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Fall 2016

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Shop Technician Henry Africano tweaks a digital design before sending it to print on the dual extruder 3D printer, one of many in mHUB's rapid prototyping lab.



by Dan Naumovich

While Silicon Valley is the recognized home of innovation and ingenuity in software and digital technology, when it comes to manufacturing, the best and the brightest are producing the future right here in Illinois. The latest manifestation of this trend towards cutting edge leadership is the recent inception of mHUB, billed as “Chicago’s first innovation center focused on physical product development and manufacturing.” It is slated to open in January of 2017.

“We want IMA member companies to know, especially the small- and medium-sized manufacturers, the great opportunity that mHUB is going to offer them. They’ll have a place they can go to get help in developing new products and processes. It gives them access to knowledge,” said Jim Nelson, IMA Vice President of External Affairs and an mHUB board member.

So what exactly is mHUB?

Physically, mHUB is a 60,000 square foot facility with state-of-the-art equipment, labs and work spaces.

Located at 965 West Chicago Avenue, it’s a former prototyping lab for Motorola Mobility. Philosophically, mHUB is the collaborative brain power of hundreds of engineers, designers, business leaders and entrepreneurs who as a collective provide a formidable and affordable research and development resource for the manufacturing community.

Haven Allen is the Executive Director of mHUB. Allen has many years of experience in economic development and public policy focused on the manufacturing sector - including two-and-a-half years as a strategist at World Business Chicago, where mHUB was conceived — along with a background in technology and entrepreneurship. In describing the role that mHUB will play in the manufacturing community, he breaks it down into the three Ps: people, product and process.

“From a people aspect, we see this as a huge opportunity to attract and cultivate highly-skilled STEM talent in the Chicagoland area,” Allen said. “Our goal is to give them the tools, resources, mentors and educators they need to thrive, and then make them accessible and a valu-

able resource to the manufacturing community.”

This talent will come from a variety of backgrounds. There are engineers who crave the challenge of working on diverse projects. There are designers working at start-ups who will exchange their expertise for a manufacturer’s product development capabilities. There are even grad students, eager to put their education to work on real-world applications while finishing their studies.

“One of things that we are constantly hearing is that small-to-medium-sized manufacturers are having difficulty attracting STEM talent,” Allen said. “At the same time, some of them didn’t necessarily need engineers full time, they just need them for very specific needs. So as this pool of talent is developed, it will become a R&D resource that manufacturers can leverage for design projects or to provide solutions to specific problems.”

The second P in the formula is products. It’s here where the manufacturers are the resource that will be tapped by the mHUB community.

“We have some brilliant engineers and entrepreneurs here, but they’re not manufacturers,” Allen said. “Some of these people are just here to innovate new products and they need assistance from manufacturers to help them think through the manufacturability and how to get their product to market. They may need assistance with how they design things, and they may also need advice on how to develop and maintain supply lines.”

In such instances, a manufacturer may offer to produce a prototype or a small-batch run of a designer’s product at-cost so the designer can evaluate and fine-tune that product before committing to full-scale production. In exchange for their services, the manufacturer can engage the community to help them develop new products or address inefficiencies in their operations.

Which brings us to process. One of the biggest challenges facing manufacturers is the inability to optimize operations due to limited, or non-existent, budgets for research

and development. This is especially true for smaller manufacturers whose owners have to focus on operations, finances and human resources, with little to no time for innovation or optimization.

In the area of process improvements at mHUB, there will be opportunities for educational sessions and mentoring. If a manufacturer wants to benefit from the full brainpower of the innovation community, however, they can initiate a “make-a-thon” with mHUB. Common in app development, this method for problem solving and solution generation is making its way to the production of physical products.

“With the make-a-thons, a manufacturer can define a very specific problem that they have say, with their operations or within their product development. The entire community can then be engaged in a two- to five-day exercise concentrated exclusively on solving that problem,” Allen said.

After the exercise is completed, the best solution will be selected and the winner will be awarded a cash prize that is determined by the manufacturer who initiated the make-a-thon. The intellectual property will be transferred to the manufacturer.

Allen said that initial expectations are to do around six-to-eight make-a-thons each year. A company can

engage the entire community in their effort, or select certain people. Through the mHUB website (www.mhubchicago.com), members can search for other members and review their credentials, work experience, product experience, educational background, certifications and other qualifications.

It’s not just the small- and medium-sized manufacturers who stand to benefit from mHUB and some of the major players in the industry

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have already signed up as partners, including GE Ventures, Marmon and UL, to name a few.

“These larger organization also have some challenges in terms of innovation and there are things with which they could really use help from people outside their organization,” said Steve Kase. “They’ve invested sponsorship fees to be able to come onto the campus and inter-

face with the bright young people who are assembled here.”

Kase is the founder of ASK Power, an Aurora-based company that specializes in the production of electrical connectors. ASK is also an mHUB corporate partner.

“I’ve been involved in workforce development activities for around seven years,” Kase said. “I worked with World Business Chicago’s Jobs Committee that was able to help add around 700 advanced manufacturing jobs. A lot of the same people involved in that effort are also involved in mHUB.”

Among the organizations that have already signed on are Argonne National Laboratory, Illinois Institute of Technology, Northwestern University, GE Ventures and Catalyze Chicago, which will now operate under mHUB.

“We have a very robust partnership program, but we’re always looking for more. What we’re building here is a community place where any of these groups can operate from and have access to our extensive resources and equipment. They can also do mentoring, education and business development here,” Allen said.

mHUB is being self-funded through various means including sponsorships and contributions. There are also 15 naming rights opportunities, four of which have been sold and three others with provisional agreements. Membership types range from simple shop access to larger multi-person offices with the goal of being reasonable to product manufacturers, while making the initiative self-sustaining.

“You can basically define your own involvement here,” Allen said. “This is a resource for the entire industry. Our mission is to support, strengthen and connect manufacturers.

Ready to get involved?

If you would like to start leveraging this valuable resource, go to www.mhubchicago.com and click on the “Get Involved” button in the upper right corner. Or you can contact Haven Allen at email Haven@mHUBChicago.com, or telephone 773-580-1485 for more information. ■

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