Indiana – Driving Technology-driven manufacturing

Through IACMI projects, member companies have developed new, commercially available products. These products have helped lead to job creation, facility expansion, and economic growth for the companies, as well as their manufacturing partners. IACMI has created an ecosystem of innovation that meets commercial needs, serves national security, and drives national economic growth.

IACMI – The Composites Institute is a 160+ member community of industry, academia, and government agencies leading innovation and workforce development initiatives to drive the adoption of advanced composites to grow U.S. manufacturing and support national security. IACMI, a Manufacturing USA institute, is supported by the U.S. Department of Energy’s Advanced Manufacturing Office as well as key state and industry partners.

Advanced composites provide strength and stiffness while being very lightweight. These characteristics provide advantages in many transportation, energy, and infrastructure applications. Greater deployment of advanced composites can offer benefits, such as providing safer, more energy-efficient vehicles. IACMI is working to drive the large-scale adoption of advanced composites in diverse markets.

IACMI showcased Indiana member innovations at the 2018 International Manufacturing Technology Show (IMTS) through the collaborative “Die in a Day” project. “Die in a Day” allowed show visitors the opportunity to follow the journey of an additively manufactured metal die as it is 3D printed, machined, and used to mold advanced composite parts – all in only a few hours on the exhibit floor.

The 2018 IMTS was the 32nd edition of the show, and drew a record registration of 129,145 attendees, featuring 1,424,232 square-feet of exhibit space in Chicago’s McCormick Place. IMTS focuses on showcasing significant advancements in materials and speeds for additive manufacturing. The collaborative nature of IACMI’s ecosystem presents the advantages of pre-competitive collaboration to drive industry-wide innovations.

“Die in a Day” project partners include:

- Wabash
- Mazak
- Lincoln Electric
- Oak Ridge National Laboratory
- CARVER

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Showcasing technology-driven manufacturing

Building an innovation network in Indiana

> 1 in 5 Hoosiers jobs are supported by manufacturing
> 1/3 of the 8,500 manufacturers in Indiana are advanced manufacturers
> 25% of Indiana economic output is based in manufacturing
> $36.6B in manufactured good exports (2017)
> 108,100 manufacturing jobs since 2009
> #2 in the nation for manufacturing jobs added since 2009

Source: Indiana Economic Development Corporation

About IACMI

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IACMI Members in Indiana
Creating an Innovation Network

8 Current IACMI technical projects with innovations created in Indiana

Support for IACMI in Indiana provided by

In January 2019, IACMI; Purdue University; Jim Schellinger, Indiana Secretary of Commerce; as well as Indiana Economic Development Corporation (IEDC) representatives cut the ribbon on the Manufacturing Design Laboratory at Purdue University’s Indiana Manufacturing Institute (IMI), which is supported by IACMI. The Manufacturing Design Laboratory is a research space dedicated to the technology-driven, digital future of manufacturing.

Establishing an Environment for Innovation

Creating space for industry collaboration in design, modeling, and simulation

The Indiana Manufacturing Institute (IMI), a 62,000-square-foot facility which is part of the Purdue Research Park of West Lafayette, is home to the Center for Composites Manufacturing and Simulation Center (CMSC). The IMI allows industry and academic researchers to collaborate on innovations impacting technology-driven manufacturing. With a concentration on design, modeling, and simulation, insight gained through world-renowned CMSC researchers and software capabilities can provide significant cost-saving advantages for industry partners engaging in the center.

Accelerating market advancements through reduced risk in manufacturing and materials understanding

“With improved composite simulation, engineers can successfully complete more designs with less need for physical model trials. This can accelerate time to market and reduce overall costs to produce a new design or part.” – Digital Engineering Sept. 2018, referring to the importance of Purdue University simulation capabilities as part of IACMI projects

Purdue University hosts American Society for Composites 32nd Technical Conference

This 2017 conference at the IMI welcomed 400+ attendees, with 35% students & 35% non-university attendees. There were 6 plenary sessions including 250 parallel talks.

Serving Workforce Needs

6 Indiana Internship placements

1700+ K – 12 STEM participants in Indiana

120+ Composites workshop participants in Indiana, in partnership with Composites One

Workforce development events in Indiana include:

• Composites technician training workshops, open to the community and free of charge, hosted with Composites One
• Manufacturing Day K – 12 STEM events
• Internship hands-on learning opportunities
• Conference presentations

Annual Dassault Systèmes sponsored internships at Purdue University

IACMI Charter Member, Dassault Systèmes fully funds six long-term interns hosted at the Indiana Manufacturing Institute at Purdue University. The students have the opportunity to work on projects with composites design and simulation experts and industry partners.

“IACMI internship incorporates government, industry, and academia all into one opportunity. Any other internship you apply for, you’re not going to get that.” – Jessica Lavorata, 2017 IACMI Intern, 2018 Purdue Graduate Student

Impacting Economic Development

National composites industry impact:

$400M Investment announced in eight states

3,000 Jobs announced

Members Meetings hosted in Indiana:

IACMI hosted its Summer 2016 and Winter 2019 Members Meetings in Indiana, bringing more than 300 attendees from across the country to Indianapolis for each meeting.