State of the Campus Address
Wallace Loh, President, University of Maryland
November 13, 2013
Stamp Student Union, Colony Ballroom

Thank you Vin [Vincent Novara, Senate President], and thanks to the members of the University Senate for hosting this annual State of the Campus Address. Thank you all for coming. I see lots of deans here, lots of vice presidents, members of the provost’s office.

And among the dean’s I would like to introduce Alex Triantis, the new dean of the Smith School of Business. I have to tell you a story. When I was an undergraduate, my first summer research project was at the University of Illinois. And my mentor was a man by the name of Harry C. Triantis – the uncle of Alex Triantis. What a small world!

We also have a fantastic new executive director of the Clarice Smith Performing Arts Center. He comes to us from the University of California at San Diego: Marty Wollesen. Thank you for joining us.

We have a new director for our Career Services Center: Kelley Bishop, who comes to us from Michigan State University. Kelley, welcome to the University of Maryland.

We even have some students here. I see the second-term President of the Undergraduate Student Government Association—Samantha Zwerling—with her cabinet. Stand up to be recognized. Thank you all for coming. You should know that Samantha has been appointed by her peers in the CIC [Big Ten’s Committee on Institutional Cooperation] to organize the lobbying effort in Congress on behalf of all the CIC institutions. Thank you for doing that Samantha.

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This is a great university. The state of the campus is strong, and will continue to be strong, because it is based on the excellence of the people of this community. The lifeblood of this university—of any university—is its faculty and staff. They are the ones who carry out and support the mission of teaching and research. You are why this university is as great as it is.

The reputation of this university is also shaped by the excellence and quality of its students and the accomplishments of its graduates. No university is better than the reputation and the quality of its alumni and its students. This is why the campus is strong.

This is my fourth State of the Campus, which means I have finally become a “senior.” I should be thinking ahead to “graduate school.” Given the average time it takes, it will probably be about six or seven years—until 2020—before I get my “Ph.D.” at being a university president.

So, I want to map out an agenda for 2020—an agenda for transformative innovation and excellence in education, research, the arts, and the redevelopment of the main street of College Park, Route 1. But it is not just a vision. It includes the active steps that we have taken within the past year, and that we will take over the next seven years to realize that transformative excellence by 2020.
Let me begin with our students. As you know, we have incredible students. Every year, the entry credentials go higher and higher. This year, they are especially high. We admitted 4,000-plus students out of more than 26,000 applicants. As a group, they have a median grade point average of 4.1. How can they be above 4.0? Because they take honors courses and that pushes them up beyond a 4.0. They have a median SAT of 1300, and 38 percent are students of color. It is a very talented and very diverse group. It is not, however, enough to simply look at the profile of the entering class.

*Our agenda for transforming undergraduate education by 2020: to educate more, educate better and educate cheaper.*

The System [University System of Maryland] has reset targets for increasing enrollments. We are meeting our share, not just on this campus but by developing the student body on the campus at Shady Grove. But it is not simply more students. It is also more of a certain type of students, particularly STEM [Science-Technology-Engineering-Mathematics] graduates.

President Obama articulated this as a 2020 goal of 55 percent of the population of this country having a college degree, whether it is an associate of arts or baccalaureate degree. This includes one million additional STEM graduates and 100,000 STEM teachers. Governor O’Malley has embraced the same targets—to have 55 percent of the Maryland population earning a college degree.

This is a state and national imperative. You all know that during the past 25 or 30 years, our nation has slipped. We used to be number one in college completion; we are now about 12th in the world. In terms of STEM production we are about 24th or 25th in the world. I don’t know that we are sliding so much as other countries are catching up.

So we must do more, and we are doing more. We got funding for 300 additional STEM majors from the state. It will be phased in over the next three years—full funding for an additional 300 STEM majors in College Park.

It is not only about doing more, it is about doing better. Doing better is measured not only in terms of bringing in higher quality students, but providing a better learning experience in order to increase graduation rates. A year ago, I said we will increase our graduation rates—they had been flat for the past 15 years, roughly 82 or 83 percent. I am pleased to tell you that as of 2013, our graduation rates climbed to 84 percent. Our goal by 2020 is 90 percent. If we get there in the next seven years, we will be among the top 10 of public research universities in the country on this measure.

We will get there by educating better.

- We will have smaller classes. Provost Rankin has devoted over a half million dollars to reduce the size of 325 small sections of introductory courses in English, Communications, and Chemistry.
- We are going to increase the number of living-learning communities. Fifty percent of our student body participates in living-learning communities. By 2020 we are aiming to reach 90 percent, so that all who want to be part of a living-learning community can have that opportunity. We began this year by creating a new cybersecurity living-learning program as part of the Honors College. Next year there will be another in law and justice.
- Provost Rankin is working on a plan to include freshmen in undergraduate research and to expand experiential activities for them.
The whole purpose is to measure success in terms of student outcomes – trying to reach the goal of 90 percent graduation rates, as opposed to the current 84 percent.

The most challenging task is not to educate more and better, it is to educate more cheaply. You see, in the old days, if you wanted to have more students, if you wanted to have more quality, you would ask the state for more money. We are in “the new normal.” This is the age of diminished resources—at best, flat growth—and the challenge is to educate more, educate better, and educate more affordably to drive down the cost.

It is no magic bullet, but certainly digital learning technology is part of the solution. So, after today’s session, Provost Rankin will unveil a fantastic idea: a new Maryland Teaching and Learning Transformation Center. This center brings together three different groups. It will include the existing Center for Teaching Excellence, which helps teachers learn to do their job better; it brings together from the Division of Information Technology the group on Learning Technologies—programmers, web designers, educational technicians—all under the leadership of our Vice President for IT Brian Voss; and creates a third unit for learning analytics and assessment to see what works. They will have post docs; they will have faculty. Education, technology and research combined, with one single purpose in mind: a dramatic increase in online courses, MOOCs [Massive Open Online Courses], and blended education, because that is what the future holds.

[Slide: Artist’s rendering of Frederick Hall] Here is the fantastic new residence hall that is going up thanks to Linda Clement and all her people. It will have 466 beds. It is being built right now next to Van Munching Hall and should be open by next fall. It will accommodate additional living-learning communities.

[Slide: Artist’s rendering of St. John Learning and Teaching Center] The $55 million St. John’s Learning and Teaching will break ground this spring, and should be open in two years. This is where the Teaching and Learning Transformation Center will be located. The building will feature online, high-tech classrooms to support blended learning.

[Slide: Middle school students mix collaborative and online learning at the College Park Academy] The College Park Academy is a public charter school that opened two months ago right here in College Park. It is operated jointly by the university and the City of College Park. In a microcosm, the College Park Academy is a preview of what transformation in learning is going to be in 2020. There are about 400 kids from all over Prince George’s County selected by lottery. Many of them come from low-income families. We began only with sixth and seventh grades, and we will expand one grade each year as they advance toward high school graduation. There will be about 800 or 900 students by then. There are only about 10 teachers, plus another 10 assistants. Each student gets a laptop computer.

Their courses are online. About six or seven language courses are offered, and they take them online. At the same time, while they are working, there are teachers who circulate around the room and serve as their mentors. Students can access tutorial help almost 24/7.

In addition, it is not just bricks and clicks, it is not just online and on site, it is not just high tech and high touch, it is also self-paced learning. When I visited about three weeks ago, I met a sixth grader studying biology, who was already working at a 10th grade level alongside her peers in the sixth grade. Online allows you to do that.
By the time they graduate, they will have accumulated the equivalent of two years of college education, so they can transfer to the University of Maryland as juniors. These students were selected by lottery, not by achievement. Their parents had to apply, so they may have been extra motivated. Many of these kids are children of our faculty and staff, and this educational opportunity is keeping the family in College Park.

My question to you is this: When these kids—the A-O generation, Always On – arrive at the University of Maryland, College Park in the fall of 2020, will they sit through, as a matter of standard procedure, 60-minute lectures, three times a day, five times a week? I do not think so.

There will always be lectures; there will always be on-site education. But you can see why we need to have a center of transformative learning to start preparing ourselves for transformative learning in undergraduate education.

Of the 38,000 students on this campus, 12,000 of them are graduate students seeking masters and Ph.D.s. They are a very highly selective group. This fall we have 3,000 new masters and Ph.D. students, with a 14 percent selection rate. If you look at their scores on the GREs [Graduate Record exams]—for those who are going to Engineering or the College of Computer, Mathematical, and Natural Sciences—the average is 780. It is a very, very talented group.

There is no question about the excellence of our graduate programs. Many of them are ranked very highly—in the top 10, certainly among the top 25. The challenge we face for transformative excellence in graduate education involves innovation. I want to propose something I have discussed for a considerable period of time with Chuck Caramello, our dean of graduate studies, and with others.

Why is it that the average time to degree, for a Ph.D. in the humanities let’s say, is seven years? In the 1960s it was five years. At Oxford and Cambridge and other British universities it is four years. Why is it that the average 10-year completion rate of Ph.D.s at the University of Maryland is 62 percent?

Now 62 percent at the University of Maryland is very good – it is higher than the national average. But what does it tell you that after 10 years only 62 percent complete their degree? And when you consider that nationally, only one-third to one-half hold tenure-track positions after graduation (they go to other careers), I think the time has come to reexamine doctoral education in America.

This is not a problem unique to the University of Maryland, and I am really excited that Chuck Caramello and his people in the Graduate School look forward to working with the directors of graduate programs, deans and chairs to reimagine graduate education in this country along the following lines:

It is time to rethink the curriculum; rethink the requirements of a Ph.D. Do you really need to write a 600-page volume for a Ph.D.? That was not the rule, by the way, in the 1960s. How is the Ph.D. preparing students for careers? There are wonderful opportunities outside of academia, and Ph.D.s might want those opportunities. If we are going to prepare them for academic careers when many of them are not going to follow this path, there is no fit between doctoral education and career possibilities. We have to take into account the career interests of the students.

So my challenge and my encouragement to Chuck [Dean Caramello] and the people in the Graduate School: by June 1, please come forward with a concrete proposal to transform doctoral education at the University of Maryland. Have a plan that can then go through the normal processes of review next fall.
We have incredible faculty. Just look, for example, at Physics Professor Jim Gates being selected to receive the National Medal of Science from President Obama earlier this year. Just think about the 22 faculty members in the Physics department who helped confirm the existence of the Higgs-boson—the so-called God particle—at CERN. Their work was acknowledged by the Nobel Committee. And there are many, many other major accomplishments by our faculty.

*Our agenda for 2020 transformational innovation and excellence in research: invest in faculty, invest in research facilities, and invest in strategic partnerships.*

The faculty is the educational and research lifeblood of this institution, and I am very, very proud of them. In the three years I have been here, we have hired 262 new tenured/tenure-track faculty members. Of that number, 60 represent a net increase (after you take out those who left or retired). That is a five percent increase in three years. If you think of just the 60 additional faculty members, they represent a $9 million investment. If they stay just 10 years, that is a $90 million investment.

I want to raise an issue here that Juan Uriagereka in the Provost’s office and I have discussed. We cannot close our eyes to the problem—the problem of the “revolving door.” This goes back many years, at least 15, maybe longer. There is a dramatic disproportion by race in terms of tenure and promotion. I will not bore you with numbers, but a very large proportion of African American and Hispanic faculty failed to make it through the process, or dropped out, perhaps because they read the writing on the wall or received offers someplace else.

The good news is this: 15 years ago, we had the same situation by gender. There was a time when women were being denied tenure. But you know what? Today, there is no longer any difference by gender. What happened? We invested resources. The NSF Advance grant gave us $1 million to invest each year. We refocused institutional attention on this problem. We started mentoring—not just junior faculty, but department chairs—and making other sorts of changes in the organization to ensure that everybody has an equal chance of success.

We should do the same thing for faculty of color. Transformative innovation in faculty and research means that by 2020 that disparity will disappear. There is no reason for that disparity, and I am asking the Provost to assemble a group to begin immediately—not just studying the problem—but developing protocols and processes to address this issue, and working with the University Senate, deans, and department chairs.

This spring, we are going to cut the ribbon on our fantastic new Physical Sciences Complex. It is an incredible facility. It cost about $125 million. It is state-of-the-art, and one of the research groups inside is the Joint Quantum Institute—joint with the National Institute of Standards and Technology (NIST). Because of the hard work of CMNS Dean Jayanth Banavar, Lockheed Martin has made a commitment of $1 million per year for the next five years to do research at the Joint Quantum Institute. Perhaps one day, they will reach the Holy Grail of a quantum computer.

We will break ground on a new Bioengineering Building late next fall. It is also roughly a $125 million state-of-the-art facility.

Vice President for IT Brian Voss has taken the lead on a multi-million dollar data center, with a super computer. Next semester we should have the 10th fastest computer among universities in this country—
until somebody buys something faster. We need to have this computing power to support the data-intensive research that we do. This is our own money. Thanks to Brian Voss and all the deans who contributed some of their college’s money to make possible this data center.

We have on the list of capital improvements—meaning it has been approved by the University System of Maryland—a mind-boggling project: a new biosciences research support facility for faculty labs, and to put together all of our animal colonies—a vivarium. This is primarily due to the audacity and tenacity of Provost Mary Ann Rankin. It is a $140 million project, but, it awaits approval by the legislature.

We have a nice new wing for the Chemistry building on the System’s list of capital projects. Although we have an incredible Chemistry department, there are high schools in this state that have better chemistry teaching labs than we do. What Mary Ann has proposed is to build five or six new chemistry teaching labs immediately in an annex to the planned St. John Learning and Teaching Center. That is an extra $35 million (on top of the $55 million for the main building). This annex plus the proposed new chemistry wing totals approximately $120 million.

When you add up the costs of all these buildings [those approved and those awaiting legislative sign-off], it totals nearly $600 million to support the research enterprise between now and 2020. I think that is an incredible investment.

In this day of the “new normal,” we cannot do things on our own. We have to partner with others to go faster and farther. By partners, I mean other universities, the federal government, and the private sector. The one I want to focus on today—the one where we have focused our attention and energies for the past two years—is the power of collaboration with other universities.

Remember that in my first year, I led the fight for the merger of the University of Maryland, College Park and the University of Maryland, Baltimore. That failed. Of course, in retrospect, I should have known that it never stood a chance of success given the politics of this state. But that is okay, because what we have instead is a very big partnership between the two institutions called MPower.

What has been accomplished in just two years? When I first came here, there were only two joint appointments between College Park and Baltimore. Right now, we have 40 joint appointments in the pipeline. And the number of joint research proposals by our two campuses has doubled in the past year: 66 proposals!

I congratulate the School of Public Health and their colleagues in Baltimore. Together, they got a $19 million grant—$19 million!—for a center on the regulatory science of tobacco, where they will do work on public health issues [including the risks from bacterial colonies in tobacco]. This is the kind of leveraging one can accomplish when working with another university that has overlapping strengths.

The new Center for Health-related Informatics and Bioimaging has also submitted and received research grants where we take computer science and engineering and apply them to the problems of biomedical research—for example, in personalized medicine. The future of medicine is basically developing customized patient treatments using information science. You need computing power to crunch all those numbers.

Perhaps even bolder, because it is so ambitious, is what we are doing in the life sciences and biotechnology. Again, I give a lot of credit to Mary Ann Rankin, who is leading this. But after all, she is a
There is consensus. People understand. We met two weeks ago with the chair of the House Science Committee, a Republican. He completely gets it that federal research funding propelled us to the Moon, launched the Internet, and enabled us to sequence the human genome. He understands that fantastic biologist. We have something called the Institute for Bioscience and Biotechnology Research (IBBR) in Shady Grove. Working with their counterparts and part of this larger collaboration with Baltimore, we are investing $13 million plus 10 new faculty members—this is over and above the investments in faculty that I quoted earlier—to dramatically raise IBBR.

About a month ago, Mary Ann and I had dinner with the president of the University of Maryland, Baltimore, with the President of Johns Hopkins, Ron Daniels, and with the CEO of MedImmune, the largest biotech company in Montgomery County. Twenty-five years ago, it started with one scientist, and very recently was acquired for $16 billion by Astra-Zeneca, the sixth largest pharmaceutical company in the world. Not only were the CEOs of those two companies there, but they flew in the entire board of directors from London.

There is another partner—NIST, the National Institute of Standards and Technology—because they have state-of-the-art instrumentation for precision measurements useful for developing new vaccines and drugs, and also developing standards.

The goal is very simple. It is to collaborate in basic research, and then to translate that research: to integrate start-up companies and accelerate development of the next generation of experimental therapeutics to cure disease. The goal is nothing less than to make the I-270 corridor, with its large number of companies, into one of the top five U.S. hubs for bioscience and biotechnology. This is the kind of investment we are making in the life sciences at the University of Maryland in collaboration with our partners.

The number one challenge to transformative innovation and excellence in education and research is what I call the “red threat.” During the Cold War, the “red threat” was the Soviet army, with divisions of tanks poised to roll across the plains of Central Europe and ballistic missiles pointed at the United States. Happily, that red threat has disappeared.

The red threat that we have today is the red ink of the federal government, as manifested in sequestration: across the board, mindless cuts of all non-defense discretionary spending. As a result, in the first year of mandatory cuts—they started last March—the University of Maryland has lost $36 million in federal research funding. If Congress does not come up with an alternative by next January, sequestration will cut even deeper next year.

I have spent a lot of time in the past few months, with my colleagues in AAU universities [Association of American Universities], talking with Congress. I want you to know that we are lobbying very, very hard on behalf of science, education, technology, and innovation.

I want to share with you something I have discovered. There is broad, bipartisan consensus on the importance of science and technology to the future of this country: that we must invest in basic research to advance the discovery and creation of new knowledge, and apply this knowledge to improve the quality of life, grow the economy, and address the grand challenges of the day—whether renewable energy or curing disease or the security of food and water, and other grand challenges.

There is consensus. People understand. We met two weeks ago with the chair of the House Science Committee, a Republican. He completely gets it that federal research funding propelled us to the Moon, launched the Internet, and enabled us to sequence the human genome. He understands that fantastic
discoveries, from astronomy to zoology, have come about because of federal investments. They do not need to be persuaded about that.

The problem is that there is not enough money. If we do not do anything about our national debt, in 20 years all the money that is invested in education and research, as well as health and infrastructure will have to be borrowed from abroad. That is simply unsustainable. That is the “red threat.”

The difficult question, to which I have no answer, surely involves a grand bargain. Science and research and federal support for education is only 1.5 percent of the entire federal budget. But entitlement programs—Social Security, Medicare, Medicaid—are 67 percent. It does not take a Ph.D. in math to figure out the problem. You have to cut entitlements, or if you do not, you have to raise taxes, close loopholes, raise revenue, or a combination of the two.

To put it starkly, this is an issue of inter-generational equity. Do we invest in the next generation—invest in education and research that will improve the quality of life—or do we invest in my generation, in Social Security, Medicare, and other entitlement programs? That is the difficult challenge. I just want to let you know that I and many of my colleagues in AAU universities are working very hard to lobby Congress. But ultimately, Congress faces very difficult choices.

What can we do to meet the red threat? First and foremost, I have asked Provost Rankin to start working with the deans, and the deans will be working with the department chairs, to come up with a new budgeting plan, in order for us to create transformative innovation and excellence in our education and research. We do not have a strategic budgeting process at this university. In fact, our office has checked with Big Ten institutions, and we are the only one that does not have a strategic budgeting process. Ours is an incremental one. Every unit gets what they got last year plus a little bit more, or a little bit less in the case of budget cuts. But let us say, for example, that in your department there has been a dramatic increase in enrollment, you do not get more money. Or if you have a dramatically decreasing enrollment, you do not get less money.

If you want to launch a major research initiative, typically you come to the central administration asking for some new funds or matching funds. Nonetheless, there are substantial balances spread across the university, and I would just remind you that five or six years ago, in a period of financial difficulty because of budget cuts, the state came in and scooped up $40 million of these surpluses to balance the state budget. Within two years, we had more than made it up.

This is no way to run a university. It is not going to be easy. We will do it slowly and consultatively. But we have to have a strategic budgeting process, where we take these fund balances and apply them and invest them for priorities in education and research, rather than simply hoard them for some future rainy day. In the present environment of the new normal, we have to do this.

We will continue to build strategic partnerships. For example, Engineering has this incredible new partnership with Siemens. They gave us PLM software—Product Lifecycle Management—worth more than $750 million. It will transform advanced manufacturing. You can design things from beginning to fabrication using 3-D printers, all online. Over the long haul, that will transform manufacturing in this country, and help bring back jobs that have been outsourced offshore.

Peter Weiler, our new VP for University Relations, has requested, and I have approved, the hiring of 41 new employees in his division. Of them, 25 will be front-line development officers. You cannot raise
money if you do not have people going out every day pounding the pavement to ask for support. We just concluded our $1 billion campaign, and we are preparing for the next one.

Let me say something very briefly about the state situation. The good news is we are all getting a cost-of-living increase of three percent this January. We are getting an average 2.5 percent merit increase on April 1, and if the legislature approves, we will also be getting another average 2.5 percent merit increase on July 1. So, that would be a total, hopefully, of up to eight percent between now and July.

The not-so-good news: earlier this summer the state was projecting a surplus; as of a week ago, they are projecting a substantial deficit based on an anticipated decline in revenues. The shutdown of the federal government, for example, cost the State of Maryland $5 million per day, multiplied by the 16 days the government was shut down. The state has asked that we prepare a one percent budget reduction.

Let me turn now, very quickly, to transformative innovation and excellence in the arts. We are a great university for STEM. By 2020, we will be a great STEAM university: Science-Technology-Engineering-Arts-Mathematics. One of the ways of doing that is by partnering with the Corcoran Gallery of Art. The Corcoran is one block from the White House. Its building is one of the world’s finest examples of Beaux Arts architecture. It has an art collection worth $2 billion. And they came to us to form a partnership—everybody is seeking partners. They came to us, as opposed to a number of other universities and private parties.

There are three main benefits for UMD in such a partnership:

- A partnership with the Corcoran will mean new majors—arts management, arts conservation, photo journalism, for example. Engineering is already considering a new major in digital media design. There are all sorts of academic possibilities that will raise our profile in the arts, and enhance the collaboration between the sciences and the arts.
- Make no mistake, being eight miles from the nation’s capital is not the same thing as having a physical presence in the capital of the world. There is a reason that Johns Hopkins, University of Illinois, University of California, University of Michigan have a physical presence in Washington, D.C. So if this partnership is concluded, we will hold events, receptions, conferences—not just in the arts, but in the sciences—one block from the White House. That will make a huge difference.
- We are preparing for the next capital campaign. We cannot go back to the same pool of donors over and over again. We need to find the next generation of donors. People who give to the arts also give to universities.

Those are three of the reasons why we want to partner with the Corcoran. I think we will probably know in the next two or three months whether this partnership goes forward.

I want to talk briefly about transforming College Park and Route 1, its main street. I talked about it a year ago, and now I can share with you some results. We want to have more faculty and staff live in College Park. Their residency is down to three percent. A generation ago it was 30 percent. How do you bring them back?

- Offer better schools for their children: this is why we started the College Park Academy.
- Increase the perception that College Park is safe: we purchased five new police cars; our police department hired five new officers, and they are now patrolling large parts of the city; we purchased
additional security cameras; we extended the code of judicial conduct so it applies to the entire city. These steps will increase the sense of safety in the City of College Park.

- Carlo [Colella, VP Administration and Finance] has developed a very clever plan to develop faculty housing. He just told me about it, so I will not go into details. There will be an exchange of land so that we can build 20 to 30 faculty houses, either single-family homes, town houses, or smaller condos in Calvert Hills, right next to the university. Now, 20 to 30 houses do not meet the needs of 9,000 faculty and staff, but it is a step in the right direction.

By 2020, what you will see along Route 1 is incredible transformation: mixed use, new facilities, with retail on the first floor. It is not just the university; it is private development. But we are working with them to ensure that in their development there is also very nice retail.

- We are going to build a hotel – I will tell you more about it, hopefully by February.
- The Book Exchange site has been demolished ahead of construction of a new multi-use facility.
- The Renfrew Properties—buildings bequeathed to us on both sides of Route 1 between Lehigh and Knox Roads—will be redeveloped by a private firm.
- Knox Village will undergo a round of development. They will dig dirt by this summer.

The problem is traffic. This Maryland State Highway Administration map shows Route 1 at rush hour as it is currently between Metzerott and Knox Roads.

[Slide]: Route 1 at peak rush hour. Red: almost gridlocked; yellow: moderate congestion; green: traffic moves smoothly

Look at this map predicting conditions in the near future: complete gridlock.

[Slide]: Maryland Department of Highway’s prediction of rush-hour traffic on Route 1 at 2030 or 2040

We are developing the City’s main street. We must find a solution to reduce congestion on Route 1. Otherwise, we have all this development and people are stuck in gridlock. Hopefully, before 2020 we will have addressed that issue.

This is the agenda for transformative innovation and excellence in research, undergraduate and graduate education, the arts, and our community in College Park. Transformation is not easy. It is not quick, and it is not without resistance. I want to work with you. I want to work with the Senate, so that together we create an even greater University of Maryland by 2020. Thank you very much.