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Sustaining Success: Partnerships that Work

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Opening

(Slide #1) Good morning. What a terrific way to start the week--in the company of colleagues who are passionate about the role of higher education in developing a sustainable culture.

One of the first things I always like to do when I speak is share just the basics about Western Michigan University. It's a simple way to set the stage and give you a sense of the size and complexity of WMU and an opportunity for you to consider how our experiences may be relevant to your own campuses.

About WMU

(Slide #2) As an institution, Western Michigan University is best described as learner centered, discovery driven and globally engaged. These are the three tenets of our strategic plan. Nearly all that we do falls under one of those three goals.

Here are some basic stats:

- We have more than 23,000 students
  - -18,000-plus undergrads
  - -5,000 graduate students
- We're one of just 157 Carnegie-designated public research universities conducting research at the higher or highest levels.

(Slide #3) • We offer more than 250 degree programs. 108 of those are at the graduate level, including 32 that lead to a doctoral degree.

• Our main campus in Kalamazoo and our 10 regional locations encompass nearly 1,300 acres which house 171 buildings.

In the Western Michigan University community, we look at sustainability in the broadest possible way. We regard it as a cultural challenge--a way to maximize quality of life for today and generations to come. Healthy living decisions, being tobacco free and enhancing diversity are among the qualities we see as ways to achieve sustainable living.

WMU sustainability history

I've had the opportunity to enjoy the past 10 years as president of WMU. We've accomplished a lot in that time and, to the point of today's discussion, we've developed some deep and truly meaningful partnerships that have helped us leverage our strengths in a way that makes our campus a sustainable and livable environment and makes sustainable living more accessible to those in the communities we serve--and beyond.

Our commitment and ability to appreciate sustainability dates back nearly 40 years to decisions that we now recognize as revolutionary. In 1980, WMU launched what is now known to be the oldest quasi-green revolving fund in the nation. It was a partnership between the University and the campus community. It was a pact that basically said, "We'll invest in energy efficiency, and every dime we save together by being more efficient will go right back into more efficiency initiatives."

(Slide #4) It's worked spectacularly well, and similar funds are now widely used around the nation--perhaps by many of you. We've financed more than 100 campus projects through our fund, with an average annual return on investment of 47 percent and an average project payback period of just over 2 years. Since 1996, our total

project costs have been approximately $7.5 million and our annual cost savings are approximately $2.75 million.

(An example: 16 years ago, WMU moved the waste heat from the chillers at its ice arena to heat the large pool in an adjacent natatorium. All of the steam energy needed to heat the pool was no longer needed. It resulted in annual savings of $24,000 per year and a 51 percent annual return on investment.)

The most important result, however, may well be the foundation that was built, and upon which we have broadened our efforts to build a culture of sustainability that permeates every aspect of our mission and vision.

Sustainability accomplishments

In more recent years, our accomplishments have included:

•**(Slide #5)** Over the past 20 years, **Campuswide energy savings** and development have resulted in a 15 percent increase in our campus square footage at the same time we decreased energy usage by 14 percent.

• In all new construction and renovation on campus over the past decade, we have made a commitment to meeting **LEED standards**. Today we have 13 LEED-certified buildings and five more in the pipeline.

• Adoption in 2010 of a **Student-initiated Sustainability Fee** (Slide#6) that, among other things, provides $75,000 annually in sustainability research grants for students. It also funds the operations of a campus sustainability office and supports programming by that office.

• **Electric vehicle charging infrastructure**. **(Slide #7)** We've built one of the most expansive EV charging infrastructures of any U.S. campus. One of our largest and most visible facilities is a set of 15 charging stations connected to massive new 50 kW solar array that provides a significant portion of the EV charging stations' energy demand. The facility was make possible through a partnership with the Clean Energy Coalition

-And we are a signatory to both the **Talloires Declaration and President's Climate Commitment.** For the latter, we have submitted and moving forward on our climate action plan, and I serve on the organization's national steering committee.

Recent recognition (Slide No. 8)

Our record over the decades has attracted much appreciated recognition over the past few years. The 2014 Climate Leadership Award from Second Nature was particularly gratifying and remains a point of pride. Other honors include the:

-Green Building Council 2014 Best of Green Schools

-Sustainable Endowments Institute--2015 Best of GRITS (Green Revolving Investment Tracking System)

-The STARS--Sustainability Tracking, Assessment & Rating System--Gold rating

-The Green Seal Certification for sustainable cleaning practices.

What we've built together as a university community allows us to expand on our record and take our commitment to sustainability even deeper into our culture. Today, we're expanding and forging new partnerships that leverage our expertise in a number of academic disciplines and allow us to serve our home communities at ever higher levels.

With public and private sector partners, we're:

- exploring alternative energy sources,
- assisting communities in sustainable transportation measures,
- refining green vehicle design
- designing better recycling products, and
- preparing a work force for sustainable industries.

Here are a few examples of some significant partnerships.

Consumers Energy

Let's start with our energy partnerships. Over the years, we have had a close relationship with Consumers Energy. Our state's power giant is in the business of rewarding customers for using less of its product, so we have become something of a poster child for that practice. Our recent construction efforts have employed the use of geothermal heating and cooling or the installation of rooftop solar panels capable of offsetting the building's energy usage. For that reason, we routinely see large incentive checks back from the company and are often heralded as an example of an organization that is always innovative and effective.

Our work with Consumers over the years led to a new partnership launched last fall. The University is now home to an 8.5 acre solar panel array **(Slide#9)** on our engineering campus that is designated as a Solar Garden--the first on a Michigan college campus.

The 1-megawatt solar power plant produces enough electricity for 200 Michigan homes and businesses. It also provides an opportunity for community members to support solar power development without installing their own solar array. They simply subscribe to the project and earn energy credits toward their monthly bills.

They can support renewable energy and reduce their carbon footprint through this program.

For WMU, there's an energy credit, of course, and so much more. The partnership with Consumers led to the establishment of a smaller set of solar panels **(Slide #10)** that will be used by faculty and students for research. It also allows WMU to use the solar facility for educational purposes such as training WMU students, exposing K-12 students to the way solar energy works and developing training for first responders who need to know how to handle solar power in emergency situations.

We'll help turn the attention of local communities like Kalamazoo to the potential of solar power.

It's an energy source that is there every day and is a clean source of power. As we learn more about maximizing its use, we don't need to worry about side effects. As a billboard once famously trumpeted:

"When there's a huge solar energy spill, it's just called a 'nice day.'"

Honeywell

Here's another one. We've just concluded a three-year initiative with Honeywell that put energy saving equipment in 50 buildings and provided energy dashboards for 12 of those buildings. **(Slide#11)** The dashboards were set up so that graduate-level research could look at whether dashboards and other tools that share information and provide feedback on energy use might lead to lasting and quantifiable behavior changes among building occupants. Behavior analysis and modification is another of our University's recognized strengths, and this effort combined that strength with our conservation commitment.

(Slide #12) Former EPA Administrator Christine Todd Whitman joined us on campus to launch this effort on Campus Sustainability Day. The Honeywell energy equipment resulted in annual energy savings to WMU of $250,000. It also allowed us to discover what we could accomplish technically as well as what we could do by harnessing the power of a community made up of thoughtful individuals.

The research effort allowed our students to explore ways to engage members of the University community and encourage them to take full advantage of the technology to reduce their environmental footprint. Online dashboards and touchscreen kiosks were analyzed and compared to see which was more effective. Competitions among buildings were studied for impact. The need for communication and promotion of the dashboard capabilities was examined for impact. The project, in the end, moved the conversation forward and set the stage for further analysis.

Michigan craft beer industry

One of our newest type of partnerships has grown out of industry demand and a work force shortage in a field that is guaranteed to attract student attention--the beer industry. Michigan, particularly West Michigan, plays a big part of the nation's $20-plus billion craft brewing industry. Sustainability--the efficient use of energy, water and locally sourced ingredients is a critical part of that industry already, and becoming more critical by the year. Nine Michigan breweries partnered with WMU and a local community college to develop the nation's first sustainable brewing degree program.

(Slide #13) The result of that partnership is a science-based program that will put our graduates in prime contention for positions across the nation. Those nine brewers serve on our advisory board and helped hone the program to the high level of rigor they know will be needed by our graduates. The industry as a whole takes a high toll

on natural resources and has been struggling for years with questions of energy efficiency as well as recycling water and byproducts. Our expertise in water management, chemistry and recycling is playing a big role in making this partnership productive for our students, researchers and community partners.

As we're preparing a new work force for that industry, our campus sustainability experts also are conducting research with those same brewers on how to test the quality of ingredients. And famed Kalamazoo craft brewer Bells Brewery is working with our researchers on a research effort of great importance to them--determining if Black Soldier Fly larvae has the potential to divert waste and increase the benefits of composting post-production materials.

Newell Brands

(Slide#14) Product design is another emerging strength at WMU and an economic development asset for West Michigan. Newell Brands, which includes such household names as Rubbermaid, Sharpie Paper Mate and First Alert, has just opened a major design center on WMU's Business Technology and Research Park. That company is tapping the expertise of our faculty and students for research on recycling container design, placement and signage that can maximize their impact. The Newell project follows promising research done by our Office of Sustainability on the impact of centralized, comprehensive recycling receptacles.

Kalamazoo Metro Transit

And finally, we've partnered with our local metro transit organization and a private transportation company in a partnership that, during the 2015-16 academic year provided more than 530,000 free bus rides annually to our students. During the past 10 years, more than 6.6 million individuals have ridden our city's bus system simply

by showing their WMU ID. Just think about the reduction in our carbon footprint those 6.6 million rides represent.

Partnerships are critical in our efforts to inculcate sustainability into our campus culture. I think we've all learned over the years the truth behind Henry Ford's observation many years ago when he said:

"Coming together is a beginning; keeping together is progress; working together is success."

Closing

(Slide #15) I could continue on, but I want to stop here and make sure there's time to address your questions. I want to be respectful of your time and make sure I address the topics you want to know about, so at this point, I want to (turn the podium over to your colleague or open the floor to your questions.)

About 16 minutes.