



# UNLEASHING THE POWER OF CONNECTED SYSTEMS

With 75 billion devices projected to be connected to the internet by 2025, the immense amount of data and data analytics enabling the industrial internet of things (IIoT) is driving the next Industrial Revolution. Research shows that while many manufacturers embrace the idea of enterprise-wide connectedness and use data in certain areas of their plants, they want to learn more about optimizing and linking information across all their business functions—and that they need to implement the culture change connectivity requires.

Inspired by discussions with executives at Rockwell Automation and Microsoft, the University of Wisconsin-Milwaukee (UWM) established the Connected Systems Institute (CSI), a comprehensive multidisciplinary institute that involves academic researchers with industry partners to conduct advanced research related to IIoT, train talent with expertise in IIoT suites and products, and give members access to new markets.

## Local and global impact

The benefits of connected systems go beyond manufacturing, industrial asset management, and connected products to include applications that change the way we live. CSI will focus on improving business practices through:

### Access to talent

- Hundreds of students learn transferable skills each semester
- Professionals earn certifications in areas such as machine learning, data analytics and cybersecurity
- Veterans receive high-skilled training as they transition back to civilian life
- Courses, workshops, and short courses

### Applied research

- Industrial internet of things
- Data analytics
- Cybersecurity
- Artificial intelligence
- Data and sensor networks
- Predictive maintenance

### A better bottom line

- Increased productivity
- Better asset management
- Reduced downtime
- Quicker delivery to customers
- Collaboration with industry partners



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## Connected systems for small and midsize manufacturers

To accelerate technology adoption and realize the benefits of a connected enterprise, CSI is customizing solutions for small and midsize manufacturers (SMMs). The CSI SMM Readiness Plan, developed in partnership with industry, academic and CSI member input, is available to any manufacturer interested in designing a roadmap and establishing a business case that incorporates some of the following technology solutions for their production floor:

- Cybersecurity
- Robotics and automation
- Sensors and data networks
- Machine learning and artificial intelligence
- Cloud functions
- Systems architecture
- Business intelligence
- Supply chain

After the initial round of training, companies have the opportunity to receive continuous support and education through options including virtual training with long-term access. They will be encouraged to participate in CSI workshops and to collaborate with the ecosystem of manufacturers and digital technology providers within CSI. In addition, CSI testbeds on the UWM campus are available for SMMs to gain hands-on experience with implementation and integration.

A connected system platform enables real-time integration of the process, data and business segments to improve overall system efficiency, perform asset management, and enhance quality, reliability and safety.

“The Connected Systems Institute is a multidisciplinary program that will enable students to learn skills not only in technology but also in business, and the breadth of courses and research at UWM makes it a perfect fit.”

~ Blake Moret, President and CEO, Rockwell Automation

“IoT is fast becoming a key strategy for companies of all sizes, yet there still exists a gap in cloud skills and training to develop connected solutions. The Connected Systems Institute helps bridge that gap by combining advanced research with training for the next wave of innovation with IoT.”

~Sam George, Director of Azure IoT, Microsoft

To learn more, visit [uwm.edu/csi](http://uwm.edu/csi)



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