

[BRIEFING ROOM](#)[ISSUES](#)[THE ADMINISTRATION](#)[PARTICIPATE](#)[1600 PENN](#)

## Briefing Room

[Your Weekly Address](#)[Speeches & Remarks](#)[Press Briefings](#)[Statements & Releases](#)[White House Schedule](#)[Presidential Actions](#)[Executive Orders](#)[Presidential Memoranda](#)[Proclamations](#)[Legislation](#)[Pending Legislation](#)[Signed Legislation](#)[Vetoed Legislation](#)[Nominations & Appointments](#)

### The White House

Office of the Press Secretary

For Immediate Release

June 20, 2016

SHARE THIS:



TWITTE



FACEB



EMAIL

# FACT SHEET: President Obama Announces Winner of New Smart Manufacturing Innovation Institute and New Manufacturing Hub Competitions

*The Smart Manufacturing Innovation Institute, headquartered in Los Angeles, CA, brings over \$140 million in public-private investment from leading universities and manufacturers to develop smart sensors for use in advanced manufacturing.*

Throughout this week, the Obama Administration will

## Disclosures

be highlighting America's capacity for creativity and invention and how our innovative progress over the last seven and a half years has helped continue to make our economy the strongest and most durable in the world. As part of this effort, today, at the third-annual SelectUSA Summit in Washington, DC, before an audience of business leaders, economic development officials, and investors from around the world, President Obama will announce that the Smart Manufacturing Leadership Coalition (SMLC) will lead the new Smart Manufacturing Innovation Institute, in partnership with the Department of Energy. The winning coalition, headquartered in Los Angeles, California brings together a consortium of nearly 200 partners from across academia, industry, and non-profits—hailing from more than thirty states—to spur advances in smart sensors and digital process controls that can radically improve the efficiency of U.S. advanced manufacturing.

The Smart Manufacturing Innovation Institute is the ninth manufacturing hub awarded by the Obama Administration. Today, the President also announced the launch of five new manufacturing hub competitions, which will invest nearly \$800 million in combined federal and non-federal resources to support transformative manufacturing technologies from collaborative robotics to biofabrication of cells and tissues, to revolutionizing the ways materials can be reused and recycled. With the new competitions underway, the Administration is on track to meet the President's goal of a National Network for Manufacturing Innovation (NNMI) of 15 institutes underway across the country before the end of his Administration.

After a decade of decline from 2000 to 2010, the U.S. manufacturing sector has added over 800,000 jobs

since February 2010 and remains more competitive for jobs and investment today compared to recent decades. And just last month, a new survey of CEOs from around the world declared the United States the most attractive country for investment for the fourth year in a row.

### **Announcing New Manufacturing Innovation Institute Award and Competitions**

The Smart Manufacturing Innovation Institute being announced today, the ninth institute government-wide awarded to-date, will focus on innovations like smart sensors that can dramatically reduce energy expenses in advanced manufacturing, making our manufacturing sector strong today and positioning the United States to lead the manufacturing of tomorrow, helping sustain the resurgence of U.S. manufacturing currently underway. The Smart Manufacturing Leadership Coalition will bring together nearly 200 partners to launch the Smart Manufacturing Innovation Institute, focused on accelerating the development and adoption of advanced sensors, data analytics, and controls in manufacturing, while reducing the cost of these technologies by half and radically improving the efficiency of U.S. advanced manufacturing.

In addition, the newly announced manufacturing innovation institute topics now under competition include:

- *Robotics in Manufacturing Environments Manufacturing Innovation Institute.* In collaboration with the Department of Defense, the newest manufacturing institute will focus on building U.S. leadership in smart collaborative robotics, where advanced robots work alongside humans

seamlessly, safely, and intuitively to do the heavy lifting on an assembly line or handle with precision, intricate or dangerous tasks. People collaborating with robots has the potential to change a broad swath of manufacturing sectors, from defense and space to automotive and health, enabling the reliable and efficient production of high-quality, customized products.

- *Advanced Tissue Biofabrication Manufacturing Innovation Institute*. In collaboration with the Department of Defense, the Institute will pioneer next-generation manufacturing techniques for repairing and replacing cells and tissues, which may one day lead to the ability to manufacture new skin for soldiers scarred from combat or to produce life-saving organs for the too many Americans stuck on transplant waiting lists today. The Institute will focus on solving the cross-cutting manufacturing challenges that stand in the way of producing new synthetic tissues and organs – such as improving the availability, reproducibility, accessibility, and standardization of manufacturing materials, technologies, and processes to create tissue and organ products. We expect collaborations across multiple disciplines; from 3D bio-printing, cell science, and process design, automated pharmaceutical screening methods to the supply chain expertise needed to rapidly produce and transport these live-saving materials.
- *Modular Chemical Process Intensification (MCPI) Institute*. In collaboration with the Department of Energy, the Institute will fundamentally redesign the process used for manufacturing chemicals, refining fuels, and producing other high-value products by combining many complex processing stages into one simple and streamlined step.

Process intensification breakthroughs can dramatically shrink the footprint of equipment needed on a crowded factory floor or eliminate waste by using the raw input materials more efficiently. For example, by simplifying and shrinking the process, this approach could enable natural gas refining directly at the wellhead, saving up to half of the energy lost in the ethanol cracking process today. In the chemical industry alone, these technologies could save more than \$9 billion annually in process costs.

- *Reducing Embodied Energy and Decreasing Emissions (REMADE) in Materials Manufacturing Institute.* In collaboration with the Department of Energy, the Institute will focus on reducing the total lifetime use of energy in manufactured materials by developing new cradle-to-cradle technologies for the reuse, recycling, and remanufacturing of manmade materials. U.S. manufacturing consumes nearly a third of the nation's total energy use annually, with much of that energy embodied in the physical products made in manufacturing. New technologies to better repurpose these materials could save U.S. manufacturers and the nation up to 1.6 quadrillion BTU of energy annually, equivalent to 280 million barrels of oil, or a month's worth of that nation's oil imports.
- *Industry-proposed Institutes Competition.* Leveraging authorities from legislation passed with broad bipartisan support in Congress, the Department of Commerce has launched the first "open topic" institute competition. This competition is open to any topic proposed by industry not already addressed by a manufacturing innovation institute. At least one institute will be awarded using FY2016 funds, and

one or more will be awarded subject to the availability of additional funds. The open topic competition design allows industry to propose technology areas seen as critical by leading manufacturers to the competitiveness of U.S. manufacturing.

Headquartered in Los Angeles, CA, the Smart Manufacturing Innovation Institute will also launch five regional manufacturing centers across the United States each focused on local technology transfer and workforce development. UCLA will lead the California regional center, in partnership with the city of Los Angeles harnessing the ability to tap the largest manufacturing base in the United States. Texas A&M University will lead the Gulf Coast center—a region anchored in the chemical, oil and gas sectors—and Rensselaer Polytechnic Institute (RPI) will lead the Northeast center, where glass, ceramic and microelectronic manufacturing has a strong presence. Pacific Northwest National Laboratory will lead a hub in the Northwest and NC State will spearhead a regional hub for the Southeast.

To ensure that all American businesses, regardless of their size or potential resource limitations, have the opportunity to benefit from the institute's progress, the Smart Manufacturing Innovation Institute will use an open-source digital platform and technology marketplace to integrate advanced sensors, controls, platforms, and modeling technologies into commercial smart manufacturing systems. The institute will also provide the manufacturing communities with easy and affordable access to real-time analytic tools, infrastructure, and industrial applications.

Through the National Network for Manufacturing Innovation, the new Smart Manufacturing Innovation Institute will partner with three existing manufacturing innovation institutes to pioneer technologies at the intersection of their unique capabilities. For example, the Smart Manufacturing Innovation Institute will partner with IACMI to demonstrate the value of using advanced sensors in the production of carbon fiber and with PowerAmerica to showcase the energy savings of using advanced sensors in the production of new wide bandgap semiconductor circuit boards.

*Industry Partners:* Aerospace Corporation; Alcoa; Analog Devices; ANSYS; ArcelorMittal; Autodesk; BASF Corporation; Bonneville Power Administration; Corning; Emerson Process Management; ExxonMobil; General Mills; Global Foundries; Google; KUKA Systems North America; Microsoft; Northrop Grumman; OSIsoft; Pfizer; Praxair; Rockwell Automation; Saint-Gobain; Southern California Edison; United States Steel Corporation; United Technologies Research Center; Medium: A&E Engineering Inc.; LanzaTech; Materia; SEVA; TowerJazz; Small: Able Industrial Products Inc.; Accurate Dial & Nameplate; Advanced Polymer Monitoring Technologies; Apex; APS Technology; Baja Designs; Banks Integration; Bonanza Associates; Citrine Informatics; EnerG2; Eon Reality; GMS Industrial Supply; Goodyear Rubber; Greenway Energy; HannahMax Baking; Industrial Automation Consulting; Infologic, Inc.; Information Systems Associates; Loman CSI-Consortium/Resource; Makai Ocean engineering; Martin Control Systems; Nila; Nimbis Services; One Cycle Control; Process Systems Enterprise Inc.; RES Group; Satelles: Savigent Software; Space Micro; Summertree Interiors

Newport Cottages; SyncFab; ThinkIQ; Viewpoint Systems; VIMANA System Insights; Vinatech Engineering Inc.; VRCO; and many more small and medium-sized manufacturers.

*Local and State Organizations:* California Chamber of Commerce; City of Los Angeles; Energy Trust of Oregon ; Los Angeles Area Chamber of Commerce; LAnSync, National Association of State Energy Officials; Oregon Department of Energy; PortTech LA; State Energy Conservation Office; State of California; State of Connecticut; State of Louisiana Board of Regents; State of Washington; Texas Workforce Commission Manufacturing Enterprise Program (MEP); California Manufacturing Technology Consulting (CMTC), North Carolina MEP , Texas A&M Engineering Experiment Station; Investing in Manufacturing Community Partnerships (IMCP): Advanced Manufacturing Partnership for Southern California (AMP SoCal); Pacific Northwest Manufacturing Partnership ; Puget Sound Regional Council.

*Academic Partners and Research Institutes:* Community Colleges: (Brazosport, California Community Colleges (113), Chaffey; Irvine Valley; Lee, Long Beach City) California Institute for Telecommunications; Cal State U (Long Beach; Poly Pomona, Northridge); California Community Colleges Centers for Applied Competitive Technologies; Clemson U.; Georgia Institute of Technology; Idaho National Laboratory; Jet Propulsion National Laboratory; Lamar U.; Lawrence Livermore National Laboratory; Louisiana State U.; Massachusetts Institute of Technology; Michigan Tech Rail Transportation Program; Michigan Technological U.; Missouri U. of Science & Technology; Montana Gallatin College; Montana State U.; MontanaTech; National Energy Technology



National Laboratory; National Renewable Energy Laboratory; North Carolina State U.; Oak Ridge National Laboratory; Oregon State U.; Pacific Northwest National Laboratory; Pennsylvania State U.; Purdue U.; Purdue U. Calumet; Rensselaer Polytechnic Institute; Rochester Institute of Technology; Rutgers School of Engineering; San Diego Supercomputing Center; Savannah River National Laboratory; Texas A&M University; Tulane U; SUNY Buffalo; U. of California (Berkeley, Irvine, Los Angeles); U. of Connecticut; Louisville; Massachusetts; Southern California; Tennessee Knoxville ; University of Texas (Austin; Rio Grande Valley); U. of Virginia; Virginia Tech; U. of Washington Clean Energy Institute; Washington State U.; West Virginia U.

*Independent Associations and Scientific Societies:*

American Foundry Society; Alliance to Save Energy; American Council for An Energy Efficient Economy; American Iron & Steel Institute; American Society of Quality; Connecticut Center for Advanced Technology; Council on Competitiveness; EWI; Gas Tech Institute; Manufacturing Enterprise Solutions Associations; North American Die Casting Association; North American Process Technology Alliance; National Center for Manufacturing Sciences; Oregon BEST; SME; Southwest Research Institute; Steel Founders Society of America; Northwest Food Processors Association.

**Early Successes from the National Network for Manufacturing Innovation**

From the very first manufacturing institute pioneering novel 3D printing technologies in Youngstown, OH, to the most recently awarded institute pushing the boundaries of advanced fiber and textile technologies

in Cambridge, MA, each of the now nine institutes is part of a growing innovation network dedicated to securing the U.S. technological leadership required to win the next generation of advanced manufacturing.

The institutes, each led by manufacturing experts renowned in their field, have attracted nearly 1,000 companies, universities, and non-profits as members of the National Network for Manufacturing Innovation. The Federal government's commitment of over \$600 million to the nine awarded institutes has been matched by over \$1.2 billion in non-Federal resources from across industry, academia, and state governments. Already these institutes are having an impact - from helping Rochester, NY attract over \$1.4 billion and 800 manufacturing jobs through new photonics companies to pioneering the first FDA approved 3D-printed medical device.

Already, these investments are generating wins for U.S. manufacturing:

- To help anchor production of new semiconductor technologies in the United States and accelerate the commercialization of advanced power electronics, in March, the Power America Manufacturing Innovation Institute successfully partnered with X-FAB in Lubbock, TX, to upgrade a \$100 million dollar foundry to produce cost-competitive, next-generation semiconductors, enabling new business opportunities to sustain hundreds of jobs.
- Using next-generation metals manufacturing techniques, Lightweight Innovations for Tomorrow (LIFT), the Detroit institute focused on lightweight metals, has successfully reduced the weight of core metal parts found in cars and trucks by 40

percent, improving fuel efficiency and saving consumers dollars at the pump. In addition, LIFT has introduced curriculum in 22 states to train workers on the use of lightweight metals. This summer, 38 companies will host students in paid manufacturing internship in partnership with LIFT.

- America Makes has attracted hundreds of millions of dollars in new manufacturing investment to its region, including helping to attract GE's new \$32 million global 3D printing hub and spurring Alcoa to invest \$60 million in its New Kensington, PA facilities, both of which will benefit from proximity to America Makes and its expertise in 3D printing with metal powders.
- In addition, America Makes, with Deloitte and other partners, has created a free online course on the fundamentals of 3D printing for businesses. Over the last year, over 14,000 business leaders have taken this course to learn what 3D printing can do for their businesses.

To learn more about the open competitions for these next manufacturing innovation institutes, please visit [Manufacturing.gov](http://Manufacturing.gov). The established manufacturing innovation institutes are:

- America Makes, the National Additive Manufacturing Innovation Institute (Youngstown, OH)
- Digital Manufacturing and Design Innovation Institute (Chicago, IL)
- Lightweight Innovations for Tomorrow (Detroit, MI)
- Power America (Raleigh, NC)
- Institute for Advanced Composites Manufacturing Innovation (Knoxville, TN)

- American Institute for Manufacturing Integrated Photonics (Rochester, NY)
- Next Flex, the Flexible Hybrid Electronics Manufacturing Innovation Institute (San Jose, CA)
- Advanced Functional Fabrics of America (Cambridge, MA)

**HOME****BRIEFING ROOM**

**From the News Room**

[Latest News](#)

[Share-Worthy Photos](#)

[Video Gallery](#)

[Live Events](#)

[Music & Arts](#)

[Performances](#)

**From the Press Office**

[Your Weekly Address](#)

[Speeches & Remarks](#)

[Press Briefings](#)

[Statements & Releases](#)

[White House Schedule](#)

[Presidential Actions](#)

[Legislation](#)

[Nominations & Appointments](#)

[Disclosures](#)

**ISSUES**

**Popular Topics**

[Supreme Court](#)

[Nomination](#)

[Criminal Justice](#)

[Reform](#)

[The Record](#)

[Cuba](#)

[21st Century](#)

[Policing](#)

[See All](#)

**Top Issues**

[Civil Rights](#)

[Climate Change](#)

[Economy](#)

[Education](#)

[Foreign Policy](#)

[Health Care](#)

[Iran Deal](#)

[Immigration Action](#)

**More**

[Defense](#)

[Disabilities](#)

[Ethics](#)

[Equal Pay](#)

[Homeland Security](#)

[Reducing Gun](#)

[Violence](#)

[Rural](#)

[Service](#)

**More**

[Seniors & Social](#)

[Security](#)

**THE****ADMINISTRATION**

**People**

[President Barack](#)

[Obama](#)

[Vice President Joe](#)

[Biden](#)

[First Lady Michelle](#)

[Obama](#)

[Dr. Jill Biden](#)

[The Cabinet](#)

[Executive Office of the President](#)

[Senior White House](#)

[Leadership](#)

[Other Advisory](#)

[Boards](#)

**Executive Offices**

[Office of](#)

[Management and](#)

[Budget](#)

[Office of Science](#)

[and Technology](#)

[Policy](#)

[Council of](#)

[Economic Advisers](#)

[Council on](#)

[Environmental](#)

[Quality](#)

[National Security](#)

[Council](#)

[See All](#)

**Initiatives**

**PARTICIPATE**

**Digital**

[Follow Us on Social](#)

[Media](#)

[We the Geeks](#)

[Hangouts](#)

[Mobile Apps](#)

[Developer Tools](#)

[Tools You Can Use](#)

**Join Us**

[Tours & Events](#)

[Jobs with the](#)

[Administration](#)

[Internships](#)

[White House](#)

[Fellows](#)

[Presidential](#)

[Innovation Fellows](#)

[United States Digital](#)

[Service](#)

[Leadership](#)

[Development](#)

[Program](#)

**Speak Out**

[We the People](#)

[Petitions](#)

[Contact the White](#)

[House](#)

[Citizens Medal](#)

[Champions of](#)

[Change](#)

**1600 PENN**

**Inside the White House**

[Interactive Tour](#)

[West Wing Tour](#)

[Video Series](#)

[Décor and Art](#)

[Holidays](#)

[See All](#)

**History & Grounds**

[Presidents](#)

[First Ladies](#)

[The Vice](#)

[President's](#)

[Residence & Office](#)

[Eisenhower](#)

[Executive Office](#)

[Building](#)

[Camp David](#)

[Air Force One](#)

**Our Government**

[The Executive](#)

[Branch](#)

[The Legislative](#)

[Branch](#)

[The Judicial Branch](#)

[The Constitution](#)

[Federal Agencies &](#)

[Commissions](#)

[Elections & Voting](#)

[State & Local](#)

[Government](#)

[Resources](#)

[Taxes](#)

[Technology](#)

[Trade](#)

[Urban and](#)

[Economic Mobility](#)

[Veterans](#)

[Women](#)

[Lets Move](#)

[Joining Forces](#)

[Reach Higher](#)

[My Brother's Keeper](#)

[Precision Medicine](#)

**Special Events**

[State of the Union](#)

[Inauguration](#)

[Medal of Freedom](#)

[En Español](#)

[Accessibility](#)

[Copyright Information](#)

[Privacy Policy](#)

[USA.gov](#)