

US Air Force Academy Spark Cell - the Future of Air Force Innovation

U.S. AIR FORCE ACADEMY, Colo. – A team of cadets in the US Air Force Academy have been finding success as an AFWERX Spark Cell.

AFWERX Spark Cells are an innovation network that encourages members of the Air Force and Space Force to explore new technologies and ideas, and connects them with industry and educational leaders in order to solve real world problems.

The Spark Cell at the US Air Force Academy (USAFA) was created in 2019, and has expanded in the three years since. Currently led by Cadet First Class Manmeet K. Pelia, the director of the 2022-23 team, the USAFA Cell primarily consists of one director, nine executive directors, and twenty four “innovation actualizers.”

In those few short years, the cadets have been a force for real progress.

One of their number, Cadet First Class Grant Schlichting, was a finalist in the Spark Tank competition hosted by AFWERX. His invention received funding and is currently being developed by the Air Force.

In collaboration with STRIKEWERX and CyberWorx during their three-day design sprint, the Cell helped to design a shell to protect the ACES II ejection seat survival kit being modified to fit the B-52. The prototype design is currently receiving further testing and evaluation.

Several members of the Spark Cell have also received scholarships and invitations to receive industry training because of their participation with the program. This sets the cadets on a path to a successful future in the Air Force.

“The USAFA Spark Cadets not only are practicing their academic skills but are taking early leadership roles in a very dynamic environment,” said Michael Offenbacher, Spark outreach representative and advisor to the USAFA Spark Cell. “They are gaining unprecedented exposure to the operating environment and enlisted force very early in their careers that will be vital in developing leadership situational awareness.”

The Spark Cell cadets are looking forward to their own future, and building a path toward an innovation framework in their later career.

“Our cell empowers cadets with a cohesive coalition of diverse innovators to enhance the U.S. military ecosystem and provide tomorrow’s tools to today’s warfighter,” said Kelsey Monaghan-Bergson, Innovation Actualizer at USAFA Spark and semi-finalist at Spark Tank 2023. “The future fight will require efforts from across the chain of command, regardless of rank and age. USAFA Spark supports this narrative by building diverse teams that challenge the status quo to improve our processes and accelerate change.”

With such a promising program, there are many benefits of a Spark Cell at the cadet level, not only to the cadets themselves, but to the Air Force and Space Force as a whole.

“We are establishing a culture of innovation by integrating Airmen with Spark Cells at the very beginning of their career,” said Col. Elliott Leigh, Director of AFWERX. “This enables them to arrive at their first duty station with the right mindset for thinking critically and driving change.”

"The cadet Spark Cell is a fantastic example of how the new generation of Airmen and Guardians at the Academy are embracing their excitement to accelerate science and technology, and bring innovative, meaningful capabilities to our Nation's warfighter," said Major General Pringle, Commander of the Air Force Research Laboratory and alum of the USAFA.

The US Air Force Academy Spark Cell, as well as the future Airmen and Guardians within it, continues to find success. As the program continues to grow, the future of the culture of innovation is in secure hands.

The 2023 Falcon Tank competition on March 23, part of Innovation Week at USAFA and powered by AFWERX, will showcase their latest ideas.



USAFA Spark Cell and Officials at Falcon Tank Competition 2022 in Colorado Springs, Colo., Friday, Apr. 8, 2022. (Air Force Photo / Michael Offenbacher)