

# MANUFACTURING & TECHNOLOGY NEWS

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## **NIST Takes Up The Mantle Of Restoring U.S. Manufacturing, Proposes Sematech-Like Manufacturing Consortia Program**

Reviving American manufacturing has become a central focus for the National Institute of Standards and Technology. The Obama administration has proposed a significant increase in funding for manufacturing programs at the Gaithersburg, Md.-based agency, an additional \$120.5 million for 2012. It has also proposed the creation of new manufacturing initiatives spread throughout its portfolio, with the aim of helping foster the development of emerging industries that can put millions of people back to work.

"We're excited about the request," says NIST Director Patrick Gallagher. "A budget like this was developed under tight constraints. The overall budget situation is an austere one and to see an agency budget request like this one is striking." The budget reflects an alignment of the NIST mission "with one of the President's top goals, which is to drive long-term economic growth through the ability to innovate," Gallagher adds. "The realization here is that manufacturing is the key part of innovation."

If Congress concurs, manufacturing will become one of NIST's core pursuits. It has requested increases in funding for advanced materials for industry (+\$14.3 million); measurement systems and standards for additive manufacturing, robotics, IT, and sustainable manufacturing (+\$13.3 million); high-tech measurement systems to support the production of nanomaterial- and nanotechnology-based products (+28.3 million); measurement science and standards to support the growing field of biomanufacturing (+\$9.5 million); the creation of an "Advanced Manufacturing (AMTech) Consortia Program that would fund cost-sharing programs with emerging industries aimed at developing technologies that

will lead to the creation of high-wage jobs and economic growth (+\$12.3 million); and strengthening measurement services to meet growing demand for precision time and synchronization services that are essential to the development of advanced technologies associated with telecommunications, information networks, electric power distribution, broadcasting and navigation systems as well as supporting quantum-based standards and measurement tools that will be "required to sustain a productive innovation ecosystem" (+\$20 million). The agency is also proposing a \$13 million increase in the budget (over the 2011 request) for the Manufacturing Extension Partnership (to \$142.6 million).

The NIST budget focus on manufacturing reflects a "very strong resurgence of interesting in manufacturing and a real maturing in the thought process about how to think about manufacturing," Gallagher told Manufacturing & Technology News. "When I'm on the Hill talking to members of Congress and key folks in the administration, there are very serious discussions about these inner-plays between innovation and manufacturing and manufacturing's key role. This bodes well because as Americans we have always been pretty good at reacting when we think things are not on the right track. This has the feel of one of those moments where we are rolling up our sleeves and tackling this."

Gallagher says there is a growing understanding that manufacturing supports the bulk of the country's spending on research and development and employs most of the nation's scientific and engineering talent. The only way to gain full economic benefit from research is through commercialization and production of new products, "and that you will lose your capacity to innovate if you don't produce," says Gallagher.

"This was a prioritization budget," he says. "This was about making sure that even though times are hard and you're looking at financial responsibility and living within your means, you don't start failing to make the key investments that are essential to long-term prosperity. Your ability to innovate new products and services is the heartbeat of your economic engine. If you want to reap the full economic benefit, you have to take this all the way to making products and services. So manufacturing is a key part of the innovation process and it is particularly important because it broadens the participation in an innovation-based economy and it is where you reap such a large part of the full economic benefit."

For all of its activities, NIST's 2012 budget request topped \$1 billion, which pales in comparison to DOD's request (\$681 billion) or the amount American taxpayers will spend in 2012 paying interest on the debt (\$240 billion).