

AIRMAN

THE OFFICIAL MAGAZINE OF THE UNITED STATES AIR FORCE

THE FUTURE OF THE AIR FORCE



Tackling a changing
environment through
INNOVATION



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An F-16 fighter jet is shown in flight, viewed from a low angle, flying over a vast, arid desert landscape. The jet is dark grey and has several missiles mounted on its wings. The sky is a clear, pale blue. The terrain below is a mix of brown and tan, with some distant mountains visible on the horizon.

EDITOR'S NOTE

The Air Force excels at identifying adversaries and implementing strategies to successfully operate in any environment, but how do we adapt to the environment itself? More importantly, how is our infrastructure impacting the climate and what is being done to reduce our carbon footprint? The Air Force is the largest consumer of fossil fuels in the Department of Defense, but how can we reduce fuel consumption without compromising lethality and efficacy?

The solution is innovation. Aligning Airmen with new technology and encouraging innovation creates opportunities for them to transport science fiction into reality.

In this issue, we'll take a look at how the Air Force is meeting these challenges around the globe. We'll fly high into an episode of BLUE and get a look at some hi and low tech solutions being implemented across the force. We'll also dig into the historic modernization throughout the Indo-Pacific and the stomping grounds of the United States Air Force Academy, where the leaders of tomorrow are grown. All this and more in this issue of Airman Magazine.

An F-16 assigned to the 416th Flight Test Squadron flies into position over the Precision Impact Range Area on Edwards Air Force Base, California. The successful drop test was in support of the Korea F-16 Update Program. The ROKAF currently operates 133 KF-16C/D Block 50/52 fighter aircraft, all of which will undergo extensive modernization and upgrades as part of the comprehensive improvement program. (U.S. Air Force photo by Ethan Wagner)



A top-down view of a grey USAF aircraft flying over a blue, cloudy ocean. The aircraft is centered vertically, with its wings spread wide. The word "BLUE" is written in large, bold, orange capital letters across the middle of the image, partially obscuring the aircraft's fuselage. Below "BLUE", the words "CLIMATE ACTION PLAN" are written in white, bold, capital letters. At the bottom, there is a small text box with a black border containing the text "CLICK TO PLAY VIDEO" and "OPENS IN BROWSER".

BLUE

CLIMATE ACTION PLAN

CLICK TO PLAY VIDEO
OPENS IN BROWSER

BLUE

CLIMATE ACTION PLAN

Video by James Kever

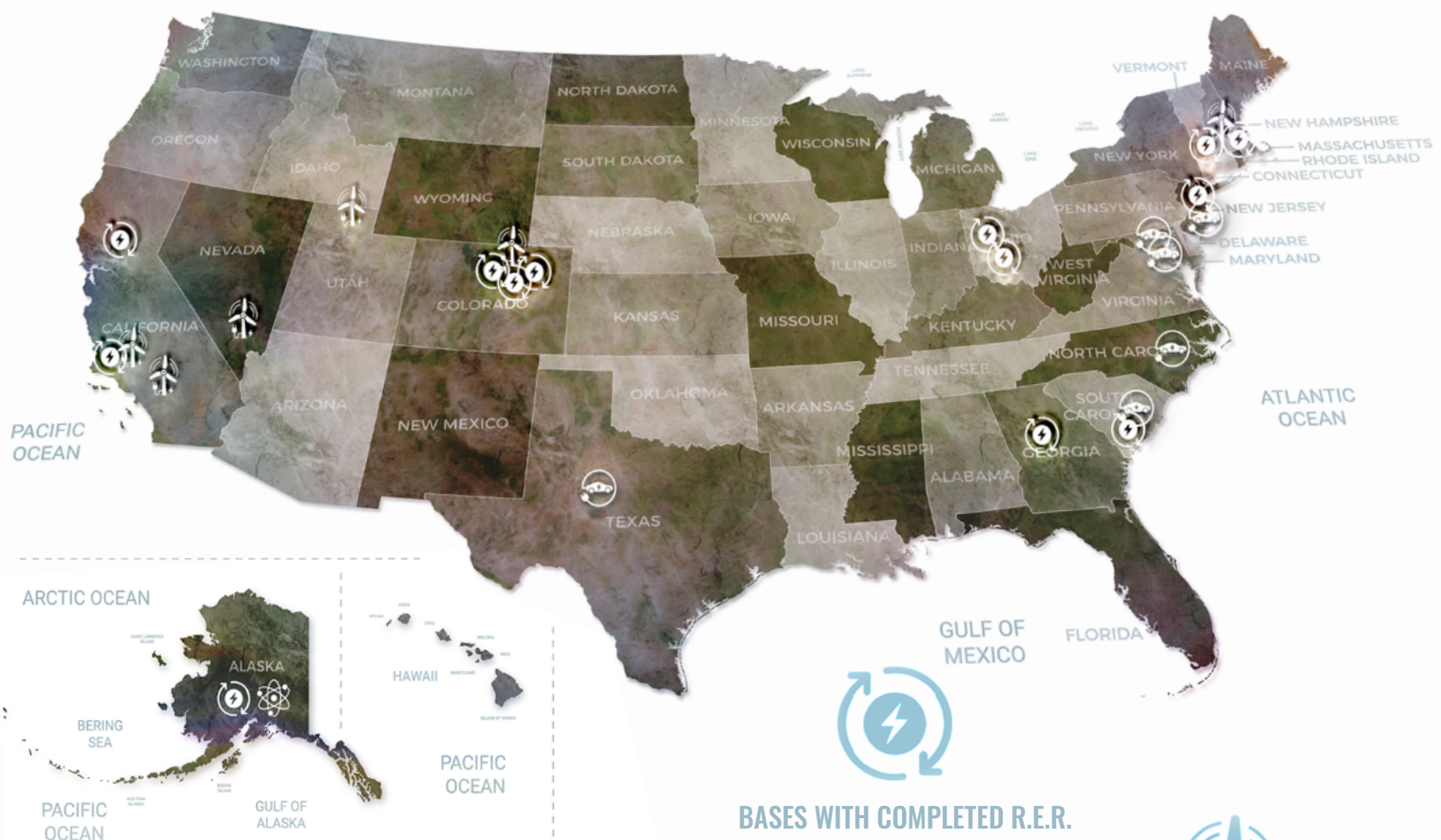
[CLICK TO PLAY VIDEO](#)
OPENS IN BROWSER

The Air Force has a problem, and national security is at risk. Near-peer adversaries and cutting-edge technologies aren't the only issues that have got the attention of the top brass ... so does the climate. Natural disasters are unpredictable and devastating. They take out power grids, leaving military bases vulnerable and unable to support and defend according to mission requirements.

HOW IS THE AIR FORCE ADDRESSING THIS?

The Climate Action Plan – guidance from the **Secretary of the Air Force** that describes a three-pronged approach to addressing climate change: increase capabilities, reduce emissions and reduce reliance on fossil fuels.

The ultimate goal is to get everyone on board, from Airmen to commanders to policymakers, to becoming what's known as a climate-informed workforce – where decisions on how to conduct day-to-day Air Force operations are made from the perspective of the Climate Action Plan.



BASES WITH COMPLETED R.E.R.

- Beale AFB
- Buckley SFB
- Vandenberg SFB
- Eielson AFB
- Hanscom AFB
- Joint Base Charleston
- Joint Base McQuire-Dix-Lakehurst
- Peterson SFB
- Robins AFB
- Schriever SFB
- Springfield-Beckley ANGB
- Vandenberg SFB
- Westover AFB
- Wright-Patterson AFB



RENEWABLE ENERGY RESILIENCE (R.E.R.)

- U.S. Air Force Academy
- Hill AFB
- Vandenberg SFB
- Nellis AFB
- Edwards AFB
- Hanscom AFB



ELECTRIC VEHICLE FLEET

- Joint Base Anacostia-Boiling
- Joint Base Andrews
- Joint Base McQuire-Dix-Lakehurst
- Seymour Johnson AFB
- Shaw AFB
- Dyess AFB



MICRO-REACTOR PROGRAM

- Eielson AFB






INTO THE FUTURE SKIES

Members from the 353rd Special Operations Group worked with the 36th Contingency Response Group from Andersen Air Base, Guam, to open Wake Island air field after Typhoon Halola passed through the island. (U.S. Air Force photo by Tech. Sgt. Kristine Dreyer)

The Modernization of the Pacific

Written by **Master Sgt. Christopher Griffin**

From the strategic airfields of World War II to the Cold War era's nuclear deterrence, and the support bases of the Vietnam War, the Pacific has witnessed the Air Force's enduring commitment to projecting power and safeguarding allies. **Pacific Air Forces'** modernization efforts demonstrates its unwavering dedication to adapting, innovating and maintaining its edge in an ever-evolving world. These endeavors encompass not only the enhancement of physical infrastructure but also the embracement of green technologies and the cultivation of partnerships that ensure continued air space superiority in the Pacific for years to come.



U.S. Air Force, Royal Australian Air Force, Japan Air Self-Defense Force, and regional allies and partners aircraft participate in a close formation taxi, known as an Elephant Walk, during Cope North 2022 at Andersen Air Force Base, Guam. (U.S. Air Force photo by Staff Sgt. Aubree Owens)

The History

Without physical infrastructure, there wouldn't be an Air Force. For many years, the first Air Force bases used grass fields or semi-prepared air strips since the combination of aircraft weight, tire pressure, and soil conditions required nothing more of a runway.

As aircraft became more technologically sophisticated and increased in weight, and military leaders employing them began demanding all-weather operations, the requirements in the development of runways and support facilities increased. The increased provisions evolved into the need for a full-fledged air base, with the standard training airfield design in World War I consisting of 50 buildings to support 100 aircraft, 150 student pilots, and their instructors.

During World War II, infrastructure in the Pacific became an integral part of the Air Force's air superiority. United States Army Air Forces built airfields on islands like Guam and Tinian to launch bombing raids against Japanese targets. These airfields also served as refueling and repair stations for Allied aircraft.



A November 1969 view of Yokota's newly opened MAC (AMC) Terminal. A C-141 and contract airliner sit in the foreground, and the old Yokota West housing area and some off-base American housing can be seen in the background. (U.S. Air Force photo courtesy of the 374 AW History Office)

During the Cold War, the Air Force continued to use infrastructure in the Pacific to project military power and deter potential adversaries. For example, the United States built strategic air bases on Guam and in other parts of the region, which could be used to launch nuclear strikes against the Soviet Union or other adversaries.

During the Vietnam War, the Air Force used infrastructure in the Pacific to support military operations in Southeast Asia. Air bases were built in Thailand to launch bombing raids against North Vietnam.



A B-29 in flight over Northwest Field, Guam. Records indicate this particular bomber was assigned to the 315th Bomb Wing, 501st Bomb Group. (Photo courtesy of the 315th Bombardment Wing circa 1945)

Yokota's Path Forward

Year after year, mission after mission, facilities degrade for a variety of reasons. In 2011, **Yokota Air Base** was deeply affected by a tsunami that wiped out much of the infrastructure throughout Japan. The resulting damage to the nation's electrical grid spurred the expectation of summertime power shortages, spelling bad news for Yokota AB due to its populace's reliance on air conditioning in the warm season. The DoD saw an opportunity to apply newer technologies while rebuilding the base.

Yokota AB has entered a 21-year, \$403 million contract with Schneider Electric to focus on 19 different energy conservation measures. Among those includes a microgrid-enabled 10-megawatt combined heat and power plant to offset the base's demand on the local electrical grid. Though the project won't rid the entire installation of carbon emissions, it will be a large step toward a greener future.

Robert Rose, **374th Civil Engineering Squadron** Chief of Portfolio Optimization, oversaw the implementation of the multi-faceted project.

"A big piece to this is that we have to have a guaranteed performance of energy conservation measures or what we call ECMS," Rose said. "That's what basically pays for this contract. It's projected to save around \$12.3 million per year in energy and water cost savings, resulting in a 29.3% reduction in energy costs across the identified facilities."



Japanese and U.S. servicemembers work together in removing debris from the rail tracks in the Tohoku region in support of Operation Soul Train. (Photo by Sgt. Monique Smith)

Teams conducted walkthroughs of more than 400 buildings on the installation to align the project changes with practical needs and applications for the different missions throughout the installation. Under the contract, other central energy infrastructure is projected to receive a makeover, and building automation will be expanded and consolidated with all facilities also receiving lighting and plumbing upgrades. Even more impressive is the ability to go into what the installation refers to as "island mode".

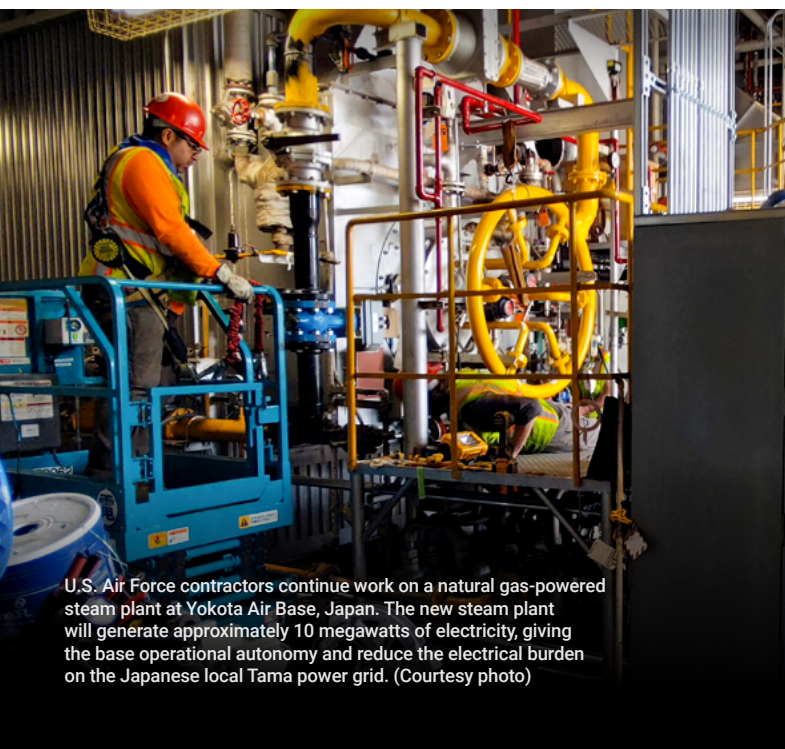
"We can isolate the base from the local power grid, which is provided by the Tokyo Electric Power Company, and the combined heat and power plant will produce its own power," Rose said.

"That's all based on our fuel supply, so that can go for days, weeks or months."

But what does that mean? What kind of impact does that have on operations and adversary deterrence in the Pacific?

"We have a dynamic and flexible infrastructure that can quickly adapt to changing energy needs and potential threats to the power supply," Rose said. "This is particularly important in the event of a natural disaster or other world events which can disrupt the local power supply. You have a switch, and then we can still continue our mission even if things outside the fence line aren't so good."

The ability to sustain an operational tempo without compromise or disruptions to energy needs outside any perimeter is an incredible deterrent for any adversary. This not only ensures operational success for the Air Force and its allies, but also provides a layer of reliable security in the region.



U.S. Air Force contractors continue work on a natural gas-powered steam plant at Yokota Air Base, Japan. The new steam plant will generate approximately 10 megawatts of electricity, giving the base operational autonomy and reduce the electrical burden on the Japanese local Tama power grid. (Courtesy photo)

Each new Hayman style igloo at Andersen Air Force Base, Guam, includes state of the art design characteristics for seismic and typhoon protection. Each igloo will have a concrete apron to ensure safe entry, as well as reinforced walls, floors and roof slabs. The base has received 12 Hayman style igloos in the last 10 years. (U.S. Air Force photo)



The Spearhead: Andersen Air Force Base

Situated on the picturesque island of Guam, the spearhead of the Pacific, you'll find **Andersen Air Base**. As technology has advanced, the island's global reach has expanded in tandem. Notably, Andersen Air Base has undergone a significant infrastructure modernization, primarily seen in its investment in the airfield.

Part of the project consists of the upgrading of the Air Force's largest munitions storage area with the construction of new reinforced munitions storage magazines, also known as "igloos." The \$28.9 million upgrade allows for the ability to increase munitions storage capabilities necessary to maintain a high level of airpower, lethality and readiness in the Indo-Pacific theater.

Also getting a facelift is the runway. Starting with its humble beginnings in 1945 and supporting airframes like the **B-36**, **B-47**, and **B-52** during the Cold War, the base has grown

to support today's sophisticated bombers and fighters. The recent expansion aimed to accommodate larger aircraft and bolster its capacity for various military operations. The previous runway, composed of asphalt with crushed coral, was sturdy but slippery in wet conditions. The new runway enhances weight-bearing capability and length, facilitating takeoffs and landings for strategic bombers, cargo planes, and more, thereby strengthening the base's regional power projection and security.

In a move to enhance command and control capabilities, Andersen Air Base has heavily invested in its communication and command centers. These upgrades involve integrating secure networks and infrastructure for efficient data sharing, real-time communication, and seamless coordination of military operations. These enhanced command centers significantly bolster the base's agility in monitoring and responding to regional developments promptly and precisely.

U.S. Air Force, Royal Australian Air Force, Japan Air Self-Defense Force, and regional allies and partners aircraft participate in a close formation taxi, known as an Elephant Walk, during Cope North 2022 at Andersen Air Force Base, Guam. (U.S. Air Force photo by Staff Sgt. Aubree Owens)





An F-16 Fighting Falcon assigned to the 8th Fighter Wing, Kunsan Air Base, Republic of Korea, flies over the Korean Peninsula. The F-16 entered the U.S. Air Force inventory in 1979 and since has undergone a number of modernization efforts; most recently the Air Force Life Cycle Management Center began providing F-16s Post Block Integration Team (PoBIT) upgrades. (U.S. Air Force photo by Capt. Kaylin P. Hankerson)

Guardians of the East: Air Bases in Korea

In the heart of the Korean Peninsula lies a vital stronghold for the U.S. Air Force, **Osan** and **Kunsan** Air Bases. Standing as sentinels of strategic airpower in the region, their importance goes well beyond asphalt runways and towering hangars; they symbolize the unwavering commitment to maintain stability, defend allies, and project strength.

The significance of these air bases extends well beyond their immediate defense capabilities. They serve as physical manifestations of the partnership and interoperability between the U.S. and South Korean armed forces, fostering cooperation and enhancing joint capabilities.

One of the largest modernizations in F-16 history is currently taking place at Osan Air Base. The aircraft is implementing its first wave of 22 modifications designed to improve the F-16's lethality to meet the needs of current and future operations.

"Avionics upgrades allow pilots to take full advantage of the jet's advanced weapons and sensors, said Capt. Michael C. Durham, **8th Operations Support Squadron**, Weapons Tactics Officer. "It [The sensor array] is capable of providing high speed data and high-resolution video and ultimately aids the pilot in tactical decision making."

"The upgraded radar, specifically, allows us to track a greater number of targets at longer ranges in both cooperative and non-permissive environments while also improving the F-16's all-weather capabilities," he added. "The improvements will give F-16 pilots extra data that will help them identify, locate and engage targets, expanding leaders' options in contingency planning to support national security objectives."

Aligning with the unit's mission of "Take the Fight North," the upgrades play a big part in deterrence for the region alongside keeping pace with near-peer threats. Becoming more lethal and survivable can deter any aggression, encouraging a "pick up the phone and talk" approach instead of "pulling the trigger" strategy.

The journey of modernization in the Pacific region reflects the Air Force's steadfast dedication to adapting, innovating, and maintaining its edge in an ever-evolving world. By investing in advanced infrastructure, the adoption of sustainable technologies and fostering partnerships, the Air Force ensures its ability to project power, safeguard allies and deter aggression in the Pacific region for the foreseeable future.

Staff Sgt. Ramiro Gamero, a 362nd Training Squadron crew chief instructor, operates a virtual reality system at Sheppard Air Force Base, Texas. The 362nd hosted an innovation expo to allow innovators to experience this technology. (U.S. Air Force photo by Airman 1st Class Katie McKee)



VIRTUAL REALITY REDUCES FUEL EMISSIONS

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OPENS IN BROWSER

The Air Force uses virtual reality as a significant tool for training simulations, decision-making abilities, and operational readiness because VR offers immersive and realistic experiences. Incorporating VR technologies into Air Force training programs is a key responsibility of the **Air Education and Training Command**.

AETC recognizes the revolutionary potential of virtual reality technology in developing abilities, knowledge and situational awareness while also positively impacting the environment and contributing to climate change mitigation in several ways. By investing in cutting-edge VR technology, AETC has adopted a forward-thinking strategy to maximize training efficacy and efficiency. Utilizing VR, AETC hopes to improve the educational experience, lower training expenses and hasten skill acquisition for Airmen in a variety of occupational disciplines, both in terms of aircraft operations and base facilities. This includes teaching pilots and ground crews how to optimize fuel consumption and reduce emissions during flight and maintenance. VR-based training can also educate personnel on energy-efficient building management and infrastructure.

Written by **Senior Airman Saomy Sabournin**

“Virtual reality is a potential game-changer for logistics and maintenance training. We’ve found in multiple test cases that giving Airmen multiple ‘reps and sets’ in a virtual world not only builds technical competency but also confidence,” said **Brig. Gen. George T.M. Dietrich III, 82nd Training Wing** commander. “So much so that when they do get that irreplaceable real-world, hands-on experience, they are demonstrating mastery of the task much more quickly – often on the first attempt.”

The Air Force conducts a significant amount of training and operations that involve air travel. Flight simulators have allowed pilots to practice their skills in a controlled environment. Due to the immersive nature of VR, aviation simulations have reached new heights. By incorporating VR into training programs, particularly for simulations and classroom instruction, the need for physical flights is reduced. This not only saves on aviation fuel but also reduces greenhouse gas emissions associated with training sorties.

AETC uses VR to accurately replicate the cockpit environment, enabling trainees to familiarize themselves with different aircraft models, instruments and flight dynamics. The success of a mission depends on the pilot's ability to build critical muscle memory, decision-making skills, and spatial awareness. VR can also provide realistic training scenarios for pilots and aircrews to practice fuel-efficient flying techniques. This not only reduces fuel consumption but also extends the operational range of aircraft.

Beyond flight training, virtual reality has proven beneficial for increasing ground staff training in maintenance and repair. With the use of VR technologies that AETC has put in place, airmen can realistically practice troubleshooting, repairs, and component replacements. This approach reduces reliance on physical equipment and minimizes the risk of damage during training. Furthermore, VR-based training modules can be accessed remotely, allowing Airmen to train on demand and at their own pace, significantly increasing flexibility and efficiency.

"VR offers the advantage of higher levels of repetition compared to hands-on training. In the 362nd (TRS), we have limited aircraft trainers and instructors, so using VR allows our Airmen to practice beyond these constraints," said Master Sgt. Jared Rice, 362nd Training Squadron innovation lead. "For instance, while

one instructor works with a small group of students on a progress check or hands-on practice, the remaining students can practice safely in the VR environment without needing direct instructor supervision. Moreover, since the Airmen are issued VR headsets and tablets, they can further enhance their skills by practicing during their study time outside the classroom."

AETC's vision for VR integration has paved the way for a more efficient, cost-effective, and realistic training experience, ultimately leading to increased operational readiness and mission success.

"The next challenge is scaling up from these test cases to all 65,000 students the 82nd (TS) trains every year. As you can imagine, that's a significant investment, and we are working closely with Air Education and Training Command and 2nd Air Force to make that happen," Dietrich said.

The Air Force and AETC are ensuring Airmen are equipped with the knowledge, experience and missions they need to protect the nation and its interests by leveraging the power of virtual reality. With VR, Airmen can hone their skills, develop critical competencies, and adapt to ever-changing demands by using virtual reality as a key component of Air Force training to prepare for the high-end competition.



An Airman from the 19th Maintenance Squadron tests new virtual reality corrosion control capabilities at Little Rock Air Force Base, Arkansas. The VR simulation allows Airmen to immerse themselves in a hangar containing an aircraft and use a controller that is modified to look and feel like a paint sprayer to paint the aircraft and various parts. (U.S. Air Force photo by Senior Airman Jayden Ford)



A photograph showing several Air Force Academy cadets in olive drab flight suits and beanies, working together to construct a large, arched emergency shelter using long metal poles. They are outdoors on a clear day, with a fence and some equipment visible in the background.

GROWING TOMORROW'S LEADERS TODAY

U.S. Air Force Academy cadets construct an emergency shelter during a Culminating Exercise (CULEX). As part of the exercise, cadets were presented a joint force scenario with real-world adversaries, testing the cadets' leadership, teamwork, and agile combat employment skills. (U.S. Air Force Photo by Justin R. Pacheco)

Written by **Master Sgt. Christopher Griffin**
Video by **Delano Scott**

The **U.S. Air Force Academy** has had the same mission since 1954: to educate, train and inspire future officers of character. The academy remains steadfast in its commitment to masterfully mold the leaders of tomorrow who will face the ever-growing challenges of an evolving battlespace.

Future leaders are prepared through a core curriculum of 29 required courses across a variety of academic disciplines, military training, character and leadership development and athletics.

The Air Force Academy's **Economics and Geosciences**, and **Civil Engineering** departments have key roles in proficiently preparing cadets for the complexities of tomorrow's operational Air Force. **Col. Justin Joffrion**, Economics and Geosciences department head, emphasized the importance of collaboration and innovation that has been incorporated into the teaching model.

"The academy actively collaborates with industry leaders, local governments and non-profit organizations to create a relevant and up-to-date curriculum," Joffrion said. "Advanced technology, including Building Information Modeling software, data collection using sUAS and Geographic Information Systems software significantly empowers cadets to gain experience with modern design tools, preparing them for the rapidly evolving engineering landscape." Joffrion elaborated.

"We use geographic information system software to integrate data from a variety of sources. It could be mapping data so that we understand topography and different landscapes. It could be overlaying additional data elements onto that sort of data so that you can visually see it." Joffrion continued, "And just like everywhere else in the world where the sensors and the internet has connected more and more data, we are reaping the benefits from that additional data, but it comes

at a cost because we have to process that data in a way that makes it useful for folks who are trying to understand the geography that they're working in."

In the face of constant environmental changes and geopolitical shifts, the Air Force Academy gracefully equips cadets with the knowledge and skills to effectively exploit topography and adapt to emerging challenges.

Sustainability and resiliency principles are integrated to teach cadets about energy efficiency, renewable energy and other sustainable practices while preparing them to guard against potential infrastructure vulnerabilities.

This development is undoubtedly instrumental in determining the success of the **Air Force's Climate Action Plan**. The CAP is a comprehensive strategy aimed at enhancing the Air Force's resilience to climate change while reducing its environmental impact. This



COL. JUSTIN JOFFRION

ECONOMICS AND GEOSCIENCES DEPARTMENT HEAD

WATCH INTERVIEW

[OPENS IN BROWSER](#)

encompasses three core objectives: fortifying operational effectiveness by investing in climate-ready infrastructure, developing resilient technologies to mitigate climate-related risks and educating the workforce and public about climate change. To underscore the Air Force's commitment to addressing climate challenges, this plan could play a significant role in the broader global efforts to combat climate change.

Dr. Steven Radil, U.S. Air Force Academy Assistant Professor of Geosciences, specializes in political geography, focusing on the spatial dimensions of political violence and plays a key role in the development of academy cadets.

"The Climate Action Plan is another crucial aspect at the academy, where reducing the carbon footprint and maximizing energy efficiencies is essential while maintaining industry-standard results that exceed the military's needs," Radil said. "Striking this balance is a challenge, but the Air Force Academy tackles it with innovative approaches, considering the implications of their decisions on the environment and the future of air and space dominance."

"One practical application of this is illustrated in the Spring of 2023's **Geospatial Science** capstone project of then cadets first class (now second lieutenants) Emily Lukowski, Maddie Williams and Ardent Almazan, entitled "**Green Tour**." For this project, they researched and mapped the existing sustainability features across the academy and planned sustainability features for implementation.

"Before we started this project, we didn't realize that so many of our facilities had so many sustainability features; you just don't see many of them," said Almazan, who was commissioned into the U.S. Space Force.

Before the cadets could begin mapping, they had to strategically set the parameters and boundaries for their analysis.

"We learned how to effectively dig for information, decipher a ton of data and determine what was important as it related to our project," Lukowski explained.

After the cadets sifted through the data, they created Green

Tour maps with the StoryMaps web tool, allowing them to bring together a lot of what they had learned throughout their geospatial sciences and core curriculum.

"I feel like in the military, our priority is the mission, probably more so over sustainability, so this capstone was really eye-opening to see the Air Force Academy does prioritize sustainability, which, for me, is really awesome that it is one of their top priorities," Lukowski said.

The advantageous knowledge and skill set cadets gain while attending the academy is crucial in their development as officers and leaders, but what happens when it's time for them to join the rest of the operational Air Force? How does the academy ensure talent is sent to the mission that needs their abilities the most?

"Usually, at the beginning of their senior year, they receive their classification," Joffrion explained. "In their three previous years, they're learning about the different opportunities out there for them in the Air Force and Space Force."

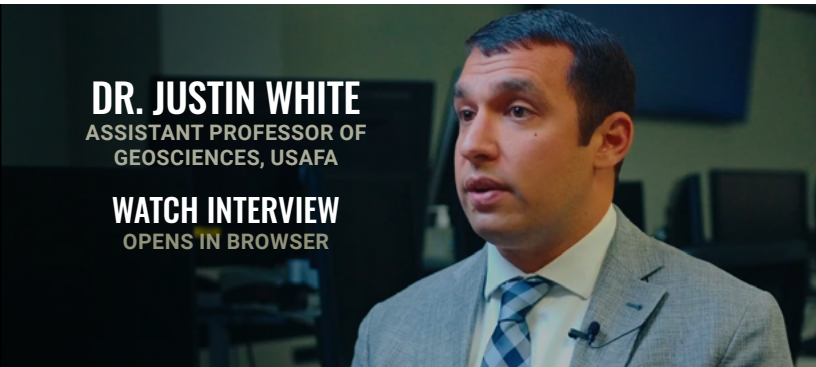


CAPT. JOSHUA GLASS

CIVIL AND ENVIRONMENTAL
ENGINEERING INSTRUCTOR, USAFA

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DR. JUSTIN WHITE

ASSISTANT PROFESSOR OF
GEOSCIENCES, USAFA

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EMILY LUKOWSKI

CADET 1ST CLASS, USAFA

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"And while they're doing this, we're watching them to see where they're strong, where their talents lie," Joffrion emphasized. "We know what we want; we're investing heavily in these cadets, so it's important for us to ensure that we connect them to the right opportunities when they graduate. So, we're looking for a very good match that will place them in the spot where the Air Force or the Space Force has needs, and that's important because the Air Force and Space Force needs these cadets."

When an officer is placed within their new organization, regardless of the role they're put into, the skills they've received during their time at the academy play a crucial part in their personal success and their contribution to the mission.

Second Lt. Morgan Searcy, who graduated from the U.S. Air Force Academy in 2022 with a geospatial science degree, landed in a unique position she didn't quite expect. She was assigned as a public affairs officer for the **Air Force Life Cycle Management Center at Wright-Patterson Air Force Base, Ohio**. Her ability to adapt to an unexpected role reinforces the

success of the skill sets the academy uses to grow leaders of character.

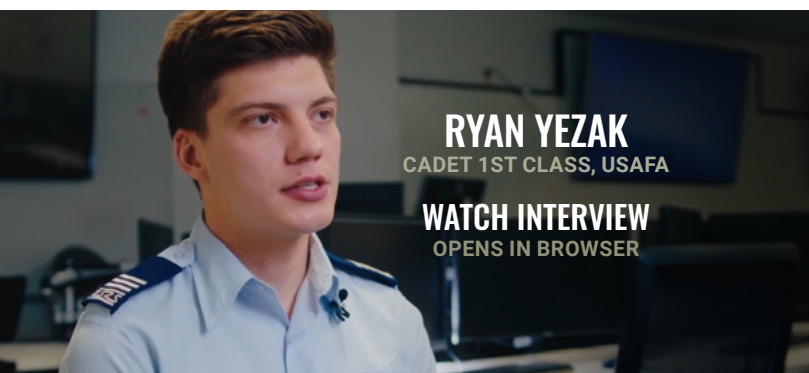
"Outside of geo, the lessons I learned being a U.S. Air Force Academy cadet have helped me understand the organizations I am a part of," Searcy said. "Any cadet can attest that when you're at school, there are a thousand things going on. From the academic loads, athletics and random Saturday-morning inspections, not to mention trying to decompress and have a social life, it's stressful, but you learn to skillfully manage your time and multitask. I am sorry to break it to current cadets: that doesn't change once you commission, but the skills you learn will continue to benefit you through your time in the military."

Searcy further explained the usefulness of the skills taught throughout her time at the academy and expounded on their real-world applications.

"With the utilization of the skills I gained at the Air Force Academy, I am able to spread the message of how hard AFLCMC members work every day to achieve the mission of the Air Force,"

Searcy explained. "My research background significantly benefits me in determining the best channels to communicate on and helps me understand what each directorate is focused on so I can provide accurate and timely information to the public."

The U.S. Air Force Academy's unwavering commitment to innovation, hands-on training, diversity and sustainability has created an environment that genuinely molds the leaders of tomorrow. By wholly providing cadets with a comprehensive education and practical experience, the academy ensures that these future officers are equipped to excel in their roles, defend the country and navigate the complexities of the battlespace with honor, integrity and excellence.



RYAN YEZA

CADET 1ST CLASS, USAFA

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SOPHIE BOULWARE

CADET STAFF SERGEANT, USAFA

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EFFICIENCY WITH MODERN MATERIALS

Video by **Joshua Dufrane**

Ed Clark, **Air Force Research Laboratory** – RXT aviation program lead, discusses new designs on the fan duct for the **KC-135 Stratotanker**. The original fan-duct panel has a water intrusion problem that causes delamination. This delamination causes sustainment, maintenance and energy efficiency problems. The modified panel fixes these issues utilizing modern materials.

The fan-ducts are being installed by Airmen at **Rickenbacker Air National Guard Base** in Columbus, Ohio, as part of the Air Force's focus on the **Climate Action Plan**.

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DEPARTMENT OF THE AIR FORCE

CLIMATE ACTION PLAN

OCTOBER 2022



PRIORITY ONE

MAINTAIN AIR AND SPACE DOMINANCE IN THE FACE OF CLIMATE RISKS

Invest in climate-ready and resilient infrastructure and facilities so our installations are better able to project air and space combat power.

PRIORITY TWO

MAKE CLIMATE INFORMED DECISIONS

Develop a climate-informed workforce, integrate security implications of climate change into Department strategy, planning, training, and operations, and incorporate climate considerations into Department requirements, acquisition, logistics, supply chain processes, and wargaming.

PRIORITY THREE

OPTIMIZE ENERGY USE AND PURSUE ALTERNATIVE ENERGY SOURCES

Expand our operational capability and power projection to support operations globally while simultaneously reducing greenhouse gas emissions and adopting cost-competitive alternative energy sources.

<https://www.safie.hq.af.mil/Programs/Climate/>



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