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Pentagon announces new push for 'smart' fabrics

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US Secretary of Defense Ash Carter speaks at Massachusetts Institute of Technology April 1, 2016 in Cambridge, Massachusetts

US Defense Secretary Ash Carter announced an initiative Friday to create smart textiles that one day could see tents made of power-generating fabric, running shoes as light as socks and uniforms that detect chemical and nuclear contamination.

The Department of Defense is investing $75 million to help create "Advanced Functional Fabrics of America"—a consortium of 89 companies, universities, researchers and startups that will innovate new fibers and textiles, Carter said as he unveiled the program at the Massachusetts Institute of Technology (MIT).

"Revolutionary fibers and textiles have enormous potential for our defense mission," the Pentagon chief said.

"For example, lightweight sensors, woven into the nylon of parachutes, will be able to catch small tears that otherwise would expand in midair, risking paratroopers' lives."

Carter, a physicist, frequently stresses the need for the Pentagon to invest in new technologies and likes to cite GPS, jet engines and the Internet as examples of military innovations that have also transformed civilian life.

He said textile manufacturers will soon combine fibers and yarns with flexible integrated circuits, lights and sensors "to create fabrics and cloths that can see, hear, sense, communicate, store energy, regulate temperature, monitor health, change color and more."

"For example, running shoes as lightweight as socks will be able to sense impact load for every step, so athletes can better understand their physiological condition," he said.

The Pentagon's $75-million investment has already been matched by more than $240 million in contributions from public and private-sector partners, Carter said.

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