

NNMI — A Boon For Smaller Manufacturers?

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The [National Network for Manufacturing Innovation](#) [1] (NNMI) is well underway, with multiple innovation hubs either established or announced, and millions invested toward the collaborations promised within. For example, [America Makes](#) [2], the additive manufacturing hub based out of Youngstown, Ohio, already has more than 20 collaborative research projects underway, according to the Advanced Manufacturing National Program Office (AMNPO). And the Lightweight and Modern Metals Manufacturing Innovation Institute, which is based out of Detroit, already has \$70 million in funding from the Department of Defense and more than 60 partners.

Basically, the network is here, and isn't going anywhere any time soon.



Karen Kurek, National Manufacturing Leader, McGladrey LLP Karen Kurek, the national manufacturing leader for [McGladrey LLP](#) [3], says, “[NNMI] is good news for manufacturing in the United States, and it’s good news in particular for small- or medium-sized manufacturers.” In many cases, she says, the small- and medium-sized enterprises (SMEs) don’t have the resources necessary to engage in the kind of research and development (R&D) that’s needed when working with advanced technologies and new materials. Even if they do commit the resources, they sometimes don’t have access to the latest developments emerging from research universities, as a larger firm might. And without that access, many SMEs are threatened with being left behind.

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Kurek, who is also a board member of the National Association of Manufacturers (NAM), argues that internal innovation will be as critical to 21st Century American manufacturing as the wider issues currently happening in the workforce and energy spaces. A successful SME will have balance between all three, but at least the hubs are providing assistance for the first — innovation — as American manufacturing gets increasingly advanced, from machinery to materials.

She adds: “Smaller, lightweight materials are going to continue to work their way into products like cars or planes. As the technology goes into nanotechnology, there needs to be more collaboration on how different materials are going to react in different processes.”

With more micro- and non-manufactured products making their way into big-ticket goods, this type of collaborative R&D could be a major boon for SMEs. Kurek offers an example: If Boeing wants to redesign a piece of an airline that uses four suppliers up the chain, there’s now, via the NNMI hubs, an opportunity for those four smaller companies to collaborate on how Boeing’s proposed changes will affect their own contributions when intermeshed with all the others.

Or, for example, take a company that has been developing a rather small and specific style of screw that has a very small thread size, as required by their customer. This company finds that the coating method they use on normal screws no longer adheres due to the small size. Before, the innovation might have been out of that company’s resource limits, but today, that same company could bring the work into a hub for collaborative research that benefits more than themselves.

Perhaps one of the best testimonials that the NNMI hubs could be widely successful is an endorsement from NAM, which is typically critical, at best, of federal initiatives that aren’t related to reducing tax or regulatory burdens. But because NAM is also focused on encouraging innovation and improving educational resources, the group sees NNMI as a potential partner. Kurek says, “On a broader scale, where we have manufacturers and universities and the government working together — that’s a really positive thing.”

Despite that, NAM isn’t giving up on its core goals. Kurek says, “We’re obviously very devoted to the manufacturing industry, and ways to make manufacturers in the U.S. more competitive. Part of that is through policy, legislation and debates related to things like government regulations, the EPA and OSHA. There are challenges on that side of the discussion, where small- and medium-sized manufacturers have wanted tax reform for many years now.”

She says there has been progress recently in, at the very least, bringing these tax and regulatory issues up in Congress and to President Obama’s administration, but change could still be years away. There are also concerns about how manufacturers will comply and pay for new stipulations under the Affordable Care Act. Even then, she says manufactures are generally looking inward again, trying to make change where they can via more efficient plants and so on.

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Even if a manufacturer isn't near one of the NNMI hubs, it doesn't mean that they can't collaborate or take away some of the innovative spirit. Simply paying attention to what's happening at the hubs is a good start — if a company is interested in new lightweight materials, for example, they should be honed into which companies are working at the Lightweight and Modern Metals Manufacturing Innovation Institute and into what developments are announced out of those collaborations. Kurek also says that local state-wide manufacturers' associations can be a good resource for news and insight.

This effort is important because at the end of the day, R&D will continue to be increasingly important to successful U.S. manufacturing. Kurek says, "Small- and medium-sized companies that invest in research and development tend to be ones that have better financial performance. Even though they might not have as much money as Boeing, these companies are innovative in their own pursuit of research and development."

Mix that R&D benefit in with the fact that more manufacturers are finding it crucial to have operations close to the customer, and engineering close to operations, and there's all the reason to invest in the U.S. to ensure the whole product lifecycle happens here.

Kurek sees that same momentum of U.S. manufacturing returning to its strengths: "I think manufacturing in America is making a comeback. We're seeing it not only in the success of manufacturers, but also seeing companies bring manufacturing back to the United States. And it's not just the large companies like GE or Caterpillar, but also middle-market companies bringing work back to the U.S. These manufacturing technology hubs are good piece in the puzzle that will make American manufacturing stronger."

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[1] <http://manufacturing.gov/nnmi.html>

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