

EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF SCIENCE AND TECHNOLOGY POLICY  
WASHINGTON, D.C. 20502

May 8, 2012

MEMORANDUM FOR SBIR PROGRAM MANAGERS

FROM: THOMAS KALIL, DEPUTY DIRECTOR  
WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY

RE: COORDINATED SBIR SOLICITATION

“I want us all to think about new and creative ways to engage young people in science and engineering, whether it's science festivals, robotics competitions, fairs that encourage young people to create and build and invent -- to be makers of things, not just consumers of things.”

-- President Obama

**Summary:** OSTP is interested in working with SBIR program managers to ensure that the President's interest in hands-on STEM education is reflected in future SBIR solicitations as a topic. The specific opportunity that OSTP is interested in is the development of a set of affordable tools, equipment and kits that will allow students to (1) engage in citizen science; and (2) design and build manufactured products. These tools also have the ability to create opportunities for entrepreneurship in manufacturing, in the same way that the Web and cloud computing have made it less expensive for software entrepreneurs to launch a new business.

This initiative could be implemented as a series of agency topics as opposed to a joint solicitation. Please e-mail me at [tkalil@ostp.eop.gov](mailto:tkalil@ostp.eop.gov) and let me know whether you are interested in participating in this effort.

## Background

In the last several years, we have seen:

- Hundreds of thousands of families participate in “[Maker Faires](#)” – which celebrate arts, crafts, science projects, engineering, and the “Do It Yourself” mindset;
- An increasing number of MakerSpaces and [FabLabs](#) opening up in communities around the country
- Museums creating hands-on activities focused on Making;
- The development of software that is allowing citizens to make meaningful scientific contributions to hard scientific problems such as [protein folding](#) and [RNA engineering](#);

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- Start-ups that are commercializing low-cost equipment and kits such as open source hardware, 3-D printers, open source equipment for [polymerase chain reaction](#);
- Entrepreneurs that are using the equipment in [TechShops](#) (including 3-D scanners, CNC machine tools, laser and water cutters, lathes, injection molding machines, vacuum forming systems, etc.) to launch their own businesses;
- Online communities that are building increasingly sophisticated projects such as [“DIY Drones.”](#)

These trends have the potential to promote a number of Administration priorities, including (1) encouraging more students to excel in STEM subjects; (2) encouraging citizen science; and (3) fostering entrepreneurship in the manufacturing sector by democratizing access to the tools needed to design, build and test just about anything.

**For more information**

<http://www.nysci.org/media/file/MakerFaireReportFinal122310.pdf>

NSF workshop on “Innovation, Education and the Maker Movement.”

<http://makezine.com/>

Make Magazine

<http://www.youtube.com/watch?v=45xt-3Z5MI4>

Maker Faire