™ **UNIVERSITY SYSTEM**
of **MARYLAND**

2021 ANNUAL REPORT

A STATE OF EXCELLENCE

LEADING MARYLAND TO EXCELLENCE

A LETTER FROM THE CHANCELLOR

The 2020–21 academic year was anything but typical, with remote instruction and safety protocols dramatically reshaping campus life. The pandemic taught us a lot—about the USM's strength and resilience, about our capacity for hard, hard work. I'm deeply grateful to the students, faculty, and staff who, in tough times, proved their unshakable commitment to what we do.

I'm grateful, too, that through it all, we never lost sight of our foundational missions: to prepare students for engaged citizenship and productive careers; to create the knowledge that improves our lives and the world in which we live; to enrich Maryland's communities, and serve the public good.

This report details our progress in areas important to us and to the state: providing Maryland students a high-quality, affordable education and enabling their success; producing graduates who meet the state's key workforce needs; promoting racial equity and advancing social justice; undertaking the research that solves the greatest challenges of our age; and engaging with our neighbors to strengthen the communities our campuses call home.

In these pages, you'll see what makes the USM so essential to Maryland's progress. Always.

Jay A. Perman
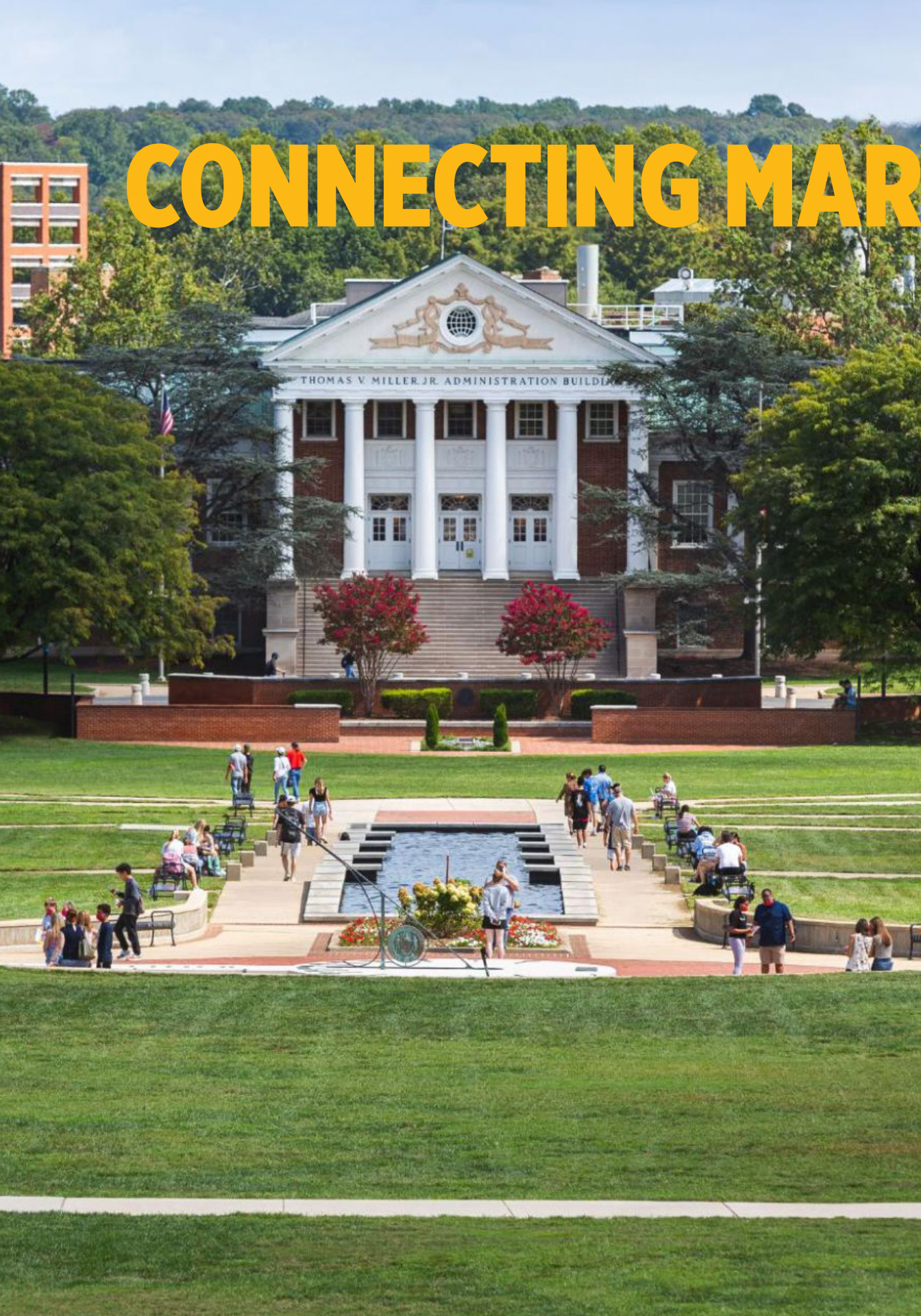Chancellor

2021 USM ANNUAL REPORT

The University System of Maryland is the state's public higher education system, consisting of 12 universities and three regional higher education centers. Through their exceptional academic programs, groundbreaking research, and economic partnerships, the institutions of the USM are leading Maryland toward new opportunities and a bright future.

Most of the photos in this Annual Report were taken prior to 2020. All University System of Maryland institutions had an indoor mask mandate during 2021.

CONNECTING MARYLAND TO OPPORTUNITY

The USM connects the people of Maryland with opportunities to learn, discover, and succeed—and connects the world to Maryland excellence.

Across our system of 12 institutions and three regional higher education centers, more than 200,000 USM students, faculty, and staff are engaged in innovative scholarship, teaching, and research that drives economic growth and strengthens communities throughout the state. USM universities are making an impact in every corner of our state but also enroll students from all 50 states and dozens of countries worldwide, creating an impressive network of more than 1,240,000 living alumni who are building the global reputation of the USM.

1   Bowie State University
2   Coppin State University
3   Frostburg State University
4   Salisbury University
5   Towson University
6   University of Baltimore
7   University of Maryland, Baltimore
8   University of Maryland, Baltimore County
9   University of Maryland Center for Environmental Science
10 University of Maryland, College Park
11 University of Maryland Eastern Shore
12 University of Maryland Global Campus

Regional Higher Education Centers
13 Universities at Shady Grove
14 University System of Maryland at Hagerstown
15 University System of Maryland at Southern Maryland

ABOVE

94%

Rate of vaccination for faculty, staff, and students on the majority of USM's 12 campuses.

LESS THAN

1%

COVID-19 infection rate systemwide since Fall 2021.

RESPONDING TO THE PANDEMIC

With guidance from medical and public health experts at USM institutions, the system developed a comprehensive model for controlling the spread of COVID on our campuses. During the Spring 2021 semester, frequent COVID testing, masking, and social distancing policies allowed USM institutions to provide in-person instruction while holding positivity rates below 1 percent. In April 2021, the USM became the first university system in the nation to mandate COVID vaccines for all students, faculty, and staff. This decisive action has resulted in a "fully vaccinated" rate of above 94% across the system. With continued vigilance throughout the fall, including contact tracing and regular testing for those receiving exemptions, USM campuses were some of the safest places to be in the state of Maryland.

USM institutions are fully engaged in pandemic response efforts at the state, national, and global levels. USM researchers, faculty and alumni, including the following prominent individuals, have made vital contributions in areas such as patient care, public health policy, and the development of COVID tests, vaccines and therapeutics.

- **Dr. Wilbur Chen,** University of Maryland, Baltimore (UMB), was named a voting member of the federal Advisory Committee on Immunization Practices, which advises the Centers for Disease Control on vaccine usage.

- **Dr. Kizzmekia Corbett,** University of Maryland, Baltimore County (UMBC) alumna, led the team of NIH scientists that developed the Moderna vaccine.

- **Dr. Matthew Frieman,** UMB faculty, led investigations into the use of new drug compounds and antibody cocktails with the potential to treat COVID.

- **Dr. David Marcozzi,** UMB faculty, was appointed as the Senior Medical Advisor to Governor Larry Hogan on COVID-19.

- **Dr. Donald Milton,** University of Maryland, College Park faculty, advanced scientific understanding of the airborne transmission of COVID-19.

- **Dr. Kathleen Neuzil,** UMB faculty, led a major effort to develop and test safe and effective COVID-19 vaccines under the country's Operation Warp Speed public-private partnership.

- **Dipanjan Pan,** UMB and UMBC faculty (dual appointment), developed a diagnostic test that uses a nanotech breakthrough to detect the COVID-19 virus in matter of minutes.

550

Residential capacity in the new Entrepreneurship Living Learning Community at Bowie State University, an innovation hub with makerspaces and an entrepreneurship academy.

80

Teaching and research laboratories, plus 50 classrooms, a planetarium, and an observatory in Towson University's new Science Complex.

84,000

Square feet In the new SMART Building at the University System of Maryland at Southern Maryland to advance autonomous technologies R&D and promote regional job growth.

45,000+

Visitors participating in programs through the Community Engagement Center at the University of Maryland, Baltimore, which held the grand opening of its fully-renovated building in 2021.

BUILDING FOR THE FUTURE

With a focus on the future, the system is investing in new facilities that provide world-class research, learning, and living environments for the people of the USM. This year, USM institutions proudly opened the doors to new buildings that will support student success, stimulate discovery and innovation, and drive Maryland's economy forward. In many cases, these buildings include spaces specifically designed for collaboration with business and industry—or for outreach programs that serve the entire community. Throughout this growth, the USM has upheld its commitment to green building, energy conservation, and other practices that enhance the sustainability of USM campuses.

Other recently completed facilities include the Center for Well-Being at the University of Maryland, Baltimore County and Pyon-Chen Hall at the University of Maryland College Park, a residence hall named for two students who helped integrate the university.

Facilities currently under construction include the University of Maryland Eastern Shore's School of Pharmacy; University of Maryland College Park's Chemistry Building; Frostburg State University's Education & Health Sciences Center; and Coppin State University's Center for Strategic Entrepreneurship.

164,852
Total enrolled students across all 12 institutions for Fall 2021.

8%
Increase in number of first-time, full-time students since Fall 2020.

34%
Increase in the number of bachelor's degrees awarded by USM institutions since 2011.

43,715
Degrees awarded by USM institutions in the 2020-2021 academic year.

30,866 Undergraduate Degrees
11,647 Graduate Degrees
1,202 Professional Degrees

80%
Of all bachelor's degrees awarded in Maryland last year were from USM institutions.

EXPANDING ACCESS TO HIGHER EDUCATION

As the state's public higher education system, the USM focuses on creating education opportunities that empower individuals to realize their potential and achieve their goals. This comprehensive system of 12 universities includes major research institutions, Historically Black Colleges and Universities (HBCUs), regional higher education centers, and the nation's largest public online university, which collectively offer hundreds of undergraduate, graduate, professional, and certificate programs. The USM is committed to providing Marylanders with a world-class education in their home state, while also attracting talented students and faculty from across the nation and around the globe. Although 2021 was a year of challenges for higher education, the USM looks forward to a bright future, as it builds on its reputation for outstanding teaching, scholarship, and research.

USM institutions have been ranked among the nation's best by publications such as *U.S. News and World Report, Kiplinger's, Money, The Princeton Review, The Wall Street Journal,* and *Washington Monthly*. The USM includes universities recognized in rankings of:

• National Public Universities
• Best Value Universities
• Historically Black Colleges and Universities
• Most Innovative Schools
• Undergraduate Teaching

• Social Mobility
• Best Colleges for Student Voting
• Best Colleges for LGBTQ+ Students
• Best Colleges for Veterans
• Top Public Schools

50%
Of undergraduate students attending USM institutions graduate without debt.

$177M
Awarded in institutional financial aid to undergraduate students in FY 2021.

$66M
Awarded in need-based institutional financial aid to undergraduate students in FY 2021.

57%
Increase in need-based financial aid to undergraduate students since 2011.

$55M+
Additional financial support distributed to USM students in the form of emergency aid grants from federal relief funds in FY 2021.

KEEPING THE COMMITMENT TO AFFORDABILITY

The USM is holding fast to its promise to make higher education affordable for all. With continued support from the governor and the Maryland General Assembly, average in-state tuition and fees for Maryland's public, four-year institutions remain below the national average. Maryland was ranked the 24th most expensive among the 50 states for public in-state tuition and fees, while neighboring states Delaware, Virginia, and Pennsylvania were ranked the 11th, 8th, and 3rd most expensive, respectively.

Debt levels for in-state students completing undergraduate degrees at USM institutions also fall below the national average. In 2020, fifty percent of the USM's in-state, baccalaureate recipients completed their college experience with zero debt and an additional 12 percent of these students graduated with debt levels of less than $10,000.

49%
USM students who are from minority populations in Fall 2021.

26%
Increase in enrollment by minority populations since 2011.

13,367
Bachelor's degrees awarded to minority students in FY 2021.

49%
Of undergraduate STEM degrees were earned by minority students in FY 2021.

67%
Increase in the number of faculty positions held by minority populations since 2011.

7
Out of the 12 USM institutions are led by Black presidents.

SUPPORTING DIVERSE AND INCLUSIVE COMMUNITIES

The USM is committed to increasing diversity within our system and fostering a culture of inclusion at each USM institution. The USM continues to increase both enrollment and degree attainment by underrepresented (defined as Black, Hispanic, American Indian, and Native American) or other (defined as Asian and multiple races) minority populations. The USM is also strengthening programs to recruit, retain, and advance faculty and staff from diverse backgrounds. Through this progress, USM institutions are encouraging diverse learning communities where each person is welcomed, valued, and offered equitable opportunities to succeed.

The USM Board of Regents has developed and adopted *Toward Racial Justice and Equity: A Plan for the USM*. This new framework is designed to guide efforts to dismantle structural racism within the USM; elevate issues of race and racism in our teaching, research, and scholarship; and redress racial inequities and advance social justice in our own communities.

4,500

Hours of instructional design support to help institutions adapt classroom-based courses for effective online delivery.

1,700

Faculty registrations in professional development seminars to strengthen online teaching strategies and skills.

400

Faculty members explored the use of adaptive courseware for course instruction to improve content delivery and student-faculty interaction.

4,000

Students across the USM took lab-based courses supported by virtual reality lab simulations.

TRANSFORMING TEACHING AND LEARNING

The USM stands as a national leader in the academic innovation movement, with system-wide efforts championed by the William E. Kirwan Center for Academic Innovation. Since 2013, the Kirwan Center has helped USM institutions enhance student access, affordability, and achievement by leveraging innovations such as online learning technologies, open educational resources, and alternative credentials. When the pandemic required USM institutions to rapidly transition to online course delivery, the Kirwan Center was uniquely positioned to help USM institutions create effective online learning environments. As a result of the pandemic, the USM is more keenly aware of the differing needs of its students, faculty, and staff and how important it is to scale academic innovation to address the changing landscape of higher education. The Kirwan Center is now exploring ways to take what we've learned, practiced, and pioneered to shape a teaching and learning enterprise that embodies the best of innovation.

Since the first MOOC was offered in 2016, USMx has grown to 1,131,000 course enrollments across 295 instances of approximately 90 courses. USMx has generated more than $3.6 million in revenue for participating institutions and the Kirwan Center. These courses include MicroMasters and Professional Certificate programs offered by UMGC, UMCP, and UMCES, and multiple MOOC and private courses developed by other USM institutions. The Kirwan Center also coordinates the USM's Maryland Open Source Textbook (M.O.S.T.) initiative, which promotes the replacement of traditional textbooks with freely available open education resources (OERs) to reduce students' costs. Through this initiative, 181 courses have adopted OERs, impacting over 92,000 students and resulting in $14.2 million in textbook savings.

12,225

STEM degrees awarded by USM institutions in FY 2021. **8,983** undergraduate degrees **3,242** graduate degrees.

930

Nursing students who graduated in 2020 and 2021 under a special early-exit option that allowed them to begin work immediately in hospitals caring for COVID-19 patients.

7,827

Cyber degrees awarded by USM institutions in FY 2021.

4,043

Health care profession degrees awarded by USM institutions in FY 2021.

79%

Of education degrees awarded in Maryland are to graduates of USM institutions.

BUILDING TOMORROW'S WORKFORCE

Across the USM, students are preparing for today's most in-demand jobs and tomorrow's emerging career fields through outstanding scholarship, research, and internship experiences. Working closely with employers throughout the state and region, USM institutions develop programs that provide graduates with the knowledge and skills required to obtain competitive jobs, as well as fill critical workforce shortages in the high-demand fields of health care, education, and STEM (science, technology, engineering, and mathematics). The close collaboration between USM institutions and employers enhances Maryland's ability to compete for skilled workers and excel in high-growth business sectors.

In 2021, the Board of Regents approved 16 new degree programs proposed by USM universities to address emerging workforce trends and needs in communities throughout the state. These new programs included new bachelor's and master's degree programs in a broad range of disciplines, such as Clinical Informatics; Cloud Computing Systems; Data Science; Diversity, Equity and Inclusion Leadership; Fermentation Science; Health Information Management; Health Professions Education; Mechatronics; Sport Management; and Technology and Information Design. The Regents also approved a new Doctorate of Business Administration at the University of Maryland, College Park, and a first-in-the-nation Doctor of Philosophy in Palliative Care at the University of Maryland, Baltimore.

$1.59B

in externally-sponsored funding received by USM institutions in support of research, education, and service in FY 2021.

429

New patents issued to USM institutions over the past five years.

317

Technologies licensed or optioned by industry partners over the past five years.

10,000+

People employed in nearly 300 companies located in USM research parks.

ADVANCING RESEARCH AND INNOVATION

Across the 12 USM institutions, faculty and staff conduct research that advances discovery, promotes understanding, fuels innovation, and supports economic growth in Maryland and beyond. Each USM institution is a research powerhouse with distinctive areas of expertise in cutting-edge fields, such as artificial intelligence, bioinformatics, cybersecurity, environmental science, public health, and more. When USM universities collaborate to exchange ideas and maximize resources, they create a dynamic environment where discovery and innovation thrive. The USM is a driving force behind Maryland's top five ranking in the Milken Institute's *State Science and Technology Index* in 2020, including a number two ranking in the Research and Development Inputs category and a number one ranking in the Technology and Science Workforce category.

Through the *MPowering the State* initiative—a structured collaboration between the system's two largest research institutions—the University of Maryland, Baltimore and the University of Maryland, College Park shared a top ten placement among all public U.S. research universities for research and development spending in the National Science Foundation's *Higher Education Research and Development Survey*. *MPower* encompasses 25 joint programs and centers and has fostered research in a wide range of fields, including brain injury, data informatics, and virtual reality and medicine.

$10.4B

Estimated economic impact
of the USM on the state
of Maryland during FY 2021.

57,505

Maryland jobs supported
by the USM budget and economic
activity during FY 2021.

1,092

Startup companies supported
by USM institutions since 2012.

$1.1M

First-time investments made
by the USM Maryland
Momentum Fund in 5 USM-affiliated
companies in 2021.

DRIVING
ECONOMIC GROWTH

The USM is a powerful catalyst for economic growth throughout Maryland, the Mid-Atlantic region, and beyond. In fact, for every dollar the state invests in the system, the USM returns at least $2–$3, enriching the cities, towns, and families of Maryland. In classrooms, laboratories, and incubators across the system, new ideas, technologies, and products are emerging and driving the creation of new businesses and jobs. USM institutions collaborate with Maryland businesses and help them grow by providing them with access to research expertise, state-of-the-art facilities, skilled employees and interns, funding, and other resources. Nearly every part of the state is touched by the work of USM institutions, which employ tens of thousands of people statewide and support additional jobs in the companies that serve USM campuses.

The USM Maryland Momentum Fund is the system's venture capital fund, which invests in Maryland-based companies connected to USM people and institutions in order to support entrepreneurism and foster economic development. Since inception, Maryland Momentum Fund investments and co-investments by USM institutions have totaled $9.6 million in 26 USM-affiliated companies across a wide range of industries, including aerospace, artificial intelligence, biotechnology, cybersecurity, food safety, and information technology. To learn more about the Maryland Momentum Fund and its portfolio companies, visit **momentum.usmd.edu**.

2 Million
Volunteer hours contributed to Maryland communities through USM medical and legal clinics, partnerships with schools and community organizations, and other service initiatives.

1,022
Maryland PreK-12 teachers attended professional development training provided by the Maryland Center for Computing Education.

7
USM institutions received Gold or Silver Seal Awards in the nationwide ALL IN Campus Democracy Challenge.

89,000
USM students voted in the 2020 elections, a 12% increase in student voting since the previous presidential election.

ENCOURAGING STRONG AND ENGAGED COMMUNITIES

USM institutions are inspiring the next generation of leaders to become engaged in their communities and change them for the better. Through community partnerships and service initiatives, USM institutions are providing students and faculty with opportunities to be part of the solution to challenging societal issues and provide aid to neighbors in need. USM students are involved in a multitude of volunteer projects throughout the state, including tutoring K-12 students, providing legal aid to immigrants, running food pantries, cleaning up the Chesapeake Bay, and more.

To encourage students to become informed citizens and participate in our democracy, USM institutions collaborate on civic education and engagement initiatives. Several USM institutions have received national recognition for their success in encouraging participation in the democratic process. Five USM institutions were listed in *Washington Monthly's* America's Best Colleges for Student Voting 2021. In addition, the 2021 ALL IN Campus Democracy Challenge recognized seven USM institutions for achieving high voter participation rates during the 2020 presidential elections: **Gold Seal Awards** (for 70-80 percent participation) to The University of Baltimore, Towson University, University of Maryland, Baltimore, and the University of Maryland, College Park; **Silver Seal Awards** (for 60-70 percent participation) to Frostburg State University, Salisbury University, and the University of Maryland, Baltimore County.

80
Green buildings constructed or in design on USM campuses with LEED certification ratings of Silver or higher.

40%
Average recycling rate across all 12 institutions, which exceeds the statewide goal of 30%.

40%
Reduction in carbon dioxide emissions across all 12 institutions since 2006 (nearly 350,000 metric tons).

AA+
Bond rating affirmed by S & P Global Ratings and Fitch Ratings (and Aa1 from Moody's Investor Services) in 2021.
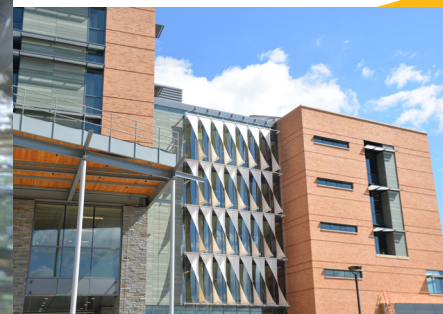
$766M
Saved through USM's Effectiveness and Efficiency Initiative since 2004.

OPTIMIZING MARYLAND RESOURCES

The USM takes seriously its stewardship responsibility to ensure the careful management of Maryland's valuable resources, including student and taxpayer dollars, as well as the lands and other natural resources of USM campuses. The USM's Effectiveness and Efficiency Initiative, launched in 2004, optimizes USM resources to yield savings and avoid excessive costs, saving the state hundreds of millions of dollars. The USM has continued the prudent stewardship of resources throughout the pandemic, resulting in favorable credit ratings from the major rating agencies and low borrowing costs for the system's facilities needs.

Through its Environmental Sustainability and Climate Change Initiative, the USM serves as a statewide leader in environmental sustainability and climate change mitigation. USM institutions are actively engaged in reducing the environmental impact of campus operations and have achieved significant progress in waste reduction and resource conservation. The USM is proud that all 12 institutions are original signatories of the College and University Presidents' Climate Commitment.

1

Public Higher
Education System

3

Convenient Regional
Education Centers

12

Nationally and World-
Renowned Universities

INFINITE OPPORTUNITIES TO LEARN, DISCOVER, AND SUCCEED

Bowie State University

Coppin State University

Frostburg State University

Salisbury University

Towson University

University of Baltimore

University of Maryland, Baltimore

University of Maryland, Baltimore County

University of Maryland Center for Environmental Science

University of Maryland, College Park

University of Maryland Eastern Shore

University of Maryland Global Campus

REGIONAL HIGHER EDUCATION CENTERS

Universities at Shady Grove

University System of Maryland at Hagerstown

University System of Maryland at Southern Maryland