



ILLINOIS



CICEP

INNOVATION AND ECONOMIC PROSPERITY UNIVERSITIES
AWARDS PROGRAM

CASE
STUDY
2014

Manufacturing Case Study

Through the creation of [UI LABS](#), the [Illinois Manufacturing Laboratory \(IML\)](#), and the [Digital Manufacturing & Design Innovation Institute \(DMDII\)](#), the University of Illinois (U of I) is enhancing the manufacturing competitiveness of the state, region, and nation and stimulating the economy by creating jobs, retaining talent, and attracting industry to Illinois. By changing the way we interact with industry, government, and other academic institutions, the UI LABS model has created new opportunities and is critical to enhancing the region's technological and economic competitiveness. These collaborative partnerships will drive growth by spurring innovation across disciplines, institutions, and sectors. Additionally, these opportunities attract the best and brightest faculty and students to the region.

UI LABS

UI LABS is an independent, not-for-profit research, training, and commercialization corporation that spun out of the University of Illinois. By bridging the gap between Urbana-Champaign in central Illinois and the city of Chicago, UI LABS leverages the collective assets of the University and the city in order to tackle big technological challenges through applied research, while offering opportunities for students and faculty to work in a highly collaborative environment. UI LABS will stimulate the economy through the development of new capabilities, new company formation, growth of existing companies, and the development of a highly-skilled, 21st century workforce.

ILLINOIS MANUFACTURING LAB (IML)

The University partnered with the State of Illinois to create the Illinois Manufacturing Lab (IML), a \$10 million initiative where, in the words of Illinois Governor Pat Quinn “companies—big and small—come to learn and use the world’s most sophisticated tools and software.” The state was lacking a model for deploying advanced manufacturing tools, technologies, and expertise to Illinois manufacturers prior to the creation of the IML. Input was solicited from a diverse cross-section of companies, manufacturing organizations across the state, and other relevant stakeholders to develop a pilot program targeted at filling the gaps in the state’s manufacturing ecosystem. The IML is demonstrating progress with its nine pilot projects currently underway. These projects, many which involve virtual modeling, simulation, and testing of new processes and products, will help the IML build a sustainable business model and improve the strength and competitiveness of small- and mid-sized manufacturers in other states and regions.

DIGITAL MANUFACTURING & DESIGN INNOVATION INSTITUTE (DMDII)

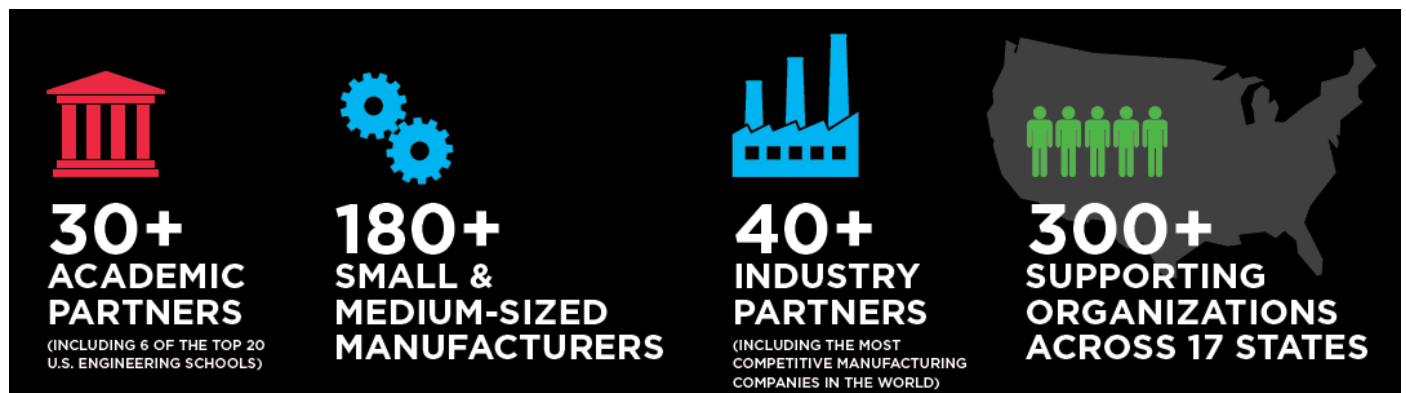
In response to the federal government’s charge to create a nationwide network devoted to innovating advanced manufacturing technologies, the University of Illinois partnered with UI LABS to bid for a \$70 million award from the Department of Defense to build an advanced manufacturing institute in Chicago. The UI LABS-led consortium was awarded the \$70 million grant to establish the Digital Manufacturing & Design Innovation Institute (DMDII). In total, over \$320 million in private and public dollars was raised. Research conducted at the DMDII is anticipated to create thousands of jobs in advanced manufacturing, enhancing the

competitiveness of the U.S. economy and generating billions of dollars of value for the U.S. industrial base.

UI LABS and the DMDII have made significant progress in a short period of time. Leadership teams have identified the needs and goals of the numerous partners and stakeholders, and are in the process of finalizing collaborative agreements. UI LABS and the DMDII will move into a 94,000 square foot [facility](#) on Chicago's Goose Island in early 2015.

PARTNERSHIPS & COLLABORATION

Partnerships form the foundation of these manufacturing initiatives. UI LABS and the DMDII are comprised of 40+ industry partners, including some of the best and largest manufacturers in the world; 30+ academic partners; 180+ small- and mid-sized manufacturers; and 300+ supporting companies, organizations, and state and municipal governments across 17 states.



The creation of UI LABS, the IML, and the DMDII has provided University of Illinois faculty and staff with a unique collaboration opportunity. In addition, the University of Illinois is interacting and working with partners and stakeholders through a new, innovative approach. We are committed to collaborating with other academic institutions in a way that fosters cooperation and productivity. This new model will create unparalleled opportunities for our faculty and students, while continuing to drive regional and national economic growth.

CONCLUSION

The aforementioned manufacturing initiatives are directly aligned with the economic development missions of the University of Illinois, the state of Illinois, and the city of Chicago. The timing of the initiatives coincides with the [regional economic development summits](#) that the University is hosting throughout the state in Summer/Fall 2014. University and state leaders are visiting regional innovation clusters to learn about the needs of each community and discuss opportunities for collaboration and economic growth, while engaging local, state, and federal elected leaders to help convene these discussions. In addition, UI LABS and the DMDII are

participating in these activities to create awareness of the new institute and educate stakeholders on how the DMDII can serve their local communities.

U of I is leading a paradigm shift in manufacturing. UI LABS, the IML, and the DMDII will raise the global competitiveness of small- and mid-sized manufacturers across manufacturing sectors to create a more agile, connected, and efficient industrial base. These initiatives provide manufacturers access to cutting-edge technologies, capabilities, and equipment, and train students and workers in an unparalleled environment. While the institute will be located in the Midwest, the impact of these significant initiatives will expand far beyond the region as the resulting innovations change the way America designs and manufactures products.

The University of Illinois is demonstrating that innovation and technology have the potential to revolutionize the manufacturing industry. Applied research at UI LABS, the IML, and the DMDII will spur the creation of thousands of jobs in advanced manufacturing fields and increase competitiveness of the U.S. economy. Through these initiatives, the University has successfully facilitated collaborative partnerships among industries, government, and other academic institutions to create real solutions to significant business and economic challenges. As a result, we are helping to ensure a more prosperous future for our local communities, the state of Illinois, the Midwest region, and the nation.