



## Obama administration launches competition for three new manufacturing innovation institutes

<http://manufacturing.gov>

The Obama administration announced in May that it is launching competitions to create three new manufacturing innovation institutes with a Federal commitment of \$200 million across five federal agencies—Defense, Energy, Commerce, NASA, and the National Science Foundation. To build off the initial success of a pilot institute headquartered in Youngstown, Ohio, the President announced in the State of the Union address in February that his administration would move forward and launch three new manufacturing innovation institutes this year. The President will continue to call on Congress to act

on his proposal to create a network of manufacturing innovation institutes across the country.

The President's manufacturing agenda starts with his vision for a National Network for Manufacturing Innovation (NNMI). The President's FY14 Budget includes a \$1 billion investment at the Department of Commerce to create the NNMI, a model based on approaches that other countries have successfully deployed. Each institute would serve as a regional hub designed to bridge the gap between basic research and product development, bringing together companies, universities and community colleges, and federal agencies to co-invest in technology areas that encourage investment and production in the United States. This type of innovation infrastructure provides a "teaching factory" that allows for education and training of students and workers at all levels, while providing the shared assets to help companies, most importantly small manufacturers, access the cutting-edge capabilities and equipment to design, test, and pilot new products and manufacturing processes.

The technology areas for the new institutes were selected based on their broad commercial applications while meeting critical mission needs determined by the administration. The selected technology areas also build off existing multi-agency priority initiatives like the Materials Genome Initiative.

The Department of Defense will lead two of the new institutes, focused on "Digital Manufacturing and Design Innovation" and "Lightweight and Modern Metals Manufacturing," and the Department of Energy will be leading one new institute on "Clean Energy Manufacturing Innovation."

All three institutes will be selected through an open, competitive process, led by the Departments of Energy and Defense, with review from a multi-agency team of technical experts.

The pilot institute established in Ohio, and which remains in operation, focuses on three-dimensional printing—referred to as additive manufacturing—that will have implications in a wide range of industries including defense, aerospace, automotive, and metals manufacturing. The Department of Defense envisions customizing parts on site for operational systems that would otherwise be expensive to make or ship. The Department of Energy anticipates that additive processes would be able to save more than 50% energy use compared to current manufacturing processes.



Credit: Pete Souza

### Open access to research publications reaching "tipping point"

[www.science-metrix.com/pdf/SM\\_EC\\_OA\\_Availability\\_2004-2011.pdf](http://www.science-metrix.com/pdf/SM_EC_OA_Availability_2004-2011.pdf)

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The global shift toward making research findings available free of charge for readers—so-called "open access"—was confirmed today in a study funded by the European Commission (EC). This new research suggests that open access is reaching the tipping point, with around 50% of scientific papers published in 2011 now

available for free. This is about twice the level estimated in previous studies, explained by a refined methodology and a wider definition of open access. The study also estimates that more than 40% of scientific peer-reviewed articles published worldwide between 2004 and 2011 are now available online in open access form. The study looks at the Eu-

ropean Union (EU) and some neighboring countries, as well as Brazil, Canada, Japan, and the United States.

Máire Geoghegan-Quinn, European Commissioner for Research, Innovation and Science, said, "These findings underline that open access is here to stay. Putting research results in the public sphere makes science better and strengthens our knowledge-based economy."

The study looked at the availability of scholarly publications in 22 fields. Free availability of the majority of ar-