



**PHILADELPHIA**  
UNIVERSITY

## News

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### **Philadelphia University Is Partner in \$317 Million National Initiative to Develop Innovations in Advanced Fabrics**

**PHILADELPHIA, April 1, 2016**—Philadelphia University is an academic partner in a new \$317 million national research initiative supported by the U.S. Department of Defense to design, develop and engineer a new generation of sophisticated and technologically advanced materials and fabrics.

The Advanced Functional Fabrics of America (AFFOA), a public-private partnership led by the Massachusetts Institute of Technology (MIT), will be a national manufacturing resource center for industry and government to draw on the expertise of academic researchers working with new fibers, fabrics and materials and developing the technology that can integrate them into products ranging from active wear to protective armor.

U.S. Secretary of Defense Ashton Carter formally recognized AFFOA as one of the [White House's National Network for Manufacturing Innovation Institutes](#) in a press conference at MIT on Friday, April 1. The NNMI initiative is a \$350 million public-private effort to boost the value of American-made products on the international market, by using new materials and manufacturing methods.

Philadelphia University, founded as the nation's first textile school, has unique expertise in the development, engineering and testing of innovative fibers and fabrics.

"Philadelphia University brings the best of its history and the best of our current capabilities to this collaborative partnership to develop the future of innovative fibers and textiles," said Philadelphia University President Stephen Spinelli Jr. "This partnership between some of America's top universities and industries, along with government, is poised to unleash manufacturing innovations across a wide range of industries."

The proposal for the institute, led by Professor Yoel Fink, director of MIT's Research Laboratory of Electronics, is designed to accelerate innovation in high-tech, U.S.-based manufacturing involving fibers and textiles. The partnership includes 31 universities, 16 industry members, 72 manufacturing entities, and 26 startup incubators from across the U.S.

This unique partnership, Fink said, has the potential to create a whole new industry based on breakthroughs in fiber materials and manufacturing. These new fibers and the fabrics will have the ability to see, hear, and sense their surroundings; communicate; store and convert energy; monitor health; control temperature; and change color.

The new initiative will receive \$75 million in federal funding out of a total of \$317 million through cost sharing among the Department of Defense, industrial partners, venture capitalists

and the Commonwealth of Massachusetts. The funding will cover a five-year period and will be administered through a new independent nonprofit organization set up for the purpose.

The institute will be headquartered in Cambridge, Mass., in proximity to MIT and the U.S. Army-funded Institute for Soldier Nanotechnology. A wide range of industries are expected to benefit from these revolutionary fibers and textiles, including apparel, consumer products, automotive, medical devices, and consumer electronics.

As part of the consortium, Philadelphia University will provide expertise and support in such areas as conceptual systems design, advanced fibers and yarns including woven, non-woven and knitted fabrics, and integrated system prototyping, said Ronald G. Kander, Ph.D., executive dean of the Kanbar College of Design, Engineering and Commerce.

“Our unique expertise will be especially valuable in conceptual design of integrated fiber/fabric systems and in prototyping and testing systems for industry partners,” he said. “Our industry engagement and transdisciplinary design capabilities will allow us to focus on real-world, industry-facing applied research to complement some of the basic research done by other consortium partners.”

PhilaU is distinctively positioned to contribute to the institute through its Grundy Materials Evaluations Laboratory, which provides a full array of performance measurement tests to evaluate new materials; the new Fashion and Textiles Futures Center, which will serve as a platform for transdisciplinary, collaborative work; and the University’s state-of-the-art surface imaging capabilities that will allow for the printing of functionality directly onto innovative fabrics.

*Philadelphia University, founded in 1884, is a private university with 3,600 students enrolled in more than 70 undergraduate and graduate programs. As the model for professional university education, the University, through its award-winning Nexus Learning approach, prepares students to be leaders in their professions in an active, collaborative and real-world learning environment infused with the liberal arts. Philadelphia University includes the innovative Kanbar College of Design, Engineering and Commerce; the College of Architecture and the Built Environment; and the College of Science, Health and the Liberal Arts. For more information, go to [www.PhilaU.edu](http://www.PhilaU.edu)*