

John C. Austin

Introduction by J. Ian Gray

Good afternoon everyone. I am Ian Gray, the vice president for Research and Graduate Studies at Michigan State University. We heard some very outstanding talks this morning and I'm sure we're in for a very good session this afternoon.

Our first speaker this afternoon is Mr. John C. Austin. John Austin is a senior fellow with the Brookings Institution as well as vice president of the Michigan State Board of Education. Mr. Austin is also a lecturer at the University of Michigan School of Architecture and Urban Planning and senior fellow with the University of Michigan School of Education. Mr. Austin has over 20 years of experience in political and public policy leadership. He is currently leading a Great Lakes Economic Initiative for the Brookings Institution, designed to improve the economic vitality of the Great Lake States.

Recently Mr. Austin served as policy director for Michigan's Governor-appointed Commission on Higher Education and Economic Growth, known as the Cherry Commission, and was principle author of the commission's report. He coauthored the influential report "Revitalizing Michigan Cities" with Michigan Future Incorporated, and has helped Michigan's Department of Labor and Economic Development to reshape Michigan's economic work force and urban development agenda.

Prior to settling in Michigan, Mr. Austin served as a special assistant to Massachusetts's governor Michael Dukakis and on the staff of the Massachusetts Secretary of Economic Affairs. His topic subject matter this afternoon is "The University: Doorway to the New Economy in Michigan and the Midwest." Please welcome Mr. Austin to the podium.

Austin

Thank you, Ian. I was looking around this morning and realizing about half the audience were friends and people who've heard me speak before. As you can see, some of those folks have decided to extend their lunch hour--very understandably--into a siesta, but I'm delighted to be here. I'm humbled to be part of this program and I did want to share reflections in terms of both what I think we have absorbed and learned about this important topic.

A few years ago with the Cherry Commission, which was designed explicitly to ask, "how do we drive our economy forward by taking advantage and leveraging these great learning institutions as well as appreciating and moving forward on being a much better educated state when creativity and knowledge are the engines of the economy?"

But I also want to share my own reflections of what we've accomplished coming out of that process and where we stand, looking at the whole Great Lakes region, the whole Midwest industrial heartland. What are we learning as we examine the role of higher education and its transition from the industrial economy to what we need to do to lead in today's global knowledge economy. And as always, none of my work is at all possible without the help of Brittany Affolter-Caine. I know Brit is shy and in the back. She's a doctoral candidate, about to get her Ph.D. here, which I have been preventing her from finishing as she's been working with me as a Brookings Senior Research Associate. If it weren't for Brit, there would only be assertions by me. But she brings data and pretty pictures that are illustrations of the data to these assertions.

I want to start really with a more personal storyline. I came here 23 years ago and accidentally met Lily, around the corner from where we are, a young woman who was a student at the University of Michigan who is today my wife and we've been married 20 years. I went to Swarthmore undergrad and the fighting little Quakers, she maintained, had a lot to be taught about in terms of Big Ten football and

atmospherics. With a strong grounding in the heartland with a wonderful family, she is why we are here in Michigan and chose to live and raise our family here. So about 17, 18 years ago we moved here after a brief sojourn in Massachusetts, where by the by I did sort of begin to, kind of intuitively, appreciate the power, the economic power of these universities, these learning infrastructures, as I lived and worked in the shadows of the MITs and Harvards. I got my graduate degree at Harvard, where I began to sense the power of those institutions to influence the economy.

As for my working philosophy, Churchill is reported to have said that leadership is moving from failure to failure with undiminished enthusiasm. And that is my motto. So 17 years ago I went to Flint, spent seven or eight years working hard to revive the Flint economy, was doing such a crackerjack job in Flint that I moved on to worry full-time about the Michigan economy. So starting ten or twelve years ago, I began to worry about the Michigan economy, which also led me to seek political office where I could help shape events and, whether you knew it or not, you elected me in 2000 to the State Board of Education where I've had a chance to work on education policy. I'm up for reelection next year, so don't let anything in this talk deter you from voting again for Austin. Whenever you see the name on any ballot, just vote for Austin.

It must have been 2001 when Dan Mulhern and I were introduced. He was not yet First Gentlemen, but Dan and I were both self-styled policy warriors, and it was prior to his wife being elected Governor. We had a number of conversations where this sort of intuitive understanding had developed, having lived and worked in Michigan for eight or so or ten years. We were talking about what matters to Michigan's economy and I remember that I asserted to Dan, "I think our universities and our great learning institutions are among our chief economic assets." And he said, "Well how does that work? What would you do to leverage that?"

I didn't have as fully formed an answer or very well-formed answer. The only thing I could think to say was, "I think you open up the tops of them, and you pour money in, and that's the way you do it." And that inevitably led to a discussion about, "Well isn't there a lot of spillage, I mean, isn't there a lot of waste," and we sort of talked about the tradeoffs, about how a few wine and cheese receptions being the price for the incredible innovation, discovery, new knowledge creation and horsepower, talents and new technology and ideas that come out of these universities.

Well I think I've informed myself a little more, but I was again, eight or seven years ago, sitting in my office worrying about the Michigan economy. I got a call for an old friend who had been working for the Marshall Fund. And he knew the kinds of things I was doing and he said, "Would you like to lead some delegations and get paid to go to Europe to look at economic development in Europe, leading teams from U.S. cities, like Cleveland, Pittsburgh, Milwaukee." And I said, "Sure that sounds interesting. It'll get me out of my sandbox." So I went to Europe four or five times looking at regional economic development there with leaders from Cleveland and Pittsburgh and Milwaukee. And Dave Hollister, who is here was then the director of the Department of Labor and Economic Growth when the governor Granholm was first elected, sort of deputized me as an ambassador from Michigan.

But several things happened when we went to Europe, which did accomplish the mission of a German Marshall Fund exchange program. It got us out of our day-to-day worrying about the economy of Michigan or Pennsylvania or Ohio. One thing we saw was the sort of broader geographies of Europe, where they actually make these crazy pictures which ask, "How do we balance the arc of development, the blue banana from London to Milan, with supporting the arc of development across the southern tier of Europe from Barcelona to Kiev?" And they do things like develop high-speed rail and infrastructures that help grow economies, and they want to connect the dots in terms of the regional metros. We went to Lyon and Turin, which were second cities in their respective countries. They, with Geneva, were trying to articulate themselves as sort of Alpine diamond with certain assets and market themselves as a broader geography.

Now their assets include things like the Alps, that we don't have (but we have Great Lakes). They also were articulating how to leverage their tremendous learning institutions, higher education institutions, particularly in Grenoble, Lyon, and Geneva, around things that we, too, are trying to leverage--life sciences, biosciences, the whole internet and research in IT. And so we saw this rhetoric and some tangible actions around a broader geography and linking metropolitan communities that have similar, perhaps shared, assets as well as shared challenges. And Turin was more of an analog, where they just had the Olympics, or Torino, I'm not sure which is the right way to say it. They were the auto capital of Italy with Fiat. Then they lost 200,000 auto jobs. They went from 280,000 auto jobs to 80,000 in the span of a dozen or fifteen years. That's a storyline that we can relate to here in Michigan. And so it was compelling and interesting to be faced with that discussion of a broader geography, of metropolitan communities across country boundaries, of trying to work together and across a broader geography of Europe.

But the main thing that happened is we talked to each other--folks from Cleveland and Pittsburgh and Milwaukee and partners in this great industrial heartland region. And we realized we have similar challenges as well as similar assets. We have the heaviest manufacturing employment, along with some states in the South manufacturing. This has left a particular legacy which was the task of the Cherry Commission, that the lighter-colored states [on the slide] are the undereducated states with lower shares of post-secondary achievement. The dark blue states have the highest rates. We--Michigan, Indiana, Ohio--have a relatively small share of our population with post-secondary degrees, since workers in the past didn't need one to get a good job on the line.

We have other legacies, the brain drain. This is the flight of our entrepreneurial, young, educated people, along with immigrants to other parts of the country and the world. All of our Midwestern states, except Minneapolis, St. Paul and Chicagoland, are talent magnets for our region. We have been losing these young talented people which are such the drivers of economic growth and vitality today. We also have this industrial culture of big paternal firms in which all of our new inventions were captured, a lack of capital, which has been alluded to in the region, to commercialize new products. All of that working together, and the loss of young talent, means we're less entrepreneurial.

The blue dots [on the slide] are the big cities that are the most dynamic in terms of entrepreneurial activity, with new high-value business startups. The red dots are the ones that are the worst, and then the yellow ones are close behind. In our region, we have lost this entrepreneurial zip and that has characterized us now for a couple generations. Then there is the physical legacy of the structures, the facilities that occupy spaces in our region, that are redundant today in terms of today's knowledge, economy. Many of these are on our waterfronts, which are new assets which we'll talk about. So we have these older, beat-up industrial cities. But we are in this transition.

It's almost inevitable, given the assets we have like these universities, and the creation that's going on here, and the physical attributes of our waterways and natural features. So we are in transition, trying to leverage these assets. On those trips [to Europe], it was a classic illustration to me of kind of the regional power that we have. Across the region are folks in Pittsburgh who are trying to be the life sciences, bio sciences capital of the world. Oh, we're in Ann Arbor trying to do that. Oh, Cleveland, you're trying to do it, too. Well guess what, individually none of us are the leader of the universe, but collectively we actually have more going on in that arena than anyplace on earth, if we thought of it that way and if we leveraged it together.

When I came back from Europe, I began to plan with several other people. Boy, do we have a game plan in the Midwest of putting a map on the of Great Lake States wall and saying, "What's the economic agenda? What are the things we can do? What public policy do we need to do? What should we all be organized around?" like they do it Europe. No, we don't do that. We don't think that way. We think, Michigan versus Ohio for the new plant or the new research facility. It's crazy.

So a bunch of us got together including folks at this great university and Michigan State University and others across the region and said, “Let’s develop this Great Lakes ‘worry’ center.” We’re going to worry about the whole Great Lakes, turn around the whole Rust Belt, an even more important project competing state against state.

So we began to do that and we’d run it out of these universities, I was interrupted. It was the spring of 2004, I got another call from Governor Granholm’s aides. They had just announced the Cherry Commission, the Lieutenant Governor’s Commission of Higher Education and Economic Growth. I thought, “Fantastic!” because these are the right issues for us to be organizing around in Michigan. How do we get smarter as a state? How do we leave behind the legacies and the cultures of the factory economy that didn’t value education? How do we leverage tangibly the creation and knowledge generation of these great learning infrastructures--universities, research universities, community colleges, and others? And so I thought, “Great, they want my ideas.” But no, they wanted me to work. They didn’t want my ideas.

So they put me to work very happily staffing the Commission, where I got to work with and learn from, and I mean that sincerely. We all learn from each other--people like Mark Murray, who’s going to come next and who was then President of Grand Valley University. President Simon, President Coleman, the leadership of the state, many of whom are in this room, were part of that Commission. And I think we, with tremendous help from the universities, from John Burkhardt and the Center for the Study of Higher and Post-Secondary Education, had tremendous staff and graduate students who helped do the homework, as did Michigan State, and our community colleges chipped in. We put together an analysis, first recognizing the problem that we have. This was in 2004.

One of the challenges to the Cherry Commission was how to double the number, or significantly increase the share, of our population with post-secondary degrees, credentials, or certificates that have currency in today’s economy, whether it’s an Associate’s Degree, Bachelor’s Degree, post-baccalaureate degree Michigan’s in the middle in these rankings, lagging the lead states and the national average in the credentials that you want to name that have real value to employers. Those are the tickets that matter. We’ve got to help more people, particularly folks being dislocated by this manufacturing economy, achieve credentials that can allow them to navigate, and even to create, in today’s economy.

The other challenge was realizing that we’re losing folks from getting to and through post-secondary education. We lose them in high school, when we must acknowledge that a quarter to a third to more in many of our urban schools drop out of high school. They don’t have a chance of participating in today’s economy. And if, at that time, only 30% of our folks who did graduate from high school had taken a curriculum that meant they could step into community college, university, or workplace ready to go without remediation. Again, that lagged both national averages and national leaders.

Completion rates. We can do a better job in helping people complete a degree. It’s great if they enroll, but if they never earn a credential that allows them to play, that’s a disservice to them and to our economies. So our completion rates, and all of these dimensions we looked at together, needed tremendous help.

We also looked at this other topic, how do we leverage these incredible hot houses of innovations that are our universities and research universities working together with the private sector? We’re a natural leader in Michigan--and it’s true across the region in new knowledge creation, R&D--but we don’t translate it into new companies. We don’t commercialize it. We don’t kick it out locally, and so we’re high in all of these metrics of creation and talent generation, scientists and engineers that we produce, but we lag in these metrics of translating that into new businesses and new activity in the region.

The Commission made 19 recommendations. It was a Commission after all. I mean it would have been better if we had five or six or three. We all have been working to implement some of them, and we have made some headway on most of them. Some of the bigger ones we’ve actually made happen. So for

example, the idea that we need to put a pool of money together to commercialize in a more diverse economy, that's the 21st Century Jobs Fund. Two billion dollars, give or take. We must put together a financial package that sets a higher bar than a high school degree as the entry point to the economy, so with some more difficulty in the legislative, political sausage-making process, the "Michigan Promise" of \$4,000 chunk of change for everyone to pay for at least some level of post-secondary education, was finally put in place.

The Cherry Commission provided the political momentum along with the economy that we have, to pass the comprehensive, rigorous high school exit expectations that we now have as law. So we now have the best, most rigorous high school, K-12 learning expectations and testing which delivers a post-secondary assessment.

Another of the recommendations by the Commission was for every community in Michigan to organize itself--it's institutions, it's economic development leadership and it's culture--around post-secondary achievement as the economic development strategy. The folks in Kalamazoo are already on their way. They sort of took that idea and went nuts with the "Kalamazoo Promise" which basically said, "We're paying for post-secondary for everybody." But it's had the more powerful effect of repopulating the city with middle class families, which is a community revitalization strategy *par excellence*. So that is an example of what is possible to do when you organize resources that every community has. Our communities are wealthy, relatively speaking, with this historical legacy of creation.

Now, from my personal perspective, and this is my opinion only, here is what we got right in the Commission and what we didn't get right. I think what we got right is a broadened and deepened understanding of a Michigan where post-secondary education is essential for the future careers. We understand better how higher education institutions, including this one, are the economic engines in multiple ways. Universities and university towns are attractive places for smart people and talented people to live and work. Witness the town we're in. It contributes a community and a culture and a buzz and lifestyle that is, in and of itself, a contributor. It produces talent that we need that drives the economy, and creates the discoveries and new ideas and new invention that drive the economy.

We got it right by not being overly prescriptive in what universities and colleges should do. I think entering the Cherry Commission, there was a feeling in some quarters that we need to make the higher ed institutions produce the widget makers and the medical technicians. We should just pay them for producing what the economy needs, which is closer to what a Florida and some other states have done. I think in the discussion we managed to appreciate, "don't kill the golden goose," the creative education of someone who may discover something that drives a whole new economic dynamic.

In one of the work groups that Mary Sue Coleman chaired on the economic development aspects of higher ed we had a presentation and discussion with the President of the Center for Creative Studies. He said, "Look, the person that designed the Chrysler 300, that's helping Chrysler sell more cars and producing jobs for people in Michigan, is an artist, is a graduate of the College of Creative Studies." So it's a great tangible lesson. Don't say, "you can't be an artist. That's crazy. You'll never find employment." Here's someone whose creativity and design was a tangible example of driving job creation in an arena that we understand.

What we didn't get done, I think, is establishing the durability of the commitment represented by the 21st Century Jobs Fund. When we say we're putting money into this fund to incubate life sciences and related new technology companies and then the next year, the legislature says, "We're going to take that away. We didn't mean that." If you keep pulling the stake out of the ground, it's kind of hard to view Michigan as a place that's serious about this.

And of course, we did not see fiscal follow-through on investing in higher education, given the budget train wreck that's going on. You don't have to go as far as I went in my first conversation with the First Gentlemen, you know, open up the top and pour the money in. But we need to invest in education

and we need to subsidize that investment in some ongoing durable way. You can't put band aids on every year and look like a national embarrassment when you're trying to also say that you are serious about leveraging your world-leading higher education infrastructure to drive the economy.

After my work on the Cherry Commission, I got back to this project of worrying about the whole Great Lakes. So we got together and said, "Look let's do what we were just doing through the Cherry Commission for the whole region." We had a first planning session of policy wonks, Federal Reserve economists, analysts from around the region here at the University of Michigan, sponsored by the Ford School and the Center for Local, State, and Urban Policy (CLOSUP). There is a regional reality to our Great Lakes economy that has developed in a highly integrated way. Michigan State University and others funded some initial work, which we published last year under this Brookings Initiative called the Vital Center. What was underscored during this process is the incredible historic as well as current primacy that education, higher education, has uniquely meant for us in this region.

This state and our sister states were organized in the 1780s by the Northwest Ordinance embedded a set of values that informed the pattern of development to this day. The values included free, not slave, labor, civil rights. We would have local government close to the people, Jeffersonian democracy. That's why we have all of these townships in this region, more than any other place on earth, which today is a new challenge. The other value was education. Room in every township was set aside for a school, and I think there's an excerpt from the Northwest Ordinance about the importance of education. If you go around the corner, it's inscribed on Angel Hall. I don't know what it says, but it does say something very specific about the importance of education.

Unique in the world, we in this region used the Land Grant University Act to build an education infrastructure at scale and with power unrivaled. We purposefully said we're going to educate every man and woman, not just the elites. And the land grant universities, of which Michigan State the first, are all about fueling commerce development and industry through these incredible institutions of higher education. So those values and that development built the largest educational program in terms of its output and in terms of its learning infrastructure, including community colleges, universities, regional universities, and research universities.

When you look at this region, it has the greatest learning infrastructure on the face of the Earth. Which includes the Chinese, our competitors, who are worried about emerging and competing and producing scientists and engineers at the same scale. When they benchmark the world universities they're trying to emulate, twenty of the top one hundred universities in the world are in our region. That's more than any place on Earth. The Northeast and Mid-Atlantic regions only have fifteen universities in these rankings. The West coast only has thirteen. No other place on earth has learning infrastructures like the Midwest.

Part of Bill Gates' road show is about industries that he knows and that he's been intimately involved with--IT, life sciences, medical. They only grow up around research universities. And we have them at scale. They have incredible relevance in today's knowledge economy.

When Al Gore invented the Internet, he got serious help from the University of Michigan, the University of Illinois, and the University of Minnesota, who invented, as was noted, all of the technologies that Dr. Vest noted. We didn't commercialize them here, but we created them here, and we are leading the development of Internet 2. We punch way above our weight in terms of producing the talent the nation needs. So with just under one-third of the U.S. population we produce 38 percent of all bachelors degrees awarded from our region. Thirty-seven percent of all advanced scientists and engineering degrees come from our region. We export talent to the rest of the country and the world. We are the nation's talent generation machine in this region, including management talent. And when we look at our Canadian counterparts, because we are highly integrated with them, it adds to that dynamic.

We've always been blessed. These learning institutions, among other things, have been magnets from around the world attracting people to get an education here in the Midwest. Many of them, I think, contributed directly to inventions like the Internet. And many of these students stay here and create new knowledge, new jobs. Like I said, immigrants are the most entrepreneurial, along with young educated people. And this recent, unfortunate, immigration debate drives me crazy, because we need to understand the economic power of immigrants, including the power to repopulate cities. Michigan only grew in population in the 1990s because of 270,000 new immigrants, while we lost some of our young and educated citizens.

If you are worried about immigrants taking your low-skilled jobs, think again. Immigrants to our states, shown in the dark blue, are better educated than our native population. On balance, over 37% of immigrants to Michigan have a bachelors degree or higher. That is significantly higher than our native population, due to the legacy of the factory economy where 22-24% have a bachelor's degree. We are not attracting the low-educated immigrants who are taking our low-skilled jobs. If anything, they are contributing to our talent base in the region.

Finally, this slide shows global cities by various metrics and there aren't that many of them. By business travel, by being the centers for firms that are serving global marketplaces, by international flows. At the center of global connectivity are these wonderful global universities, leaders in discovery and exchange in a multicultural world, learning how to do business in Japan and China.

As you know, the Chinese are coming to the University of Michigan and Michigan State and Ohio State and they are saying, "How does this institution work? We want to build twelve of them. We want to know how it works." President Coleman was on the national Council on Competitiveness a few years ago. Its report suggested that innovation, the driver of the economy, is a function of three things: new ideas, talent and infrastructure--like research universities. In this region we create a third of the nation's new intellectual property. Mostly it comes out of the private sector, but it's really dynamic when it's working with our research universities

We also have other assets, in terms of an innovation infrastructure, that give us incredible opportunities for economic success in today's knowledge economy. Among these assets is quality of life and a attractive standard of living, being near to water, with all of its aesthetic as well as commercial value; development along waterfronts is where everyone wants to be, and we are America's fresh water coast.

The Great Lakes, the U.S.-Canadian fresh water coast, has all of these attributes to leverage in a world that is unsustainable when there isn't water to support development. We actually can afford sustainable population growth here. And we can be a leader in providing a wonderful quality of life. Go to Chicago as a wonderful example. Go to Milwaukee. And we can be the world's leader in developing clean, green technologies that we need to grow new jobs. The world needs to solve giant problems in this arena that we can help solve.

Milwaukee has opened up its waterfronts. It actually took down highways and some of the residues of the industrial infrastructure. Even our older cities, like Detroit, Milwaukee, Cleveland, Chicago, Pittsburgh, have attributes needed in today's knowledge economy. People want to live and work in places with urban environments and street life and cultural institutions. People want to be in cities, they want to be on waterfronts. The bigger cities are the ones emerging as global cities.

We have that opportunity around the Great Lakes. If you don't believe me, you might believe the late Ned Gramlich, who has been working with all of us on this agenda. Ned could not attend a forum at the Brookings Institution in June on the future of the Great Lakes economy, so he happily gave us a statement that the opportunities are unrivaled for the Great Lakes region to thrive economically as a center of innovation, as an environmentally sustainable, clean, green playground for our nation's people to live and

work. And Ned was not a starry-eyed, wishful thinker like me. Ned's a hard-headed economist, who also predicted that sub-prime loan fiasco.

So what are the recommendations? I'll give you four, that are also incorporated in the Great Lakes Initiative. One has been mentioned, although not named explicitly. As a nation we need to double the amount of money invested in basic and applied research and development, and we in this region would benefit significantly because we have the places that could do that work. So we should work together politically to make that happen.

We also can be the place with the competencies in a range of areas, from the energy technologies across a range needed to solve global warming and produce new jobs. We uniquely can be the places for new global, freshwater research, education and technology business development. How to clean, treat, use water more efficiently, with the energy implications of that. The rest of the world needs such tools and technologies. And we have the horsepower to produce them here.

We need to argue as a region for our fair share of federal money. We've been donor states for years. We literally financed the infrastructure of the South and the West, that is now unsustainable. So if we wanted to ask John Dingell and Vern Ehlers and others, "It's time we got more to aid this transition and to solve problems like these and produce the talent the nation needs." That would be a raw political move, but it wouldn't be a bad one, given the merits of our arguments. If we put our region's dollars on the table through investing in state universities and we asked the Feds to do the same, we can deliver a lot of bang for the buck and deliver the goods. This in my view is the number one job creation engine for our region.

What if we came together as a region and said, "The power of building a human market, a common market in human capital, is tremendous." Think of the common power of a market in Europe that has greased their economic development. We could promote ourselves and develop ourselves as the high quality, low-cost education center of the world. One way to do this would be to have common tuition rates so I, as a Michigan resident, could send my daughter to Wisconsin or Northwestern or Indiana, and students from those states could come here.

We could have a common market in portable credentials for our nurses and teachers and their pensions. Make it so all of these could cross the borders of our states and even into the Canadian provinces. Imagine something like TIAA-CREF. University faculty can keep their retirement accounts as they move from one university to another. We should have that for our teachers and our nurses and other people, a common market in human capital that we could forge. Universities could help lead because they actually work together in the Big 10 and the CIC [Committee on Institutional Cooperation]. It would be a tremendous economic engine and put forth another marker that we are serious about being the leading education center of the world. We would say, "Please. Flock here, stay here. Don't go to school in Boston," like I did. There are plenty of good places, even if you want to get a little further away from mom and dad and leave Michigan. Madison is lovely. It's like Ann Arbor with lakes. I was just there.

We should, through federal incentives and state incentives and institutions aligning requirements in terms of the sequence in science, technology, engineering and math education. We can be the delivery agents for the national STEM agenda. We have the horsepower. We produce more science and engineering and technology graduates already. Let's up the ante. I challenging our Michigan research universities to lead this and develop a Michigan STEM center. We have a fully developed math and science network of K-12 math and science people organized in a coalition. We have the private sector in corporations and in WIRED grants. We have people working on STEM agendas in Detroit Renaissance. We also have in these three universities, and our other universities, but particularly these three, with the world's leading engineering schools, schools of education, and sciences. These universities can help forge a coalition that says, "Here's the STEM agenda for the country."

Finally, our job training system doesn't work and we need to help put on the table a package of resources. The money's already there in Pell Grants and what states have done in terms of paying for

post-secondary. Now we need to put those together in an easily identified package of dollars that is like a GI bill that says, “Look, if you’re graduating from high school, or if you’re an incumbent worker who’s dislocated, here’s a package of money to pay for your post-secondary education to get that ticket to new opportunities.”

Finally these are the things we should be insisting, as the electoral vote-rich swing states that decide the presidential elections: Ohio, Pennsylvania, Wisconsin, Minnesota, and the rest of us are the narrow-margin, big-vote states where people of both parties have to run for President. We need to say to them, “These are the things that matter for our economy in the Great Lakes. Not that nothingness that you’re talking about. These are the things fueling us as a research and talent generator for the nation.” That should be what we insist happens in this wide-open Presidential election.”

We can do it. And thank you for the opportunity to be with you.