to re-enroll and earn a college degree.



GOAL 3: DIVERSITY.


MARYLAND WILL ENSURE EQUITABLE OPPORTUNITY FOR ACADEMIC SUCCESS AND CULTURAL COMPETENCY FOR MARYLAND'S POPULATION.

GOAL 3: DIVERSITY

Maryland's ability to educate its increasingly diverse citizenry presents both an important opportunity and a pressing challenge that must be addressed in the coming years. The State's heterogeneous population is one of its most important resources. However, failure to maximize its potential will jeopardize the future development, growth, and economic vitality of the State. It should be noted that the State's commitment to this critical ideal and goal extends beyond concerns regarding Maryland's economic competitiveness. Diversity is valued not only on its civil rights merits but also because it has been found to add significant value to postsecondary learning environments. In order to ensure Maryland has a prosperous future, it is critical that diversity, broadly conceptualized, is appropriately valued and embraced as a fundamental priority. After providing a definition of diversity, this goal will discuss the achievement gap and the importance of ensuring Maryland students, faculty, and staff are culturally competent. Cultural competence is the capacity to interact effectively with people of different cultures and socio-economic backgrounds.

DEFINING DIVERSITY

Maryland Ready subscribes to a comprehensive and inclusive definition of diversity. The Council for the Advancement of Standards (2011) notes that the definition of diversity is more broadly inclusive of age; cultural identity; disability; ethnicity; family educational history (e.g., first-generation college students); gender identity and expression; nationality; sexual orientation; political affiliation; race; religious affiliation; sex; economic, marital, social, and veteran status; or any other personal attribute included in institutional policies and codes. It is the State's goal that all Marylanders feel welcomed, valued, and supported during their educational experience.

Moreover, *Maryland Ready*'s definition of diversity extends beyond equitable representation of underrepresented groups (i.e., access) and seeks to instill a commitment to providing equitable opportunity for academic success that will result in the reduction of current outcome gaps in persistence, transfer, and attainment. These outcome gaps cannot persist if Maryland seeks to remain economically competitive and attain key State priorities, such as the 2025 completion goal and closing achievement gaps. Therefore, disparities in key educational outcomes by demographic characteristics such as race/ethnicity, gender, family income, and disability status must be diminished. To accomplish these goals, holistic approaches that involve targeted outreach and recruitment efforts, wrap-around academic support services, and strategic financial aid policies will need to be enacted. Ignoring these needs will result in the continued underdevelopment of human capital, which is detrimental to the State.

Maryland Ready also reinforces the idea of diversity as a concept to be valued, appreciated, and understood. As the State becomes more diverse and the world becomes increasingly interconnected, Maryland residents will need cultural competence to engage seamlessly in diverse settings. Because many students come from homogenous home communities and PreK-12 schools, colleges and universities find themselves uniquely positioned to provide opportunities for students to interact in a diverse environment. As Maryland, the United

States, and the world continue to become more diverse, it is even more important for students to develop a baseline level of cultural competence. Although students are often the primary focus of conversations about diversity, it is also critical to note that faculty and staff diversity is equally as important in creating an enriching learning environment that promotes cultural competency.

CLOSING ACHIEVEMENT GAPS

Maryland Ready holds that providing legitimate opportunity extends beyond access and admission and involves doing what is necessary to narrow achievement gaps. Although all gaps in achievement are of significant concern to the State, the outcome disparities for African American, Hispanic, and low-income students are highlighted in this section because of their current and increasing share of the State's population.

Despite representing approximately 30% of Maryland's citizens and postsecondary students (U.S. Census Bureau, 2013; MHEC, 2013a), African Americans earn only 20% of all certificates and degrees awarded by Maryland institutions (MHEC, 2013a). Their six-year graduation rate of 42% (MHEC, 2012a) at public four-year institutions is the lowest of all racial and ethnic minority groups. This is also true for their four-year graduation and transfer rate of 23.8% at community colleges (MHEC, 2012b).

Similarly troubling data also exist for Hispanic students. Although Hispanic students comprise 8.5% of Maryland's population (U.S. Census Bureau, 2013), MHEC data show that they are currently underrepresented among enrollees at 5.7% and degree recipients at 4.6% (MHEC, 2013a). Furthermore, at 61.4%, the six-year graduation rate for Hispanic students attending public four-year institutions is below the statewide average, and the four-year community college success rate of 29.6% lags substantially behind the rates for Asian and white students (MHEC, 2012a; MHEC, 2012b).

Beyond the outcome gaps that separate African American and Hispanic students from their peers of different races, there are other areas of concern that merit significant attention. Students from low-income backgrounds have a six-year graduation rate and a four-year community college success rate that trails the average for all students (MHEC, 2013a; MHEC, 2012b). MHEC data also reveal that there is a gender gap in enrollment, retention, and completion rates. Despite comprising slightly over half of Maryland residents (52%), women account for nearly 60% of total enrollments and degrees awarded in 2011 (U.S. Census Bureau, 2013; MHEC, 2013a). Although women are achieving at higher levels than

men, this trend is not evident in the science, technology, engineering, and mathematics (STEM) disciplines, where female students only comprise approximately 34% of STEM enrollees and 36% of STEM degree recipients (MHEC

Degree and Enrollment Information Systems). Although women comprise nearly equal shares of STEM enrollment and degrees awarded, these percentages are considerably lower than the share of women among all enrollees and degree recipients (60%) in all majors and disciplines.

Given the expected decline in high school graduates discussed previously in the Significant Issues section, it is highly unlikely that the State will be able to achieve many of its long-term goals and priorities, particularly the 2025 completion goal, without narrowing these rather significant achievement gaps. The data show that students who are more likely to be academically prepared for college and have fewer financial concerns are doing considerably well, but many others are being left behind. If these trends are to be reversed, the State and postsecondary institutions must reexamine philosophical approaches to education, teaching practices, student support mechanisms, administrative structures, and funding and financial aid systems in order to ensure that robust services and resources are targeted to the populations and institutions that need them most.

COMMUNITY COLLEGES

Closing achievement gaps will involve considerable work and buy-in from each postsecondary segment and all institutions in the State. As open access institutions, community colleges provide access to postsecondary training and education irrespective of academic preparation. The State's community colleges enroll 61% of all low-income undergraduates (using Pell Grant recipients as a proxy) and 57% of all Hispanic and African American undergraduates in the State (MHEC, 2013b; MHEC, 2012c). These institutions are incredibly important because they provide local, affordable workforce training opportunities as well as transfer pathways for students who want to pursue a bachelor's degree.

Community colleges are also charged with providing the majority of Maryland students requiring developmental instruction with the academic skills and basic knowledge they need to accomplish their postsecondary goals. Data published by the Maryland Association of Community Colleges (MACC) show that students who complete developmental instruction are more likely to earn 30 credits or remain enrolled, transfer to a four-year institution, or complete a degree compared to students who do not complete developmental education and students who are considered academically prepared for college upon enrollment (MACC, 2013). Understanding this need, 20 developmental courses have been redesigned at Maryland community colleges to increase

engagement and learning in the classroom, mainly through the integration of technology.

It is important to emphasize that the community colleges serve a critical and growing need in the Maryland postsecondary system. However, there is much room for improvement. Data indicate that slightly fewer than 36% of students transfer or graduate four years after entry (MHEC, 2012b). Increasing community college success rates must be a significant priority of the State if long-term goals and economic competitiveness are to be achieved. Therefore, it is critical that the State and local governing bodies ensure these institutions have the necessary resources required to provide quality services to students in coming years.

HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

Given their missions and the students they serve, historically black colleges and universities (HBCUs) are also well positioned to make significant contributions to the State's goal of closing the achievement gap. The State's four public HBCUs provide many traditionally underrepresented students with access to a four-year educational experience in a culturally supportive environment. Maryland's four HBCUs enroll 56% of all African American students attending four-year, residential, public institutions throughout the State (MHEC, 2013a). Although HBCUs do not exclusively serve African American students, the overwhelming majority of their students come from this demographic group. Maryland's HBCUs award nearly half (49%) of all bachelor's degrees granted to African American students attending four-year, residential, public institutions in the State (MHEC, 2013a).

Serving students who are often academically underprepared, the first in their families to attend college, and with fewer financial resources than students attending other institutions has been a central part of the mission of Maryland's HBCUs. Approximately 78% of students enrolling at HBCUs are assessed to need some form of developmental instruction in English or mathematics (MHEC, 2013a). It is quite difficult and requires considerable financial resources and high-quality faculty to provide developmental and remedial services effectively, while simultaneously providing a diverse array of undergraduate and graduate offerings, and advancing other institutional priorities. To this end, since 2001, the State has earmarked special funds for HBCUs to operate summer bridge programs and enhance services designed to improve student retention and graduation. Furthermore, during the 2013 legislative session, the State allocated additional funding to HBCUs for the exclusive purpose of converting part-time faculty to full-time positions.

Given their significance in providing postsecondary opportunities to African American students, it is clear that HBCUs will need to play an instrumental role in enabling the State to close achievement gaps for African American students. Like the community colleges, the State's HBCUs have much room for improvement. Data for the 2006 cohort show that 32% of black students in Maryland's public HBCUs graduate within six years (MHEC 2012d; MHEC, 2012e). This is compared to a six-year graduation rate of 66% for African Americans attending traditionally white public, four-year, residential institutions in the State (MHEC 2012d; MHEC, 2012e). Although students attending HBCUs are more likely to be from lower-income backgrounds and less prepared for college, this gap can be narrowed substantially, and the State is committed to providing the HBCUs with the proper support required to improve student success.

CULTURAL COMPETENCE

Maryland Ready conceptualizes diversity as a value to be understood and appreciated. Thus, the State is committed to ensuring students develop a sense of cultural competence. In order to navigate through a world that is increasingly multiethnic, multinational, and globally interdependent, students must be culturally competent. The State believes that colleges and universities are better positioned to help students develop cultural competence than many other entities, given the diversity that exists at most institutions. Furthermore, colleges and universities offer many students the last available opportunity to develop this important skill and perspective prior to joining the workforce.

One clear example illustrating the critical importance of cultural competence focuses on the teaching profession. As Maryland and the nation become more diverse, teachers with the capacity to respect, understand, and instruct individuals from diverse backgrounds will be needed to properly educate the workforce of tomorrow. Teachers must be able to develop course content and materials that are engaging and inclusive of a broad range of students with various learning and communication styles, cultural norms and worldviews, and instructional needs. Understanding this critical need, colleges and universities must ensure that instilling cultural competence and attracting individuals from underrepresented groups to the teaching profession are key goals of teacher education and preparation programs.

The development of cultural competence is also applicable to individuals who lead, teach, and serve students in the State's college and universities. The State must make concerted efforts to recruit and retain faculty and staff from underrepresented backgrounds and to infuse the graduate student pipeline with potential candidates who can add diverse insights, experiences, and interests to Maryland institutions. Cultural competence is best achieved in a learning environment infused with diversity, where individuals within that community are actively engaged with one another in meaningful ways. A large body of evidence has linked interactions with diverse others to gains in multicultural competence and other positive educational outcomes, including academic skills, critical thinking skills, leadership ability, civic interest and engagement, social skills, perspective taking, and vocational preparation (Milem, 2003).

CULTURAL COMPETENCE IS BEST ACHIEVED IN A LEARNING ENVIRONMENT INFUSED WITH DIVERSITY, WHERE INDIVIDUALS WITHIN THAT COMMUNITY ARE ACTIVELY ENGAGED WITH ONE ANOTHER IN MEANINGFUL WAYS.

As the State moves forward through the 21st century, it must support efforts by postsecondary institutions to create and sustain increased cultural competence within their organizational units. Institutions must recognize and provide access to services and resources and create safe learning spaces and workplaces. They must also be responsive to students in ways that value the worth of individuals, families, and communities, while ensuring opportunity for full participation in and completion of postsecondary education.

GOAL 3: ACTION RECOMMENDATIONS

AS PART OF THE COMMISSION'S MANDATORY EIGHT-YEAR REGULATORY REVIEW, MHEC WILL REVISIT ITS STATUTORY AND REGULATORY DEFINITIONS AND REFERENCES TO DIVERSITY TO ENSURE THAT THE CONCEPT IS DEFINED BROADLY, AND INCLUSIVELY, AND ENCOMPASSES THOSE WHOSE OPPORTUNITY AND ACCESS TO POSTSECONDARY EDUCATION IS LIMITED. THESE GROUPS INCLUDE UNDERREPRESENTED MINORITIES, OLDER ADULTS, STUDENTS WITH DISABILITIES, AND INDEPENDENT STUDENTS.

IMPLEMENTATION MEASURES/STRATEGIES:

- By FY 2015, the State will review, modify, and amend references to diversity in COMAR to ensure language is more inclusive of Maryland's diverse population.
- By FY 2016, the State will review and use *the Attorney General's Strengthening Diversity in Maryland Colleges and Universities: A Legal Roadmap* as a tool for expanding the conception, application, and implementation of diversity initiatives beyond race, ethnicity, and gender, without abandoning these areas where their use is in compliance with current law and in the best interest of advancing postsecondary education for all Marylanders.

THE STATE WILL ENCOURAGE INSTITUTIONS AND THE SEGMENTS OF POSTSECONDARY EDUCATION TO IDENTIFY AND DEVELOP A PLAN FOR TARGETING OUTREACH, ACADEMIC, FINANCIAL, AND STUDENT SUPPORT SERVICES TO POPULATIONS THAT ARE UNDERREPRESENTED OR UNDERPERFORMING IN COMPARISON TO THE OVERALL STUDENT BODY. SUCH GROUPS MAY INCLUDE, BUT ARE NOT LIMITED TO, INDIVIDUALS FROM LOW-INCOME FAMILIES, AFRICAN AMERICANS, HISPANICS, MEN, WOMEN IN STEM DISCIPLINES, VETERANS, OR STUDENTS WITH DISABILITIES.

IMPLEMENTATION MEASURES/STRATEGIES:

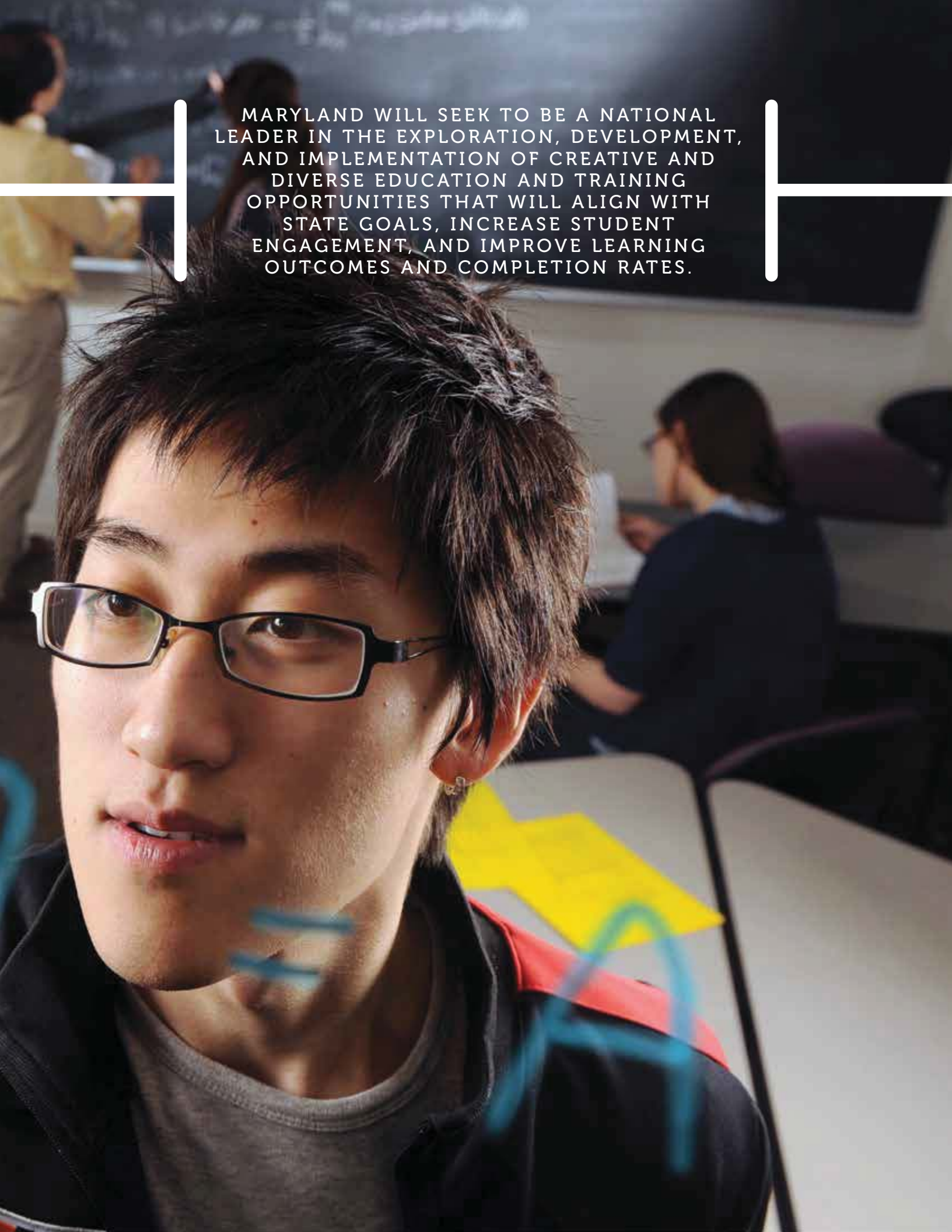
- In the 2014 institutional submissions required for the Cultural Diversity Report for Maryland Postsecondary Education, the Commission will ask public institutions to identify specific communities in need of targeted services.
- In the 2014 institutional submissions required for the Cultural Diversity Report for Maryland Postsecondary Education, the Commission will ask institutions to submit a plan for offering targeted services to specific groups and to define measurable goals for improvement on pre-identified outcomes for these groups.
- By FY 2016, the Commission will ask institutions to report on the impact of these services on student enrollment patterns, outcomes for the targeted populations, and any related achievement gaps.

THE COMMISSION WILL WORK WITH THE PUBLIC POSTSECONDARY SEGMENTS TO ENSURE THAT MEMBERS OF THE UNIVERSITY COMMUNITY DEVELOP CULTURAL COMPETENCE AND AN APPRECIATION FOR A DIVERSE RANGE OF VALUES, BELIEFS, AND ATTITUDES.

IMPLEMENTATION MEASURES/STRATEGIES:

- By FY 2018, the State will use information and data gathered from institutional submissions required for the Cultural Diversity Report for Maryland Postsecondary Education to identify postsecondary institutions needing improvement in the cultivation of a culturally competent postsecondary community.

GOAL 4: INNOVATION.



MARYLAND WILL SEEK TO BE A NATIONAL LEADER IN THE EXPLORATION, DEVELOPMENT, AND IMPLEMENTATION OF CREATIVE AND DIVERSE EDUCATION AND TRAINING OPPORTUNITIES THAT WILL ALIGN WITH STATE GOALS, INCREASE STUDENT ENGAGEMENT, AND IMPROVE LEARNING OUTCOMES AND COMPLETION RATES.

GOAL 4: INNOVATION

Maryland is staunchly committed to advancing its position as a national and international leader in higher education, supporting the completion agenda, and reaching the State's 2025 degree attainment goal. However, with this stance comes the need to think creatively and differently about how to reach more students than ever before – many of whom are from groups that have been underserved by the postsecondary community. The idea of harnessing innovation to propel the State forward is closely aligned with the Plan's title, *Maryland Ready*, which signals a willingness and intention to move beyond traditional parameters to meet the State's objectives. This goal defines innovation as the use of new, transformative approaches to delivering and evaluating postsecondary institutions' offerings, instructional methods, and training models and systems as a way of facilitating student success. Innovation also supports replicating proven strategies and bringing them to scale throughout the State, using technology in appropriate ways to enhance teaching and learning, and examining and dismantling policy and regulatory barriers that thwart productive change. Furthermore, the goal recommends developing and adopting creative policies and practices that support student retention and completion, prepare graduates for lifelong learning, support a robust workforce, and reward students based on the knowledge and skills they have attained and demonstrated.

DRIVERS OF INNOVATION

The State encourages the development of new, diverse, creative, and collaborative practices that enhance the quality, effectiveness, and adeptness of offerings and services provided by postsecondary institutions. Innovative strategies can increase student access and engagement; make college more affordable; and improve retention measures, learning outcomes, and college completion rates. In order to reap these benefits, however, the postsecondary community must be prepared to grapple with challenging issues such as the need for traditional higher education to change to better meet the needs of the ever-evolving student population, and the need to adjust instructional strategies and learning environments given new research on how students learn.

Attempts to make processes and practices more innovative can be informed by environmental trend data which reveal societal changes that have implications for

postsecondary education (Lapin, 2012). Some of the more significant trends which underscore the need for educational innovations include:

- Social values and lifestyle trends: continued poverty and associated concerns; growing student loan debt; increasing undergraduate enrollments, with Hispanic enrollment at an all-time high; dominance of social media and students wanting to be entertained and "edutained" while learning; and negative perceptions of the value/worth of college and specialized workforce training.
- Economic trends: growing income inequality; slow state and local economies; financial pressures on state budgets; the need for more high-tech, cyber security, health and education workers; rising infrastructure costs; and more competition for less public revenue and general resources.
- Education trends: growing majority/minority populations in the PreK-12 system; growing role of for-profit and not-for-profit institutions; greater availability of distance education and hybrid courses; more education options/choices for students; and increasing needs for remedial training.
- Labor force trends: changing labor force demographics due to a growing number of minorities and women in the workforce; increasing need for technology skills; increasing globalization; and high demand for workers in new and emerging fields such as IT, cyber security, and health care.
- Technology trends: innovations in information sharing; need for devices that can multitask, are smaller, cheaper, lighter, faster and simpler; and growing privacy and identity concerns.

While environmental trends provide the broad context in which innovations will be introduced, individual postsecondary institutions will be at the center of designing new methods, policies, and strategies in ways that are consistent with their missions. Furthermore, no new instructional model or approach will be successful without faculty who champion the cause. Faculty will redesign the curriculum, integrate technology into their classrooms, and assess the quality and utility of alternate approaches such as competency-based education. In many ways, faculty members are the drivers of innovative change in higher education. If the postsecondary community is to meet the needs of Marylanders and strengthen the State's position as a leader in this respect, then campus leaders, faculty, and administrators must be responsive to these trends and encourage new ways of considering and delivering postsecondary education and training to enhance success. This will include supporting and sustaining alternative forms of educational delivery; fostering new instructional methods; enhancing access, articulation, and transfer pathways; awarding credits for experiences gained outside of the traditional classroom; and encouraging institutional, segmental, and industry collaboration.

PURPOSE AND GOALS OF INNOVATION

The goals and recommendations for spurring innovation outlined in *Maryland Ready* are grounded in the fundamental beliefs that innovative approaches to education and training should be purposeful and intentional, and are best supported and evaluated on the extent to

which they align with State goals, increase student engagement, and improve learning outcomes and completion rates. This section explores each of these guiding principles more fully.

Alignment with State Goals

Innovations in education and training must meet Maryland's standards for quality and effectiveness in fulfilling the evolving postsecondary needs of students, the State, and the nation. Innovative approaches, strategies, and techniques should support high standards for effective teaching, learning, and research. Further, innovations should be comprehensive and should focus not only on championing academic excellence, but on how they can improve other institutional systems, policies, programs, and services.

A TRUE COMMITMENT TO EXPLORING AND EMBRACING INNOVATION AS ONE OF THE STATE'S PRIMARY POSTSECONDARY GOALS WILL REQUIRE THE ADOPTION OF A BROADER DEFINITION OF COMPLETION.

Establishing new delivery strategies and scaling-up innovative approaches that have not yet been widely implemented will support the State's goal of postsecondary education remaining accessible and affordable by expanding and strengthening pathways to entry, matriculation, and completion. New modes of delivery and programmatic initiatives designed to spur student success may also better serve the needs of the State's increasingly diverse student population. Using innovative strategies as well as existing approaches such as competency-based education and prior learning assessment can also help make postsecondary education and training opportunities more affordable for Marylanders.

A true commitment to exploring and embracing innovation as one of the State's primary postsecondary goals will require the adoption of a broader definition of completion that acknowledges alternative methods of knowledge acquisition, skills mastery, credit accumulation, and ways by which degree requirements can be fulfilled. In this vein, several states have supported the development and alignment of "stackable" credits, which promote the incremental completion of multiple certifications that can be aligned with workforce demands, yet remain flexible enough to meet students' needs, interests, and financial situations. As students complete these stackable requirements, each credit-bearing credential becomes eligible for assignment toward an associate's degree (Fain, 2012).

Improved Student Learning, Progress, and Engagement

Innovative approaches to education and training that are adopted and implemented by postsecondary institutions should facilitate student learning and engagement and spur student success. They should inspire interest and creativity, and equip students with the skills and competencies needed to be contributing members of society and to support Maryland's knowledge-based economy. Institutions should consider replicating promising strategies that reduce time to graduation by redesigning or otherwise streamlining coursework (especially developmental courses), accelerating credit completion, and preventing the loss of credits. The College and Career Readiness and College Completion Act of 2013, a seminal bill that became law during the 2013 Maryland

legislative session, supports a number of innovative efforts related to degree completion and student success. These strategies include reverse transfer, support for near-completers, and student transfer pathways previously discussed in Goal 2.

During the past decade, course redesign has emerged as a successful instructional approach that emphasizes student-focused instruction and engagement. Maryland has been a national leader in course redesign, which seeks to improve student learning and course completion rates, while reducing costs, by transforming the way that instruction is delivered and learning environments are designed. This strategy often involves the use of technology, computer-assisted instruction, and self-paced learning to facilitate student success. Course redesign typically focuses on entry-level gateway courses that often impede students' ability to make adequate academic progress, and one of the basic tenets of this strategy is that the entire course, not individual sections or those taught by certain instructors, are redesigned. In 2007, the University System of Maryland (USM) became the first university system in the nation to undertake a system-wide redesign effort. In 2009, USM received a grant from the Lumina Foundation to expand course redesign to other postsecondary segments. In 2011, MHEC received a grant from Complete College America that focused on transforming developmental mathematics and further supported the expansion of course redesign throughout the State. To date, 68 courses have been redesigned, and every segment of Maryland postsecondary education has been involved in these redesign efforts.

IMPROVE LEARNING OUTCOMES AND COMPLETION RATES

Maryland has also begun to explore the expansion of competency-based education as a method for earning credits that can be applied toward a degree. This is an outcomes-focused approach, whereby the emphasis is on what students know and can demonstrate rather than on the courses and requisite requirements that have been met. A competency-based approach involves identifying knowledge and skill sets; selecting appropriate content, readings, and assignments to support the attainment of these competencies; and having students demonstrate their mastery of these competencies through assessment. Competency-based learning is self-paced and student-directed, albeit with the guidance of

mentors, and allows students to determine their readiness to prove their competencies in given subjects. While still under analysis, the competency-based model has implications for a range of higher education functions and practices, including assessment, tuition and fees, financial aid, delivery costs, capital investment needs, and the role of faculty.

Prior learning assessment offers another alternative method for awarding college credit and rewards college-level learning and knowledge gained outside the traditional academic environment through various means including: work experience, employer training programs, military service, independent study, volunteer experiences, or massive open online courses (MOOCs). In short, it involves the evaluation and assessment of an individual's life learning for college credit, certification, or advanced standing toward further education or training (Council for Adult and Experiential Learning, 2012). Prior learning assessment can take many forms to include the review of individualized student portfolios, evaluation of corporate and military training, course challenge, and standardized exams. Currently, Maryland limits the number of prior learning assessment credits that may be applied toward a credential, which results in some students taking and paying for additional credit-bearing courses to meet degree requirements. Both competency-based education and prior learning assessment hold particular promise for reaching and supporting the completion aspirations of Maryland's growing returning adult population.

Innovative strategies for education and training and new policies that are enacted to support these approaches should focus on improving learning outcomes and completion rates. Additionally, these strategies should contain an assessment process that evaluates their effectiveness and potential for success. A new postsecondary data collection system, along with the Maryland Longitudinal Data System (MLDS), will provide valuable information regarding the effectiveness of these efforts. Goal 6 discusses the impact of these data innovations that will provide a potential framework to strengthen and expand both existing practices and new approaches.

GOAL 4: ACTION RECOMMENDATIONS

THE COMMISSION AND MARYLAND COLLEGES AND UNIVERSITIES WILL WORK TO STRENGTHEN THE QUALITY OF THE STUDENT ACADEMIC EXPERIENCE AND TO ENHANCE THE EASE OF CREDIT TRANSFER AMONG PUBLIC INSTITUTIONS IN THE STATE.

IMPLEMENTATION MEASURES/STRATEGIES:

- The Commission, in collaboration with Maryland public colleges and universities, will create and implement a statewide transfer agreement whereby at least 60 credits earned toward an associate's degree at a community college in the State are automatically transferrable to a public four-year institution in the State before July 2016.
- By FY 2015, the Commission's Segmental Advisory Council will evaluate the effectiveness, transparency, and user-friendly functionality of the Articulation System for Maryland Colleges and Universities and provide recommendations to the Governor and General Assembly on how credit transferability can be improved in a cost-effective and time-efficient manner.
- By FY 2018, all public colleges and universities will develop degree pathways with progress benchmarks for each academic major.
- By FY 2018, all public colleges and universities will require undergraduate students to develop and file a formal degree plan in consultation with their academic advisor.

THE COMMISSION WILL COLLABORATE WITH THE SEGMENTS OF POSTSECONDARY EDUCATION TO EXPLORE THE APPROPRIATENESS AND EFFECTIVENESS OF ALTERNATIVE METHODS OF AWARDING CREDIT.

IMPLEMENTATION MEASURES/STRATEGIES:

- MHEC will leverage its role and mission to act as a convener of all segments of postsecondary education to facilitate discussions and sharing of best practices concerning the use of massive open online courses (MOOCs), competency-based education, prior learning assessment, and other innovative approaches to access, retention, completion, and student engagement.
- MHEC will conduct a policy review, analysis, and revision of the Code of Maryland Regulations (COMAR) 13B to take into consideration the College and Career Readiness and College Completion Act of 2013 and innovations in postsecondary education that enhance access, retention, completion, and student engagement.

GOAL 5: ECONOMIC GROWTH AND VITALITY.

MARYLAND WILL STIMULATE ECONOMIC GROWTH, INNOVATION, AND VITALITY BY SUPPORTING A KNOWLEDGE-BASED ECONOMY, ESPECIALLY THROUGH INCREASING EDUCATION AND TRAINING AND PROMOTING THE ADVANCEMENT AND COMMERCIALIZATION OF RESEARCH.

GOAL 5: ECONOMIC GROWTH AND VITALITY.

Postsecondary education is an engine of economic growth and vitality. Individuals who obtain degrees and other credentials receive higher earnings, are employed at a higher rate, and generate improved tax receipts for the State, counties, and municipalities than those without advanced skills and training. Scholarly research and development fosters growth through innovation and commercialization while also contributing broadly to the State's well-being and prominence. In addition, higher education provides support for business incubation and development, and postsecondary institutions themselves also create jobs.

Maryland's economy includes a number of high-skill industries, including biotechnology, telecommunications, aerospace, and defense. The State benefits from proximity to the nation's capital and numerous federal agencies, and also maintains significant agricultural production. *Maryland Ready* places special emphasis on two elements of economic vitality, both of which are critical to sustaining the State's economic growth: workforce development and commercialization of research. Postsecondary institutions are vital to helping Maryland meet changing workforce education and training needs. An educated workforce that can adapt to changes in the global market is a vital resource in creating and attracting new businesses and in supporting a healthy, knowledge-based economy. In addition, scholarly research and development must continue to ensure that innovations are brought to market to generate greater economic growth. To remain nationally and globally competitive, Maryland's postsecondary institutions must continue to innovate and collaborate with private industry, nonprofits, and each other so that 1) graduates' education and training align with business and workforce prerequisites and emerging needs, and 2) intellectual properties developed through innovation and invention at the State's university research facilities are commercialized. Goal 5 of *Maryland Ready* outlines key considerations for developing partnerships addressing the State's education and training needs as well as promoting the commercialization of research.

TO REMAIN NATIONALLY AND GLOBALLY COMPETITIVE, MARYLAND'S POSTSECONDARY INSTITUTIONS MUST CONTINUE TO INNOVATE AND COLLABORATE WITH PRIVATE INDUSTRY, NONPROFITS, AND EACH OTHER.

SUPPORTING A KNOWLEDGE-BASED ECONOMY.

Technological advances and globalization have fostered significant changes in the workplace. Employers have invested heavily in new upgrades and equipment and expect that employees will possess the skills required to work in these enhanced environments. To promote the State's competitive, knowledge-based economy, the postsecondary segments need to provide quality education and training to members of the workforce. It is not enough to simply have more students enter and complete academic or occupational programs, but they must have access to high-caliber and effective training that meets the evolving needs of the workplace. Two trends dominate the workforce education and training horizon: 1) a perceived mismatch between the skills that job applicants possess and those that employers require, and 2) a need for more people in the workforce with recognized credentials. A credential is defined as a recognized and portable industry certification, occupational license, or postsecondary education certificate or degree.

Even during the recent economic downturn, employers reported a shortage of job applicants with the skills required for the contemporary workplace. The National Skills Coalition (2013) estimates that by 2018, 43% of Maryland jobs

will be classified as "middle skills." Middle-skill jobs require an education beyond high school, but less than a four-year degree. In 2009, only 38% of Maryland's workforce had the training required for middle-skill jobs.

In addition, as noted elsewhere in *Maryland Ready*, the changing demographics of Maryland's population and workforce require new skills, new opportunities to obtain credentials, and new patterns of enrollment in postsecondary education. Workers, including many who have already earned postsecondary degrees, must have the ability to reenter postsecondary education to secure training and credentials that will allow them to maintain or upgrade their skills. Postsecondary institutions must provide support for many types of workers, and promote multiple pathways to ease student transitions into and through postsecondary education, as noted in *Maryland Ready* Goals 1 through 4. For their part, employers must ensure that employees receive support for training and education at multiple points during their careers.

Some educational institutions are collaborating with industry to develop strategies that address changing workforce demographics, evolving workforce demands, and the skills gap through the implementation of stackable credentials (Fain, 2012). One example of strong collaboration is found in a partnership between the healthcare industry and healthcare education and training programs. An individual may enter the healthcare field at many levels, and at each level, there are well-defined next step pathways for progress. Most levels are identified through the attainment of industry-recognized credentials that are stackable, allowing students to earn credentials as they progress through educational and training programs for particular occupational fields. Collaboration among postsecondary institutions and business and industry is essential to the development and adoption of innovative approaches and strategies that can address the changing needs of the workplace and workers.

Many Maryland postsecondary institutions have standing advisory boards to ensure that input and feedback from business and industry are incorporated into programs and curricula. Academic programs with active advisory boards are recognized by business and industry as more responsive to workforce needs and as producing more employable graduates. When input from employers is not solicited, occupational education and training programs may not be as responsive to workforce needs, which may require employees to have new skills and content knowledge and to be more technologically savvy. In fact, McKinsey & Company's (2012) recently released report *Education to Employment: Designing a System That Works,* cited a startling disconnect between the expectations of educators, students, and employers. According to the report, in order to

equip the workforce with required skills the line of communication between education and business must remain open. Another benefit to having business and industry representatives on program advisory boards is that they can provide input on specialized industry-related certifications. A student who graduates from a program with recognized industry certifications enters into the workforce not only with a postsecondary credential, but also with portable value-added industry-recognized endorsements.

Input from industry-specific experts is essential for the development of strategies that support a knowledge-based economy. Public and private resources are needed to develop and implement tactics that align educational and business needs, and promote the development of middle skills in Maryland's workforce.

COLLABORATIVE EFFORTS: ENHANCING WORKFORCE DEVELOPMENT

To maximize the effectiveness of limited resources, including instructor availability, equipment, and laboratory and clinical facilities, it is critical for Maryland to address workforce needs in a coordinated manner that fully engages employers, postsecondary education institutions, and State, local, and regional government agencies. Collaborative efforts can reduce burdens on individual institutions, agencies, and businesses, and enhance the coordination of strategies to better identify and respond to student and workforce needs.

While there is widespread agreement on the need to ensure a highly skilled workforce to maintain Maryland's economic vitality, there is some disagreement about who should bear primary responsibility for achieving this objective. Some argue that the principal responsibility for identifying workforce needs and producing the requisite number of trained workers belongs to postsecondary education. Others argue that State entities like the Department of Labor, Licensing and Regulation (DLLR) or the Governor's Workforce Investment Board (GWIB) have the primary obligation to ensure a match of skilled workers and employers. Still others would argue that it is the duty of employers to provide the training and resources that ensure that employees possess the necessary skills for high productivity and profitable business. Some would say that workers themselves bear primary responsibility for developing the knowledge and skills necessary for their success in the workforce because they gain the most direct benefits. In reality, workforce development requires collaboration among all of these parties. These groups can work together to ensure that all stakeholders share resources and information to support the development of effective training, certificate, and degree programs; incentives needed to recruit qualified individuals to develop or upgrade their skills in workforce shortage areas; and capable, skilled, and knowledgeable workers.

Science, technology, engineering, and mathematics (STEM) occupations have been identified as an area of high need in Maryland. In recent years, postsecondary education institutions, government agencies, and businesses have collaborated to enhance STEM teacher preparation, increase student interest and performance in STEM disciplines, and provide workforce training in STEM-related fields. These efforts include a partnership with Project Lead the Way, a national organization that develops hands-on engineering courses for middle school and high school students, and membership in the STEM Innovation Network, a state organization that connects teachers and students with industry partners. Towson University's UTeach initiative, supported by the National Math and Science Initiative, prepares

future teachers for both a bachelor's degree in science or mathematics and a teaching certificate. Community colleges are leading job training and apprenticeship initiatives for green construction and engineering jobs. Postsecondary education institutions have implemented programs to recruit and retain more STEM students from underrepresented minority groups. Furthermore, employers are supporting student learning in STEM fields by providing real-world opportunities through internships and other practical experiences. These STEM-related initiatives can serve as models for cross-sector collaboration in many other areas.

The importance of collaborative data collection and reporting efforts among education, businesses, and government should continue to be fostered, reinforced, and improved. Reliable and timely data will allow postsecondary institutions, the State, and employers to anticipate and respond to student and workforce needs. All postsecondary education segments should be included in these efforts, along with MHEC, the Maryland State Department of Education (MSDE), DLLR, and private sector research and data collection entities. The development of the Maryland Longitudinal Data System (MLDS), as discussed in Goal 6, will play a key role in informing the decision-making of educators, employers, and policymakers.

ADVANCEMENT AND COMMERCIALIZATION OF RESEARCH

Attracting research funding and commercializing research are vital for Maryland's growth in the global economy. Innovation, invention, and the commercialization of intellectual property are important products of postsecondary research. Maryland's research institutions have a proven record of attracting federal research funding from agencies such as the National Science Foundation, National Aeronautics and Space Administration, and the National Institutes of Health, and this funding continues to grow. Maryland institutions benefit from their proximity to federal laboratories and rank favorably in terms of quality research programs. With support from the State's political environment, Maryland universities collaborate with federal research centers and private industry to develop, evaluate, and transfer technology into economy-building businesses. Through such efforts, Maryland has become internationally renowned for research and development in areas such as genomics, biotechnology, aerospace engineering, physical and environmental sciences, medicine, and software engineering.

Maryland universities, and others throughout the nation, are heavily reliant on federal research funding, which is subject to restrictions set by grant requirements. Often, entrepreneurial commercialization endeavors cannot be funded due to these restrictions. Exclusive reliance on federal funding makes Maryland institutions vulnerable to shifting federal priorities for basic research. Postsecondary research institutions should work to expand their funding bases. Additionally, the growing need for collaborative knowledge beyond any one discipline creates opportunities to establish partnerships between institutions and industry, and among various disciplines.

At the same time that federal support for basic research is declining, budget pressures are forcing federal research institutions to share costs with other institutions. Maryland research universities could benefit by taking advantage of this opportunity to partner with federal facilities on various applied research projects. Increased "dual use" partnerships between Maryland

research institutions and federal research facilities would improve visibility for Maryland research efforts and enhance opportunities for student internships and research experiences.

Relative to other states, Maryland still trails in private funding for sponsored research and commercialization (O'Malley, 2012). While Maryland is ranked first in research, it is ranked 20th in commercialization. According to the 2012 State Technology and Science Index, Maryland ranks second overall, behind only Massachusetts, in its technology and science capabilities. Even so, the 2012 Index ranks Maryland 13th under the subcategory of Risk Capital and Entrepreneurial Infrastructure. This subcategory captures information about each state's volume of venture capital investment, as well as the number of business incubators and new business startups, patents, and investments in selected technological fields such as "green tech" and nanotechnology. Maryland increasingly competes not only with other states, but also with other regions of the world, and the State must maintain its efforts to enhance research and development. Maryland's primary university research and commercialization challenges revolve around funding, lack of public exposure, and facility use and space. One additional challenge is the absence of a statewide research and development advisory body to help identify and work toward eliminating obstacles that hinder establishing entrepreneurial relationships in a manner reflective of business, rather than academic, timeframes.

State and local governments and private industries welcome opportunities to engage Maryland's research universities. Several of Maryland's institutions are considered national and international research leaders, and are developing strategic focus areas that warrant duplication or expansion throughout the State. While individual Maryland colleges and universities are implementing innovative strategies, the State's research and development community overall, as well as its statewide commercialization process and record of success, are not widely recognized inside or outside of the State. The establishment of a Maryland research council, which involves renowned institutions, would create a statewide network of research facilities and opportunities. Maryland has many public and private assets available for research, commercialization, and venture startups. A few examples include the Maryland Technology Development Corporation (TEDCO) Innovation Initiative, the Maryland Venture Fund, the NSF I-Corps Program, and private societies such as the American Chemical Society, the Institute for Electronic and Electrical Engineers, the National Organization of Black Chemists and Chemical Engineers, and the Society of Hispanic Professional Engineers. A research council would be able to promote collaboration among business, industry, research, commercialization, and venture startups throughout the State.

Maryland is prepared to enhance its collaborative efforts to support both research and development and workforce development. These collaborations will help make *Maryland Ready* for the challenges of a global, high-skill, knowledge-based economy.

GOAL 5: ACTION RECOMMENDATIONS

IN ORDER TO ADDRESS THE SKILLS GAP, PROMOTE CAREER READINESS, AND FOSTER INCREASED POSTSECONDARY PROGRAMMATIC COLLABORATION WITH PRIVATE BUSINESS AND INDUSTRY, MHEC SHOULD DEVELOP GUIDELINES TO INCREASE INTERNSHIP OPPORTUNITIES WITH PRIVATE BUSINESS AND INDUSTRY, PRIVATE BUSINESS AND INDUSTRY PARTICIPATION ON POSTSECONDARY PROGRAM ADVISORY BOARDS, AND STUDENT AWARENESS OF CAREER PATHWAYS.

IMPLEMENTATION MEASURES/STRATEGIES:

- By January 1, 2015, MHEC in consultation with MSDE, DLLR and private business and industry, will publish three advisory guidelines: Collaboration – Internships; Collaboration – Program Advisory Boards; and Collaboration – Career Pathways.

TO ADDRESS FUNDING GAPS IN OCCUPATIONAL TRAINING PROGRAMS, MHEC SHOULD CONVENE TRAINING PROGRAM STAKEHOLDERS TO DETERMINE ALTERNATE AVENUES OF FUNDING AND UTILIZATION OF SPACE AND EQUIPMENT. STAKEHOLDERS INCLUDE POSTSECONDARY INSTITUTIONS, PRIVATE BUSINESS AND INDUSTRY, FEDERAL FACILITIES, AND STATE AGENCIES.

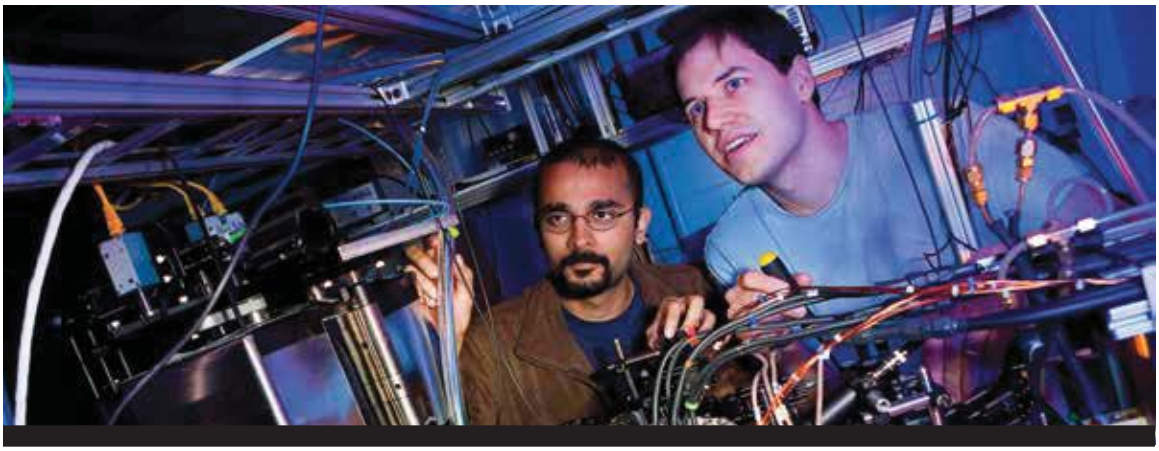
IMPLEMENTATION MEASURES/STRATEGIES:

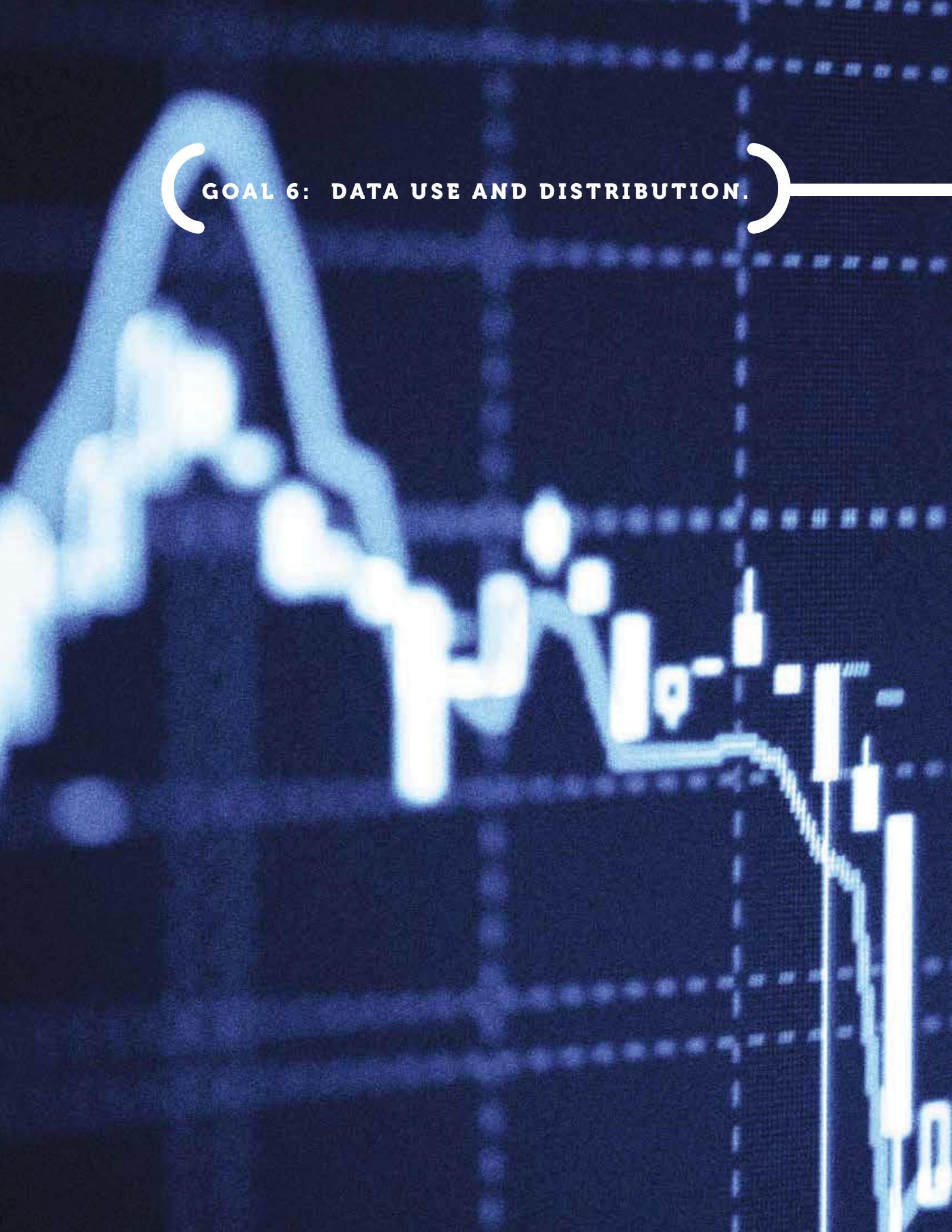
- In FY 2015, MHEC, in collaboration with the Department of Business and Economic Development (DBED) and DLLR, should engage postsecondary institutions, private business and industry, federal facilities, and State agencies in discussions on ways to collaborate across entities in an effort to better utilize existing funding, facilities, and equipment to address gaps in training programs.

WORKING COLLABORATIVELY, MHEC, DBED, AND MARYLAND PUBLIC AND PRIVATE RESEARCH UNIVERSITIES SHOULD CONVENE A COUNCIL OF RESEARCH AND DEVELOPMENT. THE INITIAL RESPONSIBILITY OF THE COUNCIL WOULD BE TO ESTABLISH COUNCIL GOALS AND OBJECTIVES. THE COUNCIL MAY: PROVIDE A STATE-LEVEL PERSPECTIVE ON RESEARCH PRIORITIES; BRAND RESEARCH AND DEVELOPMENT THROUGH A COMMON STATEWIDE VISION; GENERATE PARTNERSHIPS; PROVIDE RECOMMENDATIONS ON SITE MINING; PROMOTE UNIVERSITY RESEARCH AND COMMERCIALIZATION; INVESTIGATE AND COORDINATE DUAL USE OF FEDERAL FACILITIES; AND AS NEEDED, CONVENE A LARGER ADVISORY GROUP INCLUDING DBED, CENTERS FOR ENTREPRENEURSHIP, AND NEWLY ESTABLISHED STARTUPS, TO ADDRESS OR INVESTIGATE OTHER ISSUES.

IMPLEMENTATION MEASURES/STRATEGIES:

- By the close of FY 2014, MHEC will begin discussions with DBED, research universities, and other potential collaborators on the feasibility of forming a Council of Research and Development by 2015.





GOAL 6: DATA USE AND DISTRIBUTION.

MARYLAND WILL CREATE AND SUPPORT AN OPEN AND COLLABORATIVE ENVIRONMENT OF QUALITY DATA USE AND DISTRIBUTION THAT PROMOTES CONSTRUCTIVE COMMUNICATION,EFFECTIVE POLICY ANALYSIS, INFORMED DECISION-MAKING, AND ACHIEVEMENT OF STATE GOALS.

GOAL 6: DATA USE AND DISTRIBUTION

Goal 6 of *Maryland Ready* focuses on the need to continue and strengthen the State's commitment to the deliberate use and distribution of quality data related to postsecondary education. Over the past decade, the demand for data by policymakers, educators, and the public has increased significantly as more attention has been focused on accountability, assessment, and results. Data are needed to help inform important policy decisions, gauge program and practice effectiveness, identify areas of excellence and needs for improvement, and develop short-term and long-term plans. Requests for increased data, in recent years, have been driven by difficult economic conditions which have increased the consciousness of the public, legislators, and leaders in postsecondary education regarding how taxpayers' dollars are used. Given the economic realities of the present day, along with technological advances that have made data collection, analysis, and distribution less burdensome and time-consuming, decision-makers expect quality data to be readily available in a diverse array of continually evolving areas of interest.

Elevated expectations for timely, high-quality data have created an environment within the State where data are valued and considered as a key component of education policy development and assessment discussions. Over the past few years, this emphasis has been demonstrated through the substantial attention placed on the metrics collected for Complete College America's Alliance of the States initiative, which focuses on increasing degree and certificate completion and closing attainment gaps for traditionally underrepresented populations. This annual data initiative tracks a series of critical education indicators, disaggregated by important student demographic groups (e.g., race/ethnicity, age, Pell Grant status), examining enrollment and degree production, credit accumulation, remediation, graduation and retention rates, and other important metrics. Another highly visible data-centered initiative is Governor O'Malley's StateStat system, which includes many annually tracked and monitored education indicators that are tied to key State priorities.

The emphasis placed on these efforts and others has reinforced the need for the State to significantly expand its capacity to answer increasingly complex education policy questions in a manner that is streamlined and does not place greater burdens on postsecondary institutions. In response to this need, the State has committed substantial resources toward the development of the Maryland Longitudinal Data System (MLDS) and the redesign of MHEC's annual collection of data (through the Maryland Annual Collection) from postsecondary institutions. Together, these efforts will provide the State with considerably more data and the capacity to conduct more robust policy analysis. After detailing both of these major initiatives, Goal 6 of *Maryland Ready* will briefly discuss public data availability and technological innovation.

MARYLAND LONGITUDINAL DATA SYSTEM

The State is in the process of developing the MLDS, a statewide data warehouse that contains longitudinal data along the P-20 continuum. The MLDS will incorporate data collected by MHEC, the Maryland State Department of Education (MSDE), and the Maryland Department of Labor, Licensing and Regulation (DLLR). The primary purpose of the MLDS is to address the critical policy questions that will inform education stakeholders at all levels in order to improve the quality of education

in the State. These policy questions will mainly focus on key issues that deal with intersection points between PreK-12, postsecondary education, and the workforce such as college and career readiness. Historically, these types of transitional topics have been difficult for MHEC, MSDE, and DLLR to investigate given the lack of synergy among their individual data systems. However, the MLDS will solve this issue and provide the State with a cutting-edge, resource that can shed light on these key education and workforce transitions.

MARYLAND ANNUAL COLLECTION

Since the late 1970s, the State has collected data on postsecondary institutions through a series of regular collections, called the Maryland Annual Collection (MAC). Data gathered through the MAC allows MHEC to produce reports on critical postsecondary education topics. Despite minor modifications over the years, MHEC is currently in the process of finalizing the first ever substantive revision of the MAC. The purpose for revising the MAC is threefold: 1) improve the quality, efficiency, and flexibility of MHEC's data collection, analysis, and reporting processes; 2) develop a modernized data collection system and infrastructure that will meet the technical needs of the MLDS and current expectations for data availability and use; and 3) reduce the number of ad hoc data requests and collections by improving MHEC's capacity to answer pressing research and policy questions on an on-going basis. The revised annual collection contains many significant changes; however the items listed below constitute four noteworthy changes that will be included in the revised MAC.

- Year-round scope: Currently, some collections only provide data on students enrolled in the fall semester. Revised collections will be expanded to encompass students enrolling at any time during the academic year. In addition, institutions will submit data twice a year rather than once a year, in order to provide more timely information.
- Additional biographical information: Institutions will provide selected additional biographical information on students, such as name and zip code. This information will be used to enable the MLDS to match postsecondary education data with PreK-12 and workforce data in an effort to provide additional context and detail on student enrollment and degree patterns.
- Data on course completion and credit accumulation: For the first time, institutions will be asked to submit detailed information on academic matters including course completion, awarded transfer credit, remedial and credit-bearing coursework, face-to-face and distance education, coursework completed at off-campus sites such as regional higher education centers, and degree progress. This information will facilitate research on factors that influence persistence, credit completion, and degree completion.
- More participating institutions: MHEC will collect more data from other postsecondary educational institutions, including private career schools, for-profit institutions, and out-of-state providers. This change reflects the diverse array of educational options available to Maryland students. This new information will enable MHEC to better assess statewide postsecondary enrollment and degree completion.

GOAL 6: DATA USE AND DISTRIBUTION

MHEC began phasing in the new system of collections in fall 2013 after it was pilot tested in spring 2013. All public postsecondary colleges and universities will participate fully in the revised MAC, and member institutions in the Maryland Independent College and University Association (MICUA) have agreed to substantially increase their data submissions to MHEC and provide many of the data elements included in the revised system of collections.

PUBLIC DATA ACCESSIBILITY

For many years, postsecondary education in Maryland has made data available to the public through a variety of media and formats. However, there was a lack of uniformity and timeliness in these data products. This has remained the case even though expectations about data availability have increased over the last decade. Data now underpin accountability at all levels, drive decision-making by consumers, and are critical in goal setting and achievement. In order to make suitable and timely data easily accessible, MHEC and postsecondary institutions will work to establish minimum standards for the content and presentation of public data through institutional websites and other outlets. This will ensure that the public has convenient access to up-to-date data and information to allow them to answer questions about Maryland postsecondary education accurately and quickly.

DATA NOW UNDERPIN ACCOUNTABILITY AT ALL LEVELS, DRIVE DECISION-MAKING BY CONSUMERS, AND ARE CRITICAL IN GOAL SETTING AND ACHIEVEMENT.

TECHNOLOGICAL INNOVATION

The creation of the MLDS is a significant technological advancement. To support these efforts, partnering agencies as well as postsecondary institutions are making major technological changes and improvements to their individual systems. For example, many colleges and universities have either developed or enhanced the capacity to send and receive electronic transcripts in order to enable the transfer and linkage of student records between postsecondary institutions and school districts, and to facilitate the timely and efficient sharing of student records among postsecondary institutions. These data will be ultimately transferred to MHEC through the revised MAC system.

MHEC, a major data contributor and cornerstone of the MLDS, is currently engaged in a significant overhaul of its technological infrastructure. The agency has made major strides toward the implementation of migration plans that will modernize its systems, aligning with the MLDS platform and embracing a new robust database technology. This new platform will enable MHEC to institute advanced procedures to collect, clean, analyze, and present data in the future. The revised MAC will be stored in a comprehensive database equipped with powerful analytical and reporting tools. Researchers will be able to extract data and apply these technologies to perform more sophisticated analyses and present results in a more user-friendly fashion, utilizing dashboards and other business intelligence tools.

CONCLUSION

The inclusion of Goal 6 in *Maryland Ready* underscores the State's commitment to high-quality data use and distribution as a means to inform policy and decision-making for postsecondary leaders, legislators, and the public. The State believes that the revised MAC and the MLDS will have an immediate and long-lasting impact on Maryland. However, further modifications and adjustments to both the MAC and the MLDS will be needed in order to optimize their usefulness for years to come and ensure key State goals and priorities can be achieved.

GOAL 6: ACTION RECOMMENDATIONS

MHEC, AS ONE OF THE THREE AGENCIES PROVIDING DATA AND OVERSIGHT TO THE MARYLAND LONGITUDINAL DATA SYSTEM (MLDS), WILL WORK TO ENCOURAGE THE MLDS CENTER TO CONDUCT RESEARCH ON TRANSITION ISSUES OF IMPORTANCE TO THE POSTSECONDARY EDUCATION COMMUNITY, INCLUDING BUT NOT LIMITED TO COLLEGE READINESS, FACTORS AFFECTING ACADEMIC SUCCESS AND DEGREE COMPLETION, AND EMPLOYMENT AFTER GRADUATION. IT WILL ALSO WORK TO PROVIDE ACCESS TO MLDS DATA FOR SCHOLARS AND INSTITUTIONAL RESEARCHERS CONDUCTING THEIR OWN STUDIES, IN ACCORDANCE WITH APPROPRIATE CONCERNS FOR PRIVACY AND CONFIDENTIALITY.

IMPLEMENTATION MEASURES/STRATEGIES:

- By FY 2015, MHEC will work with MLDS Center staff to draft protocols for access to data for interested parties and affiliates.
- By FY 2015, MHEC will work with MLDS Center staff to develop a research agenda examining the impact of academic preparation on student success in college.
- By FY 2015, MHEC will work with MLDS Center staff to develop a research agenda focused on workforce outcomes for college graduates.

MHEC WILL CREATE A DATA ADVISORY GROUP FOR CONSULTATION ON DATA ISSUES. THE GROUP WILL WORK WITH MHEC TO CONTINUALLY IMPROVE DATA DEFINITIONS AND QUALITY, RELEVANT POLICY, AND THE DISSEMINATION OF DATA TO THE PUBLIC AND STAKEHOLDERS WITHIN POSTSECONDARY EDUCATION. THE GROUP WILL FACILITATE IMPROVED COMMUNICATION BETWEEN THE COMMISSION AND INSTITUTIONS OF POSTSECONDARY EDUCATION ON INITIATIVES IN WHICH DATA SERVE A CRITICAL AND ESSENTIAL ROLE.

IMPLEMENTATION MEASURES/STRATEGIES:

- By FY 2015, MHEC, in collaboration with the postsecondary segments, will generate a procedure for selecting members of the Data Advisory Group and identify participants.
- By FY 2015, the Data Advisory Group will convene and develop a regular meeting schedule.

MHEC WILL INTRODUCE THE EXPANDED MARYLAND ANNUAL COLLECTION (MAC), AND INSTITUTIONS WILL PROVIDE ADDITIONAL DATA IN ACCORDANCE WITH THE COLLECTION. THE MAC WILL REDUCE THE NEED FOR AD HOC DATA COLLECTIONS, SUPPORT THE DEVELOPMENT OF THE MLDS, AND ENHANCE MHEC'S CAPACITY TO CONDUCT AND PUBLISH ANALYSES ON CRITICAL POSTSECONDARY EDUCATION POLICY ISSUES.

IMPLEMENTATION MEASURES/STRATEGIES:

- During FY 2014, MHEC and Maryland institutions will develop standard data dictionaries for data elements captured in the MAC.
- By FY 2015, MHEC will fully implement the revised MAC.
- Through FY 2018, MHEC, in collaboration with the Data Advisory Group, will continually work with Maryland institutions to implement, assess, and revise the new data collections.
- Through FY 2018, MHEC will assess the effectiveness of the MAC in reducing ad hoc collections by tracking the potential number of ad hoc collections that have been eliminated.

MHEC AND INSTITUTIONS OF POSTSECONDARY EDUCATION WILL ENSURE THAT POSTSECONDARY EDUCATION DATA ARE ACCESSIBLE AND AVAILABLE TO THE PUBLIC AND OTHER INTERESTED PARTIES. WHERE POSSIBLE, MHEC WILL WORK WITH INSTITUTIONS TO DEVELOP CONSISTENT METHODS OF DATA DISTRIBUTION. DATA SHOULD BE TIMELY, READILY ACCESSIBLE, AND AVAILABLE ACROSS MULTIPLE PLATFORMS AND MODES OF DELIVERY.

IMPLEMENTATION MEASURES/STRATEGIES:

By FY 2018, MHEC, in collaboration with the postsecondary segments, will develop a recommendation for a minimum number of data elements that should be displayed on institutional websites.

- By FY 2018, MHEC, in collaboration with the postsecondary segments, will determine when these data should be made available and updated annually.
- By FY 2018, MHEC, in collaboration with the postsecondary segments, will determine how this information should be displayed and posted on the website.

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