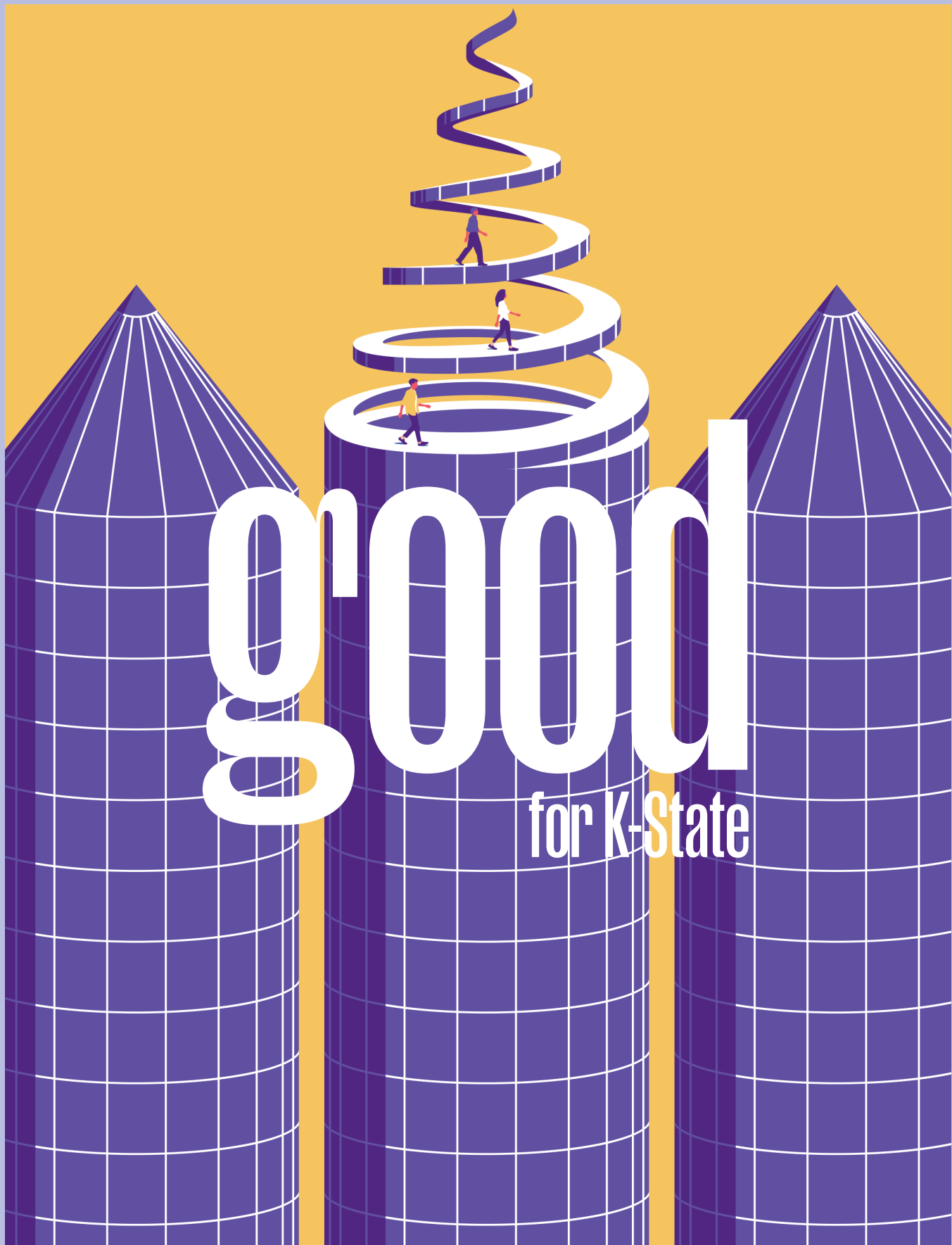


Beyond silos: The future of ag research



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for K-State

BOLDLY
ADVANCING
K-STATE

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We are. K-Staters are creating energy-efficient and affordable housing right here in Kansas.

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Good for K-State is devoted
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K-State is working to reset an entire
industry — from pilots to mechanics.

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Removing the silos

The Agriculture Innovation Initiative brings together the best minds across campus and industry to tackle complex challenges

BY MARISA LARSON

SILOS ARE GREAT when it comes to storing grain but not for launching game-changing ideas into the world.

Segregating research by academic discipline leads to siloed thinking. But diversity of thought, attacking a problem from different points of view and areas of expertise — that's where the magic happens.

That's why K-State is breaking down silos with the new Agriculture Innovation Initiative.

New and renovated facilities will pull together the best minds from across campus to take on the biggest global challenges, such as water conservation, farming in a changing climate, and ensuring we have a safe and sustainable global food system.

Here are the key ingredients to make this bold initiative successful:

BUILDING SMART SPACES

The facility upgrades and expansions will amplify grain, food, animal and agronomy research.

The Agronomy Research and Innovation Center will combine research teams from across campus to advance crop production, soil health and water management. Experts will develop new solutions that are resilient, efficient, profitable and sustainable.

The Bilbrey Family Event Center is a new multispecies competition space to support teaching and both youth and extension efforts in equine and livestock sciences. As a place to host rodeos, horse shows and

4-H events, the arena can also boost economic development and student recruitment.

The Global Center for Grain and Food Innovation will strategically connect K-State's world-renowned animal science and food science programs with our unique grain science programs to address both opportunities and challenges facing global agriculture.

CAMPUSWIDE BRAINPOWER

Solving big problems requires a new way of working.

It involves knocking down boundaries between traditional academic subjects to address complex issues that cannot be fully understood using a single disciplinary perspective. The goal is to reach deeper understanding by considering a challenge from multiple angles — and incorporating insights from many areas of expertise.

Beyond focused efforts on cutting-edge research and industry-changing products and solutions from K-State's top-ranked College of Agriculture, the innovation centers will draw the brightest minds from the colleges of Arts and Sciences, Business, Engineering, Health and Human Sciences, and Veterinary Medicine to catalyze interdisciplinary teaching, learning and research.

Bringing together interdisciplinary clusters of faculty in these spaces will create a dynamic environment where different skills and experiences come together to advance science at a much faster pace.



WORKING WITH INDUSTRY PARTNERS

All of society, including industry, will benefit from innovations made through this new approach. Food and agriculture leaders such as the Kansas Farm Bureau, Kansas Soybean Commission and Ardent Mills have invested in the initiative. Partnerships between K-State and industry will generate production and business solutions, provide learning opportunities for the existing ag-sector workforce and build a talent pipeline for future ag leaders.

OPTIMIZING SOLUTIONS

KSU Foundation and the College of Agriculture worked with donors to take advantage of a 3:1 funding match from the state of Kansas that generated \$125 million for this project in record time. Fundraising continues toward a \$210 million goal.

It's a pivotal moment for K-State — and even the world.

"Kansas State University has an inspiring opportunity to help the world's ability to feed 2 billion more people by 2050. To contribute to a Kansas

economy that thrives. To optimize agriculture for the highest levels of efficiency and yield," said K-State President Richard Linton. "Now's the time to invest. The sky's the limit." ■

 **Learn more**
ksufoundation.org/gfks/aginnovation





A LOVING BOND
Fourth-year veterinary student Trey Tomlinson examines Diego, whose owners are currently homeless.



ANIMAL WELLNESS

Caring for both ends of the leash

**K-State's Wellness on Wheels
brings veterinary care to
vulnerable populations**

BY MARISA LARSON

PHOTOS: DAVID MAYES PHOTOGRAPHY INC.

“She’s my life,” Randy Roberson said as a lone tear rolled down his cheek.

Roberson calls a campsite along the river in Topeka home, even on cold fall days. He’s concerned about his beloved lab-mix pooch, Little Sister, who was jumped by another dog last night. Her usual confidence is hiding behind anxious eyes.

Roberson brought Little Sister to be seen by veterinarians and veterinary students from Kansas State University and The Street Dog Coalition. The vets, along with Valeo Behavioral Health Care, Stormont Vail Health, the Topeka Police Department and Topeka Rescue Mission Ministries make up the Mobile Access Partnership, or MAP, which provides outreach and services to people who are living on the street or don’t have housing of their own.

In the three-and-a-half years he and Little Sister have been together, Roberson revealed to me they’ve only been apart once. For eight hours.

“She goes everywhere with me,” he said. “She brings me comfort and safety. She’s always watching my back, and I watch hers.”

THE LEASH AS A LIFELINE

Riding in K-State’s Wellness on Wheels mobile veterinary vehicle on our way to Topeka, Dr. Ron Orchard, who teaches community outreach, explained that by helping pets, veterinarians are also a conduit to care for people. It’s a matter of building trust and taking care of the lives at both ends of the leash.

We’re on our way to a weekly MAP outreach event to provide people without housing with food, a shower, clean clothes and medical care. People receive help with getting IDs, housing and work. And

if they have pets, they can have their companions taken care of.

“What the veterinarians are doing is opening doors for us to reach some of the people who would not necessarily open their camp to us,” said Jenny Falk, director of MAP operations for Topeka Rescue Mission Ministries. “That initial touchpoint of having their pet taken care of has allowed us to start building relationships with some folks to the point where they come on their own now.”

UNBREAKABLE BONDS

Over and over, MAP workers and volunteers told me that these owners love their pets more than themselves — and will do anything for them. On this cold, windy day, that was evident everywhere you looked.

Renee Adams took off her tan hoodie and wrapped her puppy, Star, in it. A chihuahua, Miss Piggy, stayed warm inside Charles VanVleck’s green fleece. Everyone who brought a pet waited out in the cold to make sure their companions could get the preventive care, or sometimes emergency care, they needed.

Why do people struggling with homelessness go to such lengths to keep and care for their pets when they’re having difficulty taking care of their own needs?

“Before, I wondered about that. Then I walked a mile in their shoes and saw the error in that thinking,” said Matt Baldwin, homeless case

manager with Valeo Behavioral Health Care. “A lot of people have trauma in their life. And those dogs are the only thing that loves them unconditionally, the only thing they can trust. Their pets are a constant companion, give them a reason to get up in the morning and keep them moving forward.”

Sylvia Ramos feels that way about Loki, her fluffy black shepherd. When I asked her what having Loki in her life meant to her, she replied, “Unconditional love. He loves me no matter my good days or bad days. He’s my anxiety tamer,” she said. “One time I was having a panic attack and he curled up right behind my neck on the arm of the couch, and I was instantly calm and relaxed.”

It’s because of this human-animal bond that MAP is able to help people experiencing homelessness.

“One of my favorite quotes says, ‘Recovery happens at the speed of trust,’” Baldwin said. “People love their fur babies more than themselves and more than most other humans. So they’re much more likely to go above and beyond to get the pet’s needs taken care of. This then helps them start working toward getting their own needs taken care of.”

WELLNESS ON WHEELS

In K-State’s Wellness on Wheels (WOW) vehicle, fourth-year veterinary students bring care to pets that will never visit a veterinarian otherwise due to cost, location or a lack of



GOING WHERE NEEDED

Renee Adams (right) gives her dog Lilly a comforting squeeze so veterinary student KaDeja Evans can examine her.

information about basic pet care. This could be individuals who are elderly, experiencing homelessness, living in a remote location or people with serious illnesses.

WOW and its services are made possible through gifts from Cheryl Mellenthin of Sealy, Texas, and many other individual and corporate donors, as well as through grants. The WOW vehicle was added to K-State's shelter medicine and community outreach program in 2021. It joined the mobile surgery unit, which partners with animal shelters and rescue groups to provide spay and neuter services, as one more way to give veterinary students surgery experience.

"The WOW is set up with many of the features of a general practice veterinarian and includes exam areas, a surgical suite, dentistry equipment, digital radiography and seating for clients as we consult with them," Orchard said. "The goals for the community outreach course include training students to practice resource-limited medicine, while working with clientele who historically would lack the ability to have their pet seen by a

veterinarian. We hope to instill in every student that every client is worthy of a veterinarian-client/patient relationship."

REAL-WORLD PREPARATION

Dr. Allison Crow, a K-State graduate, discovered her calling when Baldwin invited her to join him on a visit to a family living by the river. Their dog had recently had 10 puppies.

"That experience showed me the power of the human-animal bond," Crow said. "People who had very little poured their resources and their ingenuity into making sure those animals were cared for."

The family had MacGyvered a heating system for their shelter and nested the puppies just the right distance from the heat source to keep them warm, but not too warm.

Crow, who works in a veterinary clinic in north Topeka, continued to go on visits with Baldwin. Then the pandemic lockdown hit in March. As things began opening up again later that year, Crow looked into grants to fund her work with the unhoused and launched the Topeka chapter of The Street Dog Coalition. Orchard reached out to her and the

partnership between Street Dog and K-State was born.

"I love having students come experience the spectrums of care and be able to put theory into clinical practice before they graduate," Crow said. "Even when people are not homeless, a great majority of them have issues with the financial burden of pet care. So having this perspective and being forced to think about how to offer various options and levels of care is helpful for the students, and it has made my experience in clinical practice much better as well." ■

 Support this work
ksufoundation.org/gfks/wellnessonwheels





ENVIRONMENT



Proud of the house we built

As the nation's housing shortage approaches crisis levels, a home-grown solution emerges from K-State's award-winning Net Positive Studio

BY ALISON ROGERS

The year was 2019, and Stafford County was hemorrhaging houses.

YEARS OF CAREFUL economic development planning had paid off: The central Kansas county had employment opportunities to offer, but housing couldn't keep up. How could it, when the county was tearing down four or more aging homes for each new one built?

As they joined countless other municipalities in this struggle nationwide, officials saw one attempted solution after another fall flat. They would need fresh ideas for long-term success, but where were those ideas hiding?

It turns out they were a short two hours away at Kansas State University, where the College of Architecture, Planning and Design had recently developed a program for graduate students known as the Net Positive Studio.

CURBING THE CRISIS

The same question was stumping everyone: How can towns — large or small — grow when workers can't find a place to live? Stafford County's shortage of affordable homes left would-be residents with few options,

limited to aging and low-quality dwellings.

"We have a housing crisis," said Ryan Russell, Stafford County Economic Development executive director. "Population decline is a big concern for rural areas, and we've been fighting it here for a number of years already due to the lack of affordable housing."

Why is a decent house suddenly so hard to afford? The problem is twofold: Houses are bigger and so are our energy bills.

Every house built in the United States for less than \$150,000 was met with an average of 56 new homes costing more than \$300,000 in 2020. And new houses have grown from an average of 1,590 square feet in 1976 to 2,333 square feet today.

Let's say you find a great house in your price range. Can you afford to live in it?

Average residential electricity spending last year showed the largest annual increase since the U.S. Energy Information Administration began calculating it in 1984. The increase was driven by a

predictable combination: extreme temperatures that raised electricity consumption for heating and cooling, and higher power-plant fuel costs that were passed on to consumers. Depending on a home's insulation level, utility equipment and other factors, Kansans in 2020 spent an average of \$2,677 on electricity and natural gas — with some hit with bills of \$4,000 or more.

"We have a lot of staff in our school districts and our hospital who are coming in from outside Stafford County to work," Russell said. "Our city managers field questions about where to buy houses all the time, but there's just nowhere for low- to moderate-income residents to live."

The county submitted a grant proposal for housing funds and hit the jackpot when the state connected it with Associate Professor Michael Gibson, faculty lead of K-State's service-learning architecture course known as the Net Positive Studio. Gibson and his students would collaborate with community partners to research, design and construct a house that checked all their boxes in the county seat of St. John.

That pioneering-yet-pragmatic blueprint could serve as a prototype for a series of new homes throughout the county — and beyond.

MASTERING A MODERN HOUSING SOLUTION

The students' assignment seemed tough but

straightforward: They would build a net-zero house. These homes are designed for net zero energy use thanks to strategies that maximize space and efficiency coupled with a small array of solar photovoltaic panels.

Having studied community-based development, Gibson knew the net-zero house was an important start. But he had seen what houses were capable of with a little extra consideration, and the studio was an important opportunity for his students — and the communities — to learn that net-positive homes were the path to a healthy, growing community.

“Housing doesn’t just need to save energy or sell for less: It needs to give something back,” Gibson said. “Housing needs to support comfort, safety, financial security, domestic life, social relationships and overall well-being for homeowners. Housing needs to achieve social and economic sustainability just as much as environmental sustainability.”

He established the studio in 2018 with support from Tim DeNoble, the college’s dean at the time, to offer students a real-world experience with a service slant. Instead of designing hypothetical buildings, these students would build actual homes that bring neighbors together and give the environment a break. Creating real homes for real people is about as real-world as it

gets, and it would give K-State students an experience that serves them well after graduation.

The studio delivers advanced research training to architecture students completing the final two semesters of K-State’s accelerated five-year master’s degree program. But Gibson sometimes wonders if the most valuable takeaway of the Net Positive Studio might be the thorough lesson in collaboration students are guaranteed to receive.

“Students in the Net Positive Studio are learning to communicate with clients, partners and stakeholders with a wide variety of skill sets,” he said. “No one on their own is going to build a net-zero, affordable house, but we can recognize each other’s strengths and do it together.”

That outdoor living space is essential to well-being is another tenet of net-positivity. The living area doesn’t end at the door; it expands to furnish the home with the restorative effects of its natural surroundings and encourages residents to be active in their community.

“Outdoor spaces also function as an extension of the house, and along with an open layout and high ceilings, make the surroundings feel spacious despite the small footprint,” Gibson said. “And that’s a testament to the creativity these students apply to the planning process — it’s imagination, persistence and passion.”

LEARNING TO LEVEL UP

The Net Positive Studio is giving new meaning to the word “homework.”

In this one-of-a-kind experience, students work together to analyze everything from climate to the psychology of color, design a high-performance home and draw construction plans. Then they switch gears to pre-fabricate a large portion of the building.

Recent graduate Ann Lomshek studied sustainable landscape design and workforce housing extensively during her time in the studio, ultimately earning the Stella E. Ellithorpe award for student research. Now an architect in Dallas, she credits the studio experience with helping her get a great start to her career and deepening her passion for habitat restoration in residential design.

What does a sustainable landscape look like? Picture your summer to-do list: Cross out mowing. And watering, while you’re at it. Replace those lines with “sit on patio with lemonade and holler encouraging words at neighbors,” who are unfortunately still at the lawn’s beck and call.

“Replacing the traditional monoculture lawn with a native garden adds a lot to a net-positive house, because native plants eliminate the need for mowing and other maintenance that is often a hidden cost of homeownership,” Lomshek said. “I found that incorporating

Continued on page 14

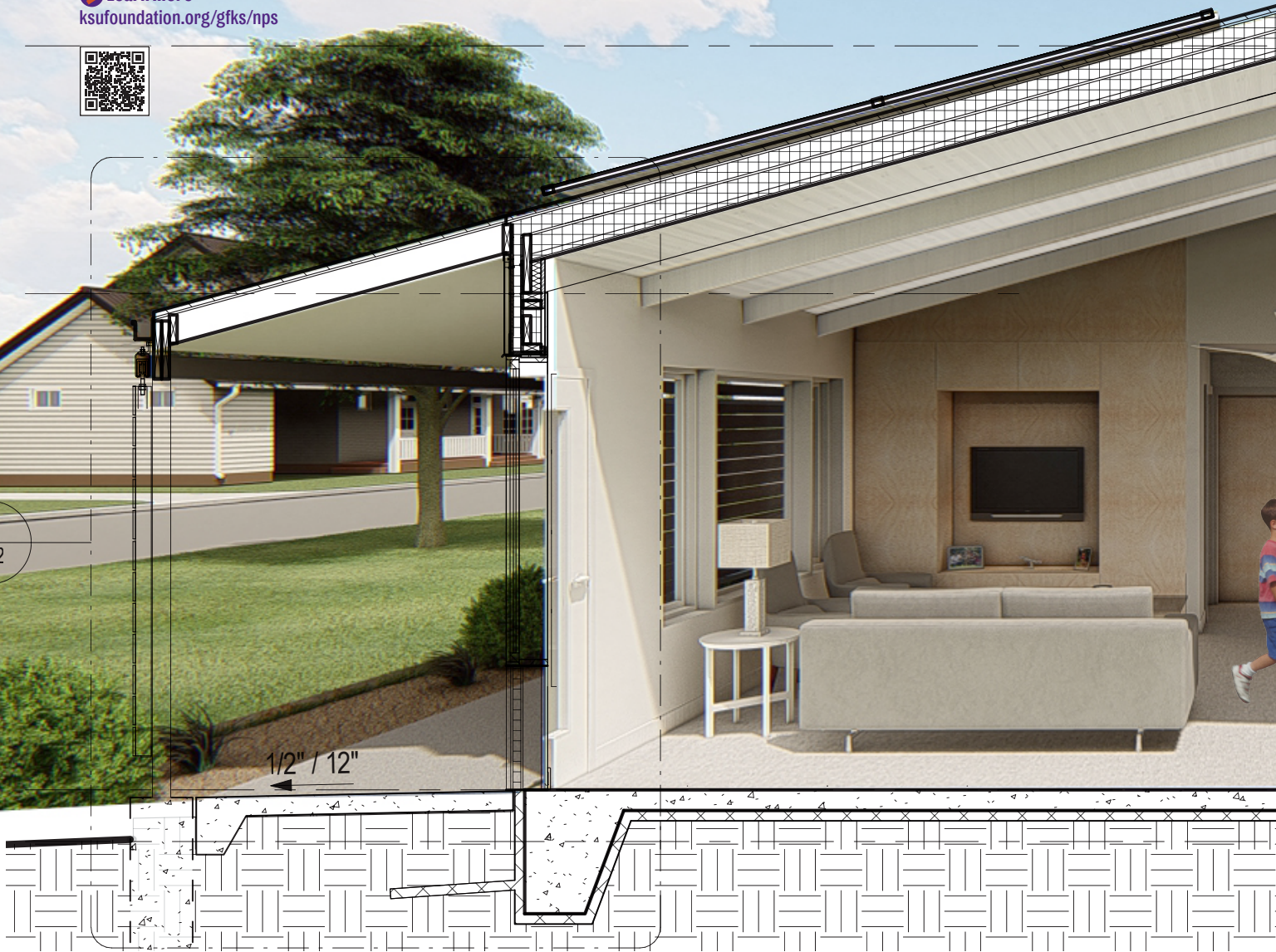
KEEP THE PROGRESS GOING

Support fellowships for fifth-year students

K-State is working to become the first nationally ranked architecture school to cover the cost of its final year. Help power the College of Architecture, Planning and Design’s fifth-year fellowship program, so students can devote their time and creativity to pivotal experiences like the Net Positive Studio.

 **Give to fifth-year fellowships**
ksufoundation.org/gfks/apd





Anatomy of a net-positive home

How does a house become net positive? Here are 10 cost- and energy-saving features incorporated by the Net Positive Studio.

1 LESS IS MORE

Modest square footage cuts building costs, leaving more budget for upgrades to insulation and high-efficiency windows and doors. The savings are then transferred to monthly utility bills.

2 OPEN IT UP

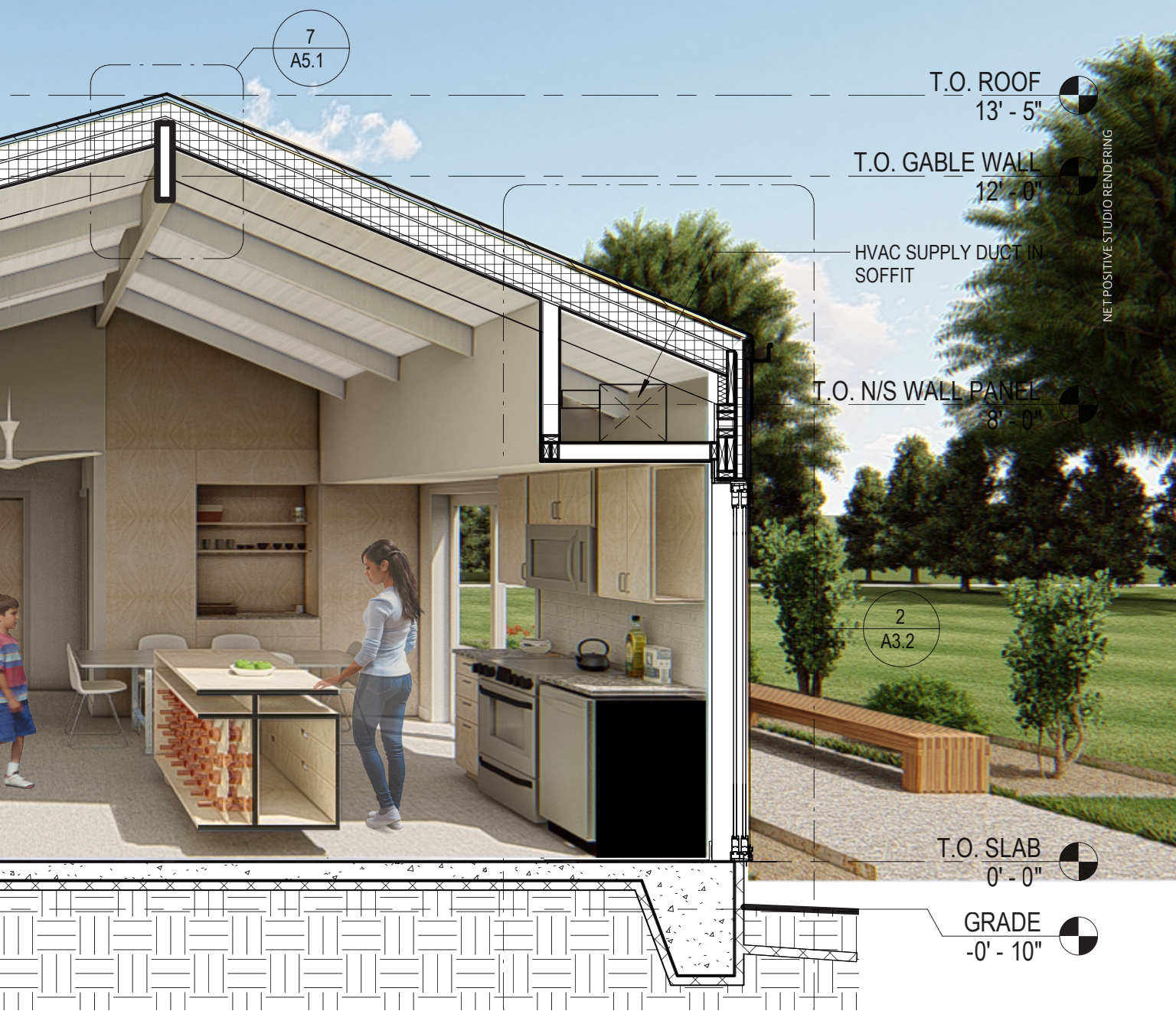
Open layouts and high ceilings make the homes feel spacious. The designs maximize room size, increase availability of natural light and promote air circulation.

3 GREAT OUTDOORS

Get in touch with your inner nature nut to improve your physical and mental health. The K-State designs create ideal outdoor spaces that encourage socialization.

4 SEAL THE DEAL

A tight building envelope — walls, windows, doors and roof — reduces the need for heating and cooling. Elements like continuous insulation and high-efficiency, carefully sealed doors and windows keep heat inside during the winter and reduce heat gain during the summer.



6 WORK THE ANGLE

Strategically located windows and overhangs either block or receive sunlight based on the sun's angle and orientation in summer and winter. Bonus: This passive solar approach also increases natural light when we need it to counteract winter gloom.

6 MASSIVE BENEFITS

A shallow, highly insulated concrete foundation requires a fraction of the concrete — which itself takes copious amounts of energy to produce — found in traditional foundations. In

our climate, the Net Positive Studio calculated the energy-saving potential of insulated slabs to be approximately 20% versus slabs-on-grade or uninsulated basements. Bonus: Thermal mass floors can absorb winter sun and release heat overnight.

7 RAYS THE ROOF

With its energy-saving passive features, a net-zero house in Kansas can remain comfortable without added heating or cooling for over half the year. A small photovoltaic system is enough to offset electric heating and cooling needs the rest of the year,

along with the power used by the home's appliances and lighting. Bonus: Solar panels can sometimes be mortgaged with a house.

8 EASY BREEZES

An open floor plan with windows on opposite sides of the home creates a crosswind, keeping people comfortable without the need for air conditioning when it's temperate outside.

9 PRE-FABULOUS INSULATION

Students produce pre-fabricated structural insulated

panels to complete the building envelope. These SIPs have more than twice the thermal resistance of traditional fiberglass insulation, and they're assembled indoors to control construction quality and cost. Bonus: They speed up the building process.

10 GREENER YARDS

Landscaping design utilizes native plants that are well-adapted to the climate and thrive with just rainwater. Reduced watering and mowing = reduced environmental impact, money and work!

Continued from page 11

bioswales — a type of eco-friendly terracing — looks gorgeous and helps the property stand out in the community.”

The studio’s assignments require the advanced level of detail professional architects need on a design/build project of this magnitude.

“Architecture students don’t often get the chance to build a realistic representation of their design, so our digital designs often exist mostly in our heads with no real confirmation that they could exist in the real world,” said fellow grad student Ethan Tschanz. “The Net Positive Studio teaches us to translate our work from the digital realm to the physical — a truly humbling experience, but one that will prove invaluable later in our careers.”

HOW SMARTER HOUSING HITS HOME

Creating modestly priced homes that improve lives and strengthen neighborhoods sounds like a tall order, but consider the prototype house in St. John: When the sawdust settled, the Net Positive Studio — along with AmeriCorps Vista members, Stafford County Economic Development staff and community volunteers — had built a 1,100 square-foot, \$120,000 home that would be comfortable without heating or cooling for more than half the year.

With 30% of take-home pay as the threshold for an affordable housing cost burden according to the

Department of Housing and Urban Development, a homeowner earning \$37,660 would need to cap monthly payments at \$827 or less. The owner of the K-State house would only pay an estimated \$720.

“Through this process, we’ve learned that a well-designed, compact house requires only a modest amount of solar power to offset — or even exceed — the amount of energy it will use,” Gibson said. “We’re demonstrat-

powered by renewable energy.

Or they can look to Stafford County — now the location of 10 additional homes based on the K-State prototype — and to Ogden, Kansas, which became the site of a net-positive house in 2021 that’s now home to Yackelyn Torres and her family.

“When someone is struggling with poor living conditions, it can make a world of difference to transition to homes like

efforts with landscape architecture and community planning counterparts.

The homes in Ogden and Stafford County are shining examples of K-State living its land-grant legacy. The Net Positive Studio’s ingenuity can be scaled up to strengthen communities in a way that’s good for students, good for the university, good for the economy, good for the environment and good for Kansas.

Let’s say you find a house in your price range. Can you afford to live in it?

ing that good design, analysis and construction will enable almost anyone to afford a net-positive house.”

Skeptics need only look to the U.S. Department of Energy, which awarded the St. John student design team with second place in the market potential category, third in the architecture category and third in the affordability and financial feasibility category of the Solar Decathlon 2020 Build Challenge, a collegiate competition to build high-performance, low-carbon homes

these,” Stafford County’s Russell said. “The better-quality surroundings, with their natural light and low-stress energy costs, translate directly into better-quality lives.”

PROVING IT’S POSSIBLE

Now that Gibson and team have arrived at a solid system for single-family dwellings, they’re branching out to create entire net-positive communities. The studio is working on a project that could become a development of 16 to 18 net-zero homes in Ogden. Gibson is also considering larger multidisciplinary

“So few homes are being built to meet sustainability goals yet remain affordable — you really don’t see that combination very much anywhere, especially in Kansas,” Gibson said. “We’re doing this to prove it can be done.” ■



PHOTO: NET POSITIVE STUDIO

BUILDING DREAMS Living the net-positive life comes highly recommended by the Torres family, who bought this student-designed, energy-efficient home in Ogden, Kansas.

LIVING NET-POSITIVELY

Yackelyn Torres lives in a K-State-designed Net Positive Studio home in Ogden, Kansas, with her three children and the family dog. Here's a snapshot of her life as a net-positive homeowner — and confirmation that these expertly designed houses achieve what they set out to do.

What's it like to own a net-zero home with solar panels?

It's the same as a traditional house, but I have two electrical meters and my bills are broken down into energy usage versus energy generation. I can get detailed data from the solar panels through an app on my phone. It shows me the panels are working and logs the amount of energy they produce daily, weekly and monthly.

The house is also less vulnerable to large temperature fluctuations. It stays warmer in cool weather and cooler when it's hot with less help from the utility systems.

What features do you like best about your home?

It's a beautiful, modern home. I love the high ceilings throughout the house and the functionality of the kitchen, but for the most part I appreciate the size of the home — it's just right for me and my children. I'm hoping to live here until they've all graduated from high school.

Does your home's design encourage you to enjoy the outdoors and spend time with neighbors?

Yes! We have a basketball hoop and plenty of yard space to enjoy along with our dog, and it's perfect for barbecues.

What does net-positive homeownership mean to you?

I never dreamed of owning a house at the age of 34. It feels really good to know my children have a place to call home, and I work only seven minutes away.

Life has been pretty hectic and my journey has been full of ups and downs, but this experience has reminded me why it's important to never give up. Hard work really does pay off!



THE GHOST IN THE RADIATOR

And other tales from K-State's forgotten classrooms

BY ALISON ROGERS

IT WAS A DARK AND STORMY day in Manhattan. Students filed into the Eisenhower Hall classroom, shaking rain from their umbrellas.

At the front of the class stood German professor Necia Chronister, trying in vain to erase decades of chalk residue from the blackboard. A few sneezes erupted from the first row.

"Good enough," she said. "Let's get started."

As she began the day's lecture on novelist Thomas Mann, several students put jackets back on to fight the chill.

Chronister had just hit a groove in her lesson on Dr. Faustus when suddenly a sharp banging sound made everyone jump. Exclamations rippled through the classroom,

followed by chuckles from the upper-division students.

"It's OK, everyone," Chronister assured them. "It's just the radiator ghost stopping by for another visit."

LEARNING AT LARGE

Beyond the occasional radiator ghost, K-State students and faculty are haunted by classrooms that are long overdue for the updates needed to propel them into the present.

Flip This Classroom is an initiative to raise \$7 million for improvements to 67 of K-State's most-used classrooms. It supports the university's strategic plan, which accentuates continued efforts to recruit and retain both students and faculty.

WHICH CAME FIRST?

Test your knowledge of K-State history in relation to other notable events.

Which came first?

1

- a. Neil Armstrong's moonwalk
- b. Cardwell Hall

2

- a. Taylor Swift's birth
- b. Throckmorton Hall

3

- a. The Dwight D. Eisenhower administration
- b. The radiators in Eisenhower Hall

4

- a. The compact disc
- b. Bluemont Hall

ANSWERS

1. Cardwell Hall [1963] preceded the moonwalk [1969].
2. Throckmorton Hall [1981] is older than Taylor [1989].
3. The radiators [1951] were on campus before Eisenhower became president [1953].
4. CDs weren't around until a year after [1982] Bluemont Hall's construction [1981].



OLD

WHAT'S WRONG WITH THIS PICTURE?

Old classrooms have outdated technology, limited collaboration space and one-size seating (bad for lefties and tall people).

PHOTO: DAVID MAYES PHOTOGRAPHY INC.



NEW

WHAT'S RIGHT WITH THIS PICTURE?

Modern classrooms emphasize group work, with flexible furniture, ample laptop space and updated AV equipment.

PHOTO: K-STATE DIVISION OF COMMUNICATIONS AND MARKETING

K-State 105, the strategic plan's pledge to deliver university knowledge and innovation to all 105 Kansas counties, is also driving the renovations. Classrooms must be capable of educating on campus and beyond.

"Our goal is to engage with research and extension partners across the state," said Heather Mills, director of space management for K-State's Division of Facilities. "This will involve changes in our approach to classroom technology and functionality, to allow better connection and collaboration."

Flip This Classroom ultimately will improve both teaching and learning at K-State. Banishing the Eisenhower radiator ghost via HVAC updates is just a bonus.

CLEARING THE COBWEBBS

For Chronister, summertime heat is the biggest challenge in the 70-year-old building.

"My lesson plans include strategies for balancing instruction and group work in a way that allows me to turn the window-unit air conditioner off when I'm speaking, yet leave it on as much as possible," Chronister said. "It's still difficult for students to hear each other in their groups, and they deserve a learning environment that allows them to focus on the learning material — not on the AC."

On the northern edge of the Manhattan campus, Throckmorton Hall — built in 1981 — is newer than some buildings. But time moves on, and while some of its classrooms have received the 21st century overhaul, others are still waiting.

"Upgraded rooms allow us to do a better job of in-class teaching, as well as meeting needs of remote learners," said Anita Dille, professor of weed ecology and assistant head of teaching in the agronomy

department. "We can offer a class online, record and export lectures for a hybrid option and try different teaching methods like surveying students on their phones."

What else matters to today's students? Dille emphasizes that today's students require and expect outlets for laptops and other devices, and adds that a strong Wi-Fi signal is a detail that can't be overlooked. But aesthetics play a role too — especially in student recruitment.

WHO YOU GONNA CALL?

K-State has seen the addition of many modern, state-of-the-art facilities over time, but the great thing about Flip This Classroom is that improvements will be focused on multiuse spaces that host a slew of students each day from many majors.

There's a happy ending to this story — one in which students can focus on the first-class instruction taking place instead of the ghosts of classrooms past. ■

“The upgraded rooms allow us to do a better job of in-classroom teaching, as well as meeting needs of remote learners.”

ANITA DILLE, PROFESSOR

"In my role as assistant head of teaching, I give prospective students a tour of our building," she said. "We highlight our updated classrooms, which are brighter and dust-free, but the tour also includes a larger lecture space that's dated with worn-out carpet and a mix of gray and orange seats."

During a tour of this rust-colored classroom in 2023, members of the KSU Foundation Board of Trustees couldn't help but cringe. Their Trustee Excellence Fund helps provide seed money for the classroom initiative.

▶ Watch a video and keep up with Flip This Classroom progress
ksufoundation.org/gfks/flipthisclassroom



GREATER g'OOD

Good work and accolades



ILLUSTRATION BY JACK WILSON

WHAT IF MORE WOMEN WORKED IN AEROSPACE?

**K-State strives to reset
an entire industry**



WHEN K-STATE SALINA named its new residence hall after Amelia Earhart, it honored her status as an aviation pioneer.

But let's be clear: She's hardly the only high-flying woman in aerospace. After setting multiple flight records, Helen Richey became the first woman commercial airline pilot in 1934. Eileen Collins became the first woman to pilot a space shuttle in 1995.

And when you consider that self-taught inventor E. Lillian Todd designed and built aircraft in 1906 — only three years after the Wright brothers took flight — you'd expect women to have a serious presence in aerospace.

SO WHERE ARE ALL THE WOMEN?

The proportion of women pilots — a paltry 6% according to UNESCO — lags behind other STEM careers like doctors (44%) and engineers (21%).



PHOTO: DAVID MAYES PHOTOGRAPHY INC.

HIGH FLYERS Professional pilot students (from left) Venus Thanasouk, Yulissa Hernandez, Natalie Novak and Roxana Linares competed in a national air race.

THE PITCH

K-State women are making their mark inside the cockpit and under the hood. Two donor-driven funds propel that success:

Support women in aviation

This fund supports scholarships and initiatives that move women forward.

Aviation maintenance scholarships

A new Vanier family scholarship fast-tracks women — and men — to address the projected shortage of 12,800 aircraft mechanics over the next decade.

INTERESTED IN SUPPORTING THESE PROJECTS?

Contact us
 Galen Bunning
galenb@ksufoundation.org
 785-775-2138

Or donate online
ksufoundation.org/gfks/womeninaviation



And women make up only 2.6% of the aviation maintenance workforce, says Rebecca Lutte of Embry-Riddle Aeronautical University. Her study also shows that over the past 60 years, female representation in aviation has grown by an anemic 1% per decade.

WHY CAN'T WE SPEED THINGS UP?

K-State is on it. Our percentage of women in aviation — 14% and

growing — is more than double the national numbers.

And with two flight teams placing in the collegiate top 10 in 2023, K-Staters are building a national profile in the Women's Air Race Classic, which zigzags across 10 states in four days.

"This is a great opportunity to fly over different parts of the country you might not have seen before," said Yulissa Hernandez, a professional

pilot major from Salina. "We also have a chance to fly with and meet other female pilots and network with those in the aviation industry."

Ladies and gentlemen, we're ready for launch. ■

Pop quiz

K-State's new agriculture innovation centers will unite experts from across campus to tackle the world's biggest challenges, thanks to donors who helped raise \$125 million. How much do you know about K-State's current ag and environmental research?

1. Farmers cover their fields with plastic to prevent weeds and conserve water. But K-State researchers are testing eco-friendly, spray-on polymers to cut down on plastic waste. What are the polymers made from?

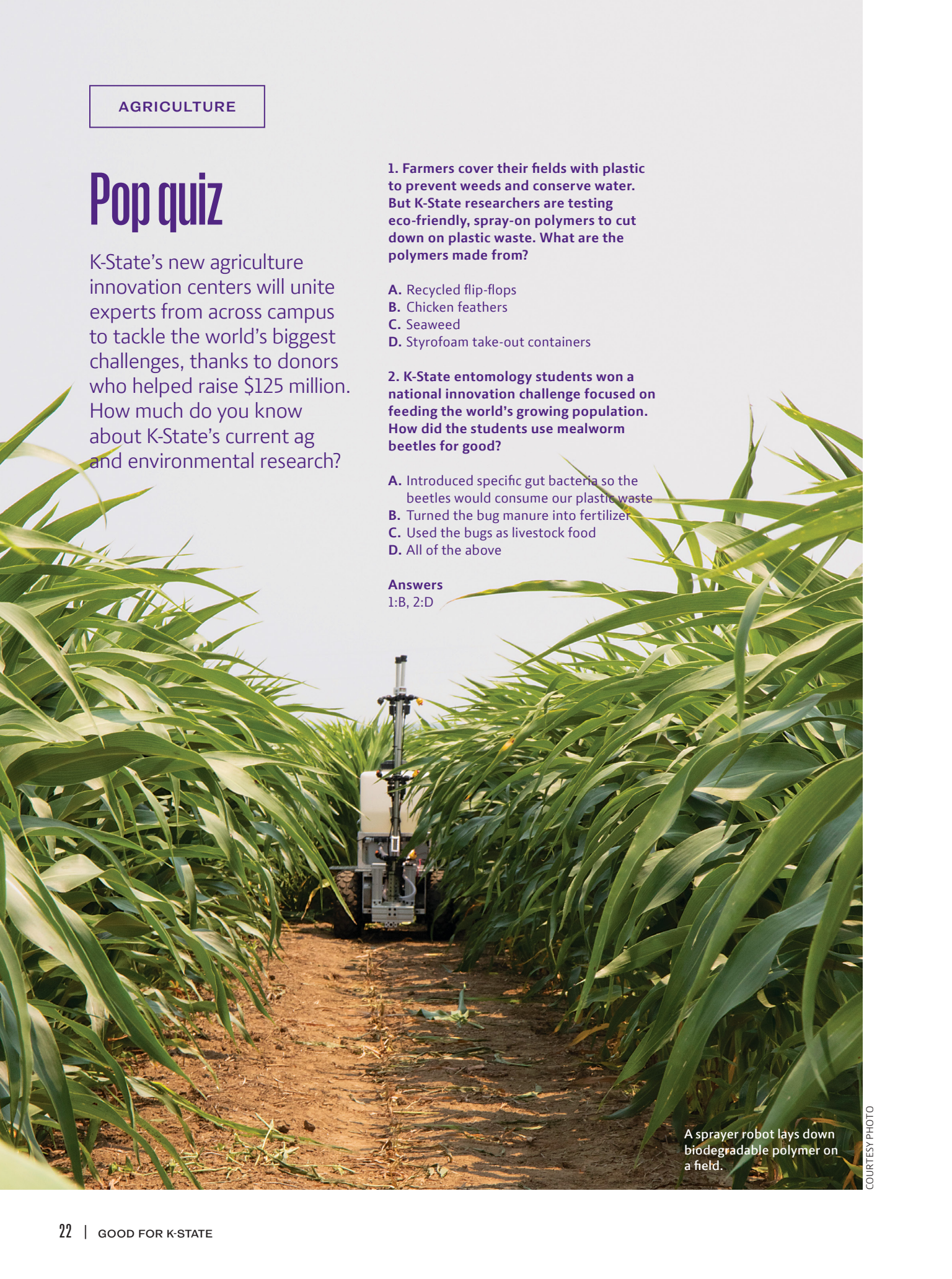
- A. Recycled flip-flops
- B. Chicken feathers
- C. Seaweed
- D. Styrofoam take-out containers

2. K-State entomology students won a national innovation challenge focused on feeding the world's growing population. How did the students use mealworm beetles for good?

- A. Introduced specific gut bacteria so the beetles would consume our plastic waste
- B. Turned the bug manure into fertilizer
- C. Used the bugs as livestock food
- D. All of the above

Answers

1:B, 2:D



A sprayer robot lays down biodegradable polymer on a field.

COURTESY PHOTO



PHOTO: DAVID MAYES PHOTOGRAPHY INC.

LEAVE YOUR LEGACY

ROCK THE HOUSE

It's more mod than *Mad Men* and *Austin Powers* combined.

That viral mid-century house that made hipsters drool when it hit the market has a K-State connection. Architect Robert Batt '51, designed the one-of-a-kind residence in Salina.

He and his wife, Maryellen, left it to K-State, which means that groovy pad will support the College of Architecture, Planning and Design for generations to come.

Have you thought about making K-State part of your family legacy?



PHOTO: REALTOR.COM

[Learn more about gift planning ksufoundation.org/gfks/batt](https://ksufoundation.org/gfks/batt)



Teachers of tomorrow

As our nation's schools become more diverse, shouldn't the instructors at the front of the classroom reflect that?

K-State's College of Education received a \$3.9 million federal grant to advance its decades-long work to diversify the teaching workforce.

Through Project RAÍCES — Spanish for “roots” — K-State partners with the University of Nebraska-Lincoln to recruit and retain teachers of color, starting in Dodge City. Project RAÍCES also expands an alternative pathway to earn a teaching license, K-State's MA in teaching.

Along with BESITOS (which recruits bilingual students into teaching), Step-Up (which helps Kansas communities grow their own teachers), and Call Me MISTER (which develops male teachers), K-State is shaping the schools of tomorrow.



[Watch how Call Me MISTER makes great teachers ksufoundation.org/gfks/mister](https://ksufoundation.org/gfks/mister)

SCHOLARSHIPS

How to beat the high cost of living

The bad news is pizza and apartments.
The good news is beer.

The 2023 Student Price Index jumped by 7.8% this year. The index, calculated by the K-State Economics Club for 20+ years, tracks college student cost of living by monitoring rent, gas, tuition, athletic tickets and groceries.

Student economists noted surges in pizza prices (+40%), ICAT tickets (+34.1%) and textbooks (+23.5%). But beer (-14.29%) and on-campus

Greek housing (-2.9%) registered declines.

BEHIND THE NUMBERS

If you're not keeping up with college costs, they've been creeping up for decades. Textbooks now come with online homework systems that cost more, not less. Pizza ingredients have gone up — as have delivery charges. The

rise in off-campus rent — up 15.1% this year — is credited to Manhattan catching up with the rest of the country.

But what drove beer's price drop? It's a mathematical quirk based on a change in how that stat is computed.

More good news: 150+ scholarships were created last year to keep K-State affordable, regardless of economic ups and downs.

STUDENT EXPERIENCE



#1

Here's something to smile about: K-State students are the friendliest in the country.

According to the Princeton Review's 2024 national survey, K-State is also tops in other areas:

- No. 1: best town-gown relations
- No. 2: happiest students
- No. 2: best alumni networks at public schools
- No. 3: best public schools for internships
- No. 4: best quality of life
- No. 5: best student support/counseling services
- No. 6: best athletic facilities

PHOTO: FJ GAYLOR PHOTOGRAPHY



Mia Wells

Scholarships make a K-State education more attainable for students who show promise and drive. With our match program, families like yours can turn dreams into reality for generations of Wildcats. The world needs more students like this.

Mia Wells, senior in education studies from Batavia, Illinois, received the Mistler Family Scholarship through the K-State Family Scholarship match.



PHOTO: DAVID MAYES PHOTOGRAPHY INC.

WHAT I'VE LEARNED

About leadership
"Being a leader is about your willingness to learn and listen in order to transform something."

About coexistence
"It's not about comparing cultures but finding aspects of cultures that mutually benefit one another."

About surviving on a student budget
"Don't live within walking distance from Starbucks. Your wallet will thank you."

THE PITCH

Double your impact with a Vanier family scholarship match.

 [Learn more](https://ksufoundation.org/gfks/familyscholarship)
ksufoundation.org/gfks/familyscholarship



How has this scholarship brought you closer to your career aspirations?

"My dream is to run a nonprofit for adults with profound special needs. This funding allowed me to focus less on work and take advantage of once-in-a-lifetime opportunities such as serving three weeks at a nonprofit for children with special needs in Guatemala. The experience brought me closer to reaching my full potential — and my nonprofit dream."

What surprising talent did you discover while studying at K-State?

"As a learning assistant with K-State First and the Academic Achievement Center, I've learned that not only do I love building relationships with my students, but that I have a talent for finding their strengths. Whether they're struggling academically, socially or emotionally, I've helped them discover their potential and find their place at K-State."

What do you know now that you wish you knew as a freshman?

"That change is uncomfortable. But when you come out on the other side you're a stronger leader, learner and overall person. Becoming comfortable in a position is a signal that you need to leave your comfort zone again, whatever that looks like." ■

SERVING UP HOPE

A new, spacious K-State food pantry taps into a vital need for access to healthy and affordable food

BY MARISA LARSON

TALK ABOUT AN UPGRADE! What started six years ago as a modest set of shelves in Fairchild Hall's basement is now a spacious store in a highly visible spot on campus.

When the new Cats' Cupboard food pantry opened this fall, students lined up outside the building.

Why such a crowd? Nearly 40% of K-State students report not having enough food

on a consistent basis to live a healthy, active life.

Cats' Cupboard provides free food and essentials to students, faculty and staff, removing one barrier to success.

"Students come to K-State to better themselves and to better their lives," said Shelly Williams, Morrison Family Director of Cats' Cupboard. "They're working hard, trying to focus on their classes, enjoying

the culture and making those relationships that will enhance their lives both professionally and personally. They shouldn't have to worry about not having enough to eat."

YOU MAKE A DIFFERENCE

The new facility, across from the Carl R. Ice College of Engineering, was made possible by a lead gift from David and Tracy Lockton. A combination of grants and gifts

from individuals and corporations keep the pantry's shelves stocked.

The growth of Cats' Cupboard is a testament to caring donors like you. But it's also a sign of continuing need. The pantry accepts donations of food, kitchenware and money and appreciates volunteer help with stocking shelves and greeting shoppers. ■



PHOTOS: DAVID MAYES PHOTOGRAPHY INC.





THEN AND NOW

800 square feet

8,000
square feet

70 shoppers a day

200
shoppers a day

PLUS

Parking lot
Loading dock for deliveries
Warehouse storage

Learn how you can help
ksufoundation.org/gfks/catscupboard







ARTS

A BIG STEP UP

Most people try to pack in as many steps in a day as possible.

BUT FOR K-STATE marching band members, their new home saves them more than 31 million steps. That's how many total steps it took to get the 400-piece band from McCain to the practice field at Memorial Stadium during one season.

Thanks to a lead gift from Ward and Brenda Morgan, and hundreds of other donors, the Tracz Family Band Hall resides in the renovated west side of Memorial Stadium, right next to the band's practice field.

Now that all the band instruments, uniforms and gear live in one place, band members get their steps in by practicing their formations and not from schlepping their gear across campus. ■

[▶ Watch a band member describe the new hall
ksufoundation.org/gfks/bandhall](https://ksufoundation.org/gfks/bandhall)



PHOTO: DAVID MAYES PHOTOGRAPHY INC.

Tic-tac-toe for dough

KSU Foundation trustees surprise students with substantial scholarships

BY MARISA LARSON

SANTA CLAUS HAS ELVES. Cinderella has a fairy godmother. Kansas State University has trustees!

Who makes up the KSU Foundation Board of Trustees, you ask? Volunteers who serve as K-State's premier advocates, ambassadors and investors. For more than 70 years, these men and women have generously given their time and resources to boldly advance K-State.

As part of their commitment, trustees contribute to the Trustee Excellence Fund (TEF), which is used to seed-fund projects that represent emerging opportunities or address student and campus needs. Past TEF contributions have supported the Cats' Cupboard, the Open/Alternative Textbooks initiative, strategic enrollment management, K-State Proud and the Flip This Classroom initiative. Beyond their collective



PHOTO: DAVID MAYES PHOTOGRAPHY INC.

SLAM DUNK With shrewd strategy and not-bad lay-ups, Kate Carney, left, won a \$4,000 scholarship. Erin Huff, right, received a \$1,000 scholarship for playing.

games to play Trustees Tic-tac-toe to win a scholarship. Unlike typical tic-tac-toe, this on-court version requires scoring some baskets — and there are no losers! Both students come away winners, with a combined gift of \$5,000 divided between them.

impact, trustees also give generously to a variety of programs they care about as individuals. In fiscal year 2023 alone, trustees contributed more than \$50 million to K-State people and programs.

TRUSTEES TIC-TAC-TOE

Now trustees are using the TEF to make a K-State education more affordable. During basketball season, they'll choose two lucky students at selected home

**KSU FOUNDATION
SUCCESSSES IN
FISCAL YEAR 2023**

\$226.4M

Raised in gifts and commitments

152

New scholarships created

30%

Increase in scholarship dollars made available since FY20

 [Learn more about trustees ksufoundation.org/gfks/trustees](https://ksufoundation.org/gfks/trustees)



YOUR turn

Keep K-State moving ahead





PHOTO: STEFANIKOLIC/E+ VIA GETTY IMAGES

HELPING EVERY KANSAN

**From Hugoton to Hiawatha,
extension programs
improve Kansas life far
beyond the farm**

What is one thing that every Kansan has in common? They have access to information that improves their lives through K-State Research and Extension (KSRE). From mapping out a household budget to choosing the best Medicare plan to taking the extra calories out of cooking without losing taste to growing prize-winning tomatoes, KSRE is in every county to make Kansans' lives better.

YOU MAY THINK KSRE is just for farmers, live-stock producers and 4-H youth. While those are an important aspect of extension agents' work, your local extension office and the statewide network of KSRE scientists, educators and volunteers are there to improve Kansans' lives, livelihoods and communities through education, research and leadership.

Want a greener lawn without using lots of water and fertilizer? How about planning meals that are easy on the pocketbook and a hit with the family? Or finding the best way to pass on personal possessions? Resources for these topics and a variety of others are available online through the KSRE website, bookstore and course catalog. You can also attend workshops in person and online to participate in K-State's goal to create a bright future for all.

YOUR TURN

You can make a difference in your life — and the lives of 2.94 million Kansans — by supporting the work of K-State Research and Extension.

 **Donate online**
ksufoundation.org/gfks/ksre



HEALTHY LIVING
 Extension classes teach Kansans how to tweak family recipes to make them diabetic-friendly.

PHOTO: K-STATE RESEARCH AND EXTENSION



THINK BEYOND THE SHIRT

When thousands of students paint Bramlage purple by wearing K-State Proud T-shirts, please remember: it's not about the shirt. This student-run fundraiser — every donor gets a shirt — helps K-Staters in dire situations: when they're in a car wreck, when their apartment burns down, when they lose a parent.

K-State Proud has thrown a lifeline to 900+ students so far. Will you help us reach even more?

 **Donate online**
ksufoundation.org/gfks/proud



IMPROVE FINANCIAL FUTURES

K-State's vision of financial education for all took a big step when All In raised \$1 million in 2023. Powercat Financial, a renowned peer-to-peer program that teaches money management, was able to double its counseling staff in 90 days.


If your college memories include some financial missteps, maybe it's time to help today's K-Staters make smarter decisions.

 **Donate online**
ksufoundation.org/gfks/financialfutures



WHAT SHOULD K-STATE FOCUS ON NEXT?

- Rural schools
- Economic development
- Healthy communities
- Something else?

 **Tell us what matters to you**
ksufoundation.org/gfks/advance



CONTACT US

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 785-775-2146

BOLDLY ADVANCING K-STATE


1800 Kimball Avenue, Suite 200
Manhattan, Kansas 66502-3373

CHANGE SERVICE REQUESTED



Peer into the future

You don't need a crystal ball to see K-State's future. A multi-year strategic plan unveiled this fall charts a new course: experiential learning for all students, a water research institute, new certifications that grow our learner population, and much more.

 See the vision
ksufoundation.org/gfks/nextgen



CHEAT SHEET

Want to be a dazzling conversationalist even though you haven't read this magazine (yet)?

Drop these fab facts during your next staff meeting or cocktail party:

New American houses average 2,333 square feet, up from 1,590 in 1976. **P. 8**

K-State's new centrally located band hall saves band members 31 million steps per season. **P. 28**

Experts project a shortage of 12,800 aircraft mechanics over the next decade. **P. 20**

Cats' Cupboard food pantry serves 200 shoppers per day in its new building, almost triple its previous traffic. **P. 26**

K-State is renovating 67 classrooms across campus. **P. 16**

The cost of beer is down 14.29% (but pizza is up 40%), according to the 2023 Student Price Index. **P. 24**