

## BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

### **Research, Economic Development, & Innovation Committee**

Thursday, October 7, 2021  
8:45 a.m. to 10:00 a.m.

UW Oshkosh  
Reeve Memorial Union  
Ballroom 227A  
748 Algoma Blvd., Oshkosh  
Via Webex Videoconference

- A. Call of the Roll
- B. Declaration of Conflicts
- C. Approval of the Minutes of the July 8, 2021 Meeting of the Research, Economic Development, and Innovation Committee
- D. UW Oshkosh: Building a Better Talent Pipeline Through Undergraduate Research, Economic Engagement, and Business Outreach
- E. Focus on the Future: Preparing Talent to Address Tomorrow's Workforce Needs – Employer Panel – Moderated by Rebecca Deschane, New North Vice President of Talent Development
- F. UW-Madison School of Computer, Data & Information Sciences (CDIS): Driving a Strong Innovation Ecosystem and Educating Talent to Support Fast-Growing, Competitive Industry Needs

October 7, 2021

**UNIVERSITY OF WISCONSIN OSHKOSH:  
BUILDING A BETTER TALENT PIPELINE  
THROUGH UNDERGRADUATE RESEARCH,  
ECONOMIC ENGAGEMENT, AND BUSINESS OUTREACH**

**REQUESTED ACTION**

Host campus presentation; for information only.

**SUMMARY**

UW Oshkosh will share their work in building a talent pipeline using undergraduate research, economic engagement, and business outreach that involves two innovative bio-digester sites.

**Presenter(s)**

- Bob Roberts, Vice Chancellor for University Affairs
- Brian Langolf, Director of Biogas Program
- Tony Long, President of Agra Energy Corporation

**BACKGROUND**

Biogas continues to be a proven, pioneering academic and research pursuit and sustainable source of energy for the University of Wisconsin Oshkosh. The institution continues to collaborate with partners in two, highly-innovative digester sites, each leveraging different technology as it furthers UWO's academic mission.

In 2011, the UW Oshkosh Foundation-Witzel, LLC built the first commercial scale dry fermentation anaerobic biogas system in the Americas. The project began as part of the University's commitment to reduce our community's reliance on fossil fuels.

An additional goal was to create a research site and instrument for students and faculty. A diverse group of collaborators made this project's funding, construction and operation a reality.

The renewable energy facility is producing approximately 8 percent of the University's electrical needs and is converting 10,000 tons of yard and food waste per year to produce up to 3,300 megawatts of electrical energy per year.

The plant is approximately 19,000 square feet, of which 6,900 square feet are utilized for biogas production. The gas is collected into a bag on-site and used to run a combined heat and power (CHP) unit to generate electricity and heat.

The Allen Farms biogas project and technology involves the first small-scale biogas system in Wisconsin. Today, the project involves a deepening partnership between farm owner Dave Allen, UWO and Agra Energy Corporation, based in southern California.

This small-farm scale digester is an innovative, scaled technology involving wet digestion and a 64kW engine using plug flow system technology. The pilot project is located on a family farm with fewer than 250 head of dairy cattle, about 12 miles northwest of the Oshkosh campus. The purpose of the project is to better understand, refine and optimize the process of producing electricity from methane derived from manure.

Each digester site has operated as a kind of laboratory connected to UW Oshkosh's collaborative Engineering Technology program. Students in this major gain hands-on experience operating and overseeing cutting-edge sustainable technologies while preparing for careers in futuristic, sustainable energy fields.

October 7, 2021

**FOCUS ON THE FUTURE: PREPARING TALENT TO ADDRESS  
TOMORROW'S WORKFORCE NEEDS – PANEL DISCUSSION**

**REQUESTED ACTION**

Information only.

**SUMMARY**

Continued economic strength and historically low unemployment are causing increased demand for highly skilled graduates, with many positions going unfilled across a broad range of employment categories. The current tight labor market is expected to continue as the economy rebounds.

Today's workforce panel discussion provides a forum for the REDI Committee to hear directly from employers based in Northeastern Wisconsin. These national and regional innovators and leaders will provide diverse and divergent perspectives on topics of importance that can help guide strategies, directions, and actions to further enable the university to develop and implement more effective pathways to career opportunities.

Rebecca Deschane will moderate today's discussion. Rebecca is Vice President of Talent Development for New North, the regional economic development organization supporting 18 counties across northeastern Wisconsin. The panelists represent small-, medium-, and large-sized businesses.

**Presenters:**

- Rebecca Deschane, Vice President of Talent Development, New North
- Dan Ariens, Chair and CEO, Ariens Company, Brillion
- David Richter, UW Oshkosh alumnus and Vice President of Operations for Silver Star Brands (formerly Miles Kimball)
- Rebecca Timmins, UW Oshkosh alumna and founder of Celebrate Neurodiversity (Fox Cities Child Care/Autism Respite & Resource Center)

October 7, 2021

**UW-MADISON SCHOOL OF COMPUTER, DATA & INFORMATION  
SCIENCES (CDIS): DRIVING A STRONG INNOVATION ECOSYSTEM AND  
EDUCATING TALENT TO SUPPORT FAST-GROWING, COMPETITIVE  
INDUSTRY NEEDS**

**REQUESTED ACTION**

For information only.

**SUMMARY**

In 2019, UW-Madison established the School of Computer, Data & Information Sciences (CDIS) to strengthen research and education on campus, prepare tech-savvy graduates to fill new kinds of jobs, support a wave of Wisconsin entrepreneurs, and partner with industry to provide them with the competitive advantage of the latest technology.

Developing ever better hardware and software has been the focus of computer scientists and engineers for 50 years, empowering exponential growth in the collection of data and the rise of data science in almost all aspects of society. At the same time, the pervasive assembly and application of big data has created challenges — issues of privacy, ethics, security and more — that CDIS addresses at the intersections of computing and data with the humanities.

At its founding, newly appointed CDIS Director Tom Erickson pointed out that UW-Madison's approach was unique across the nation. Essentially, it joined three top ranked programs and put them together in a manner that offers unmatched breadth and opportunities for collaboration in medicine, engineering, life sciences, nursing, education, and more.

Technology has driven substantial economic growth on the coastal regions of the USA. This growth has been fueled by industry-academic ecosystems, most notably Stanford/UC-Berkeley in the San Francisco Bay area and MIT/Harvard in Boston. A 2019 Brookings Institution Report, names Madison as the number one and Milwaukee as the 17<sup>th</sup> most likely new centers for innovation growth, pointing out the opportunity that exists in developing a similar industry-academic ecosystem in Wisconsin. A recent LinkedIn report

validates this notion, naming Madison number one in the nation in tech hub growth during the past two years.

Today, the Computer Sciences curriculum at UW-Madison represents the university's most popular undergraduate major, with more than 3,700 students pursuing programs offered by Computer Sciences, Statistics, and the iSchool.

UW-Madison Chancellor Rebecca Blank will introduce Tom Erickson and additional university and industry presenters, who will provide an update on CDIS' continuing efforts to meet Wisconsin's critical talent needs, and efforts related to research and collaboration.

**Presenters:**

- Rebecca Blank, Chancellor
- Tom Erickson, Founding Director, School of Computer Data & Information Sciences
- Remzi Arpacı-Dusseau, Chair of Computer Sciences
- Michael Ellis, Chief Customer & Digital Officer, Johnson Controls

**BACKGROUND**

As technology becomes more pervasive in the world on all levels — from smart devices to algorithms shaping the global flow of information and commerce — university researchers and innovators continue to lead in this field.

The UW-Madison School of Computer, Data & Information Sciences is a place where top researchers are shaping the way the world uses technology, and where Wisconsin's students learn how digital-age tools enrich their lives and careers.