



IMPACT REPORT

JULY 1, 2023 – JUNE 30, 2024



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LETTER FROM THE PRESIDENT



Terry Samuel
KSTC President

Dear Supporter,

It's been an incredible year for the Kentucky Science & Technology Corporation. By fostering an environment where knowledge, talent and innovation flourish, we've advanced toward our vision of the future – one where Kentucky is recognized as a national and international leader in innovation and technology-based economic development.

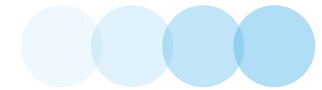
As we move toward making this vision a reality, we've secured new federal funding and highly competitive grants, including two National Science Foundation (NSF) Awards through the NSF GRANTED and NSF Engines programs. We've launched new initiatives with our close partners including Invest Blue with University of Kentucky and NSF AMT – an additive manufacturing project with University of Louisville and the Kentucky Community and Technical College System. And we supported Kentucky State University in securing the largest-ever federal research grant received by the institution.

We've traveled nationally and internationally to recruit top-notch talent

to fill workforce needs for Kentucky employers through our KY VALOR program. And we've received national recognition for our team members and programs with awards including the National Science Board Science and Society Award and the Department of Defense Nunn-Perry Award.

I encourage you to read about these accomplishments and more in the following report. Yet, the metrics and stories included here only scratch the surface of what we've achieved and the potential of what lies ahead for KSTC and Kentucky. I could not be more proud of our team, our organization and our partners.

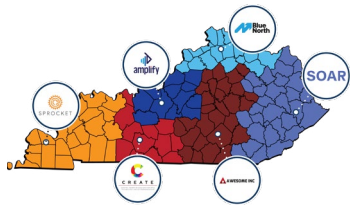
Sincerely,



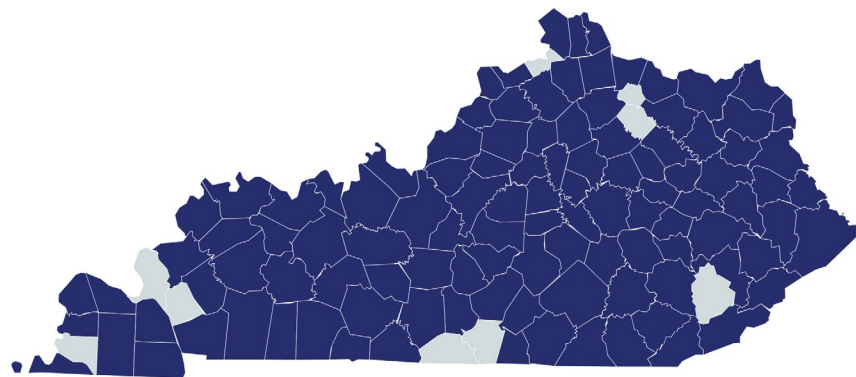
KENTUCKY SCIENCE & TECHNOLOGY CORPORATION

Since its founding in 1987, the Kentucky Science & Technology Corporation (KSTC) has been a pioneering force in driving science, technology, and innovative economic development throughout Kentucky. Our mission is to cultivate knowledge, talent and innovation, ultimately propelling the state’s growth and competitiveness on a national and global scale.

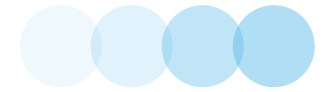
Current Initiatives



Resources for All Kentuckians



KSTC’s services and programs are available to all Kentuckians. In addition to offices in Lexington, Louisville, Covington, Bowling Green and Elizabethtown, our team is located throughout the state. We oversee Kentucky’s six regional Innovation Hubs, partner with Kentucky’s 24 public higher education institutions, and work with schools and clients in 111 counties.



THANK YOU TO OUR PARTNERS

Funders & Donors

- Central Bank & Trust Company
- Charter Communications
- Code.org
- Computer Science Teachers Association
- DeSalvo & Co CPAs
- Expanding Computing Education Pathways Alliance
- Fayette County Public Schools
- Kentucky Department of Education
- Kentucky Department for Local Government
- KY Innovation at the Kentucky Cabinet for Economic Development
- Jane and Terry Samuel
- Joanne Lang
- Legal Advantage
- Lexington-Fayette Urban County Government
- Lexmark International
- The Lighthouse Beacon Foundation
- Raytheon
- U.S. Department of Defense Office of Small Business Programs
- U.S. Department of Treasury
- U.S. Economic Development Administration
- U.S. National Science Foundation
- U.S. Small Business Association

With Support From

- Amplify
- Appalachian Regional Commission
- Awesome Inc
- Blue North
- Bowling Green Chamber of Commerce
- College Board
- Commonwealth Seed Capital
- CREATE
- CSforALL
- CS/IT Academy
- Eastern Kentucky University
- Greater Owensboro Economic Development
- Kentucky Bar Association IP Section
- Kentucky Commission on Military Affairs
- Kentucky Community and Technical College System
- Kentucky Council on Postsecondary Education
- Kentucky Department of Veteran Affairs
- Kentucky Highlands Innovation Center
- Kentucky State University
- Launch Blue
- Morehead State University
- Murray State University
- National Math & Science Initiative

- Northern Kentucky University
- SOAR
- Southeast Kentucky Economic Development
- Sprocket
- Stites & Harbison
- University of Kentucky
- University of Louisville
- U.S. Copyright Office
- U.S. Intellectual Property Alliance
- U.S. Patent and Trademark Office
- Western Kentucky University
- Zoeller Pump Co.



Senator Chris McDaniel, Evan Knowles, Logan Jones and Monique Kuykendoll Quartermaster at the 2024 KY Backed event.

KENTUCKY'S RISE AS A LEADER IN INNOVATION

In our pursuit to position Kentucky as a national and international leader in innovation and tech-based economic development, KSTC is cultivating an environment where knowledge, talent and innovation thrive. Over the past year, we have made significant strides in elevating Kentucky's profile in these areas, with notable achievements that underscore our commitment to fostering a vibrant innovation ecosystem.

Securing a \$1 Million NSF Engines Development Award

The National Science Foundation (NSF) awarded KSTC a \$1M NSF Engines Development Award to advance additive manufacturing in Kentucky through a project called NSF AMT. The award provides funding to help partners create economic, societal and technological opportunities for their regions, setting them up to compete for an NSF Engines award of up to \$160M – the largest award ever offered by the NSF.

“By focusing on advancing sustainable additive manufacturing technologies, this project has the potential to support expansion and attract companies and additional high-wage, high-skilled jobs for our commonwealth,” said Kentucky Gov. Andy Beshear. “These kinds of initiatives add to the remarkable strides being made by Kentucky’s entrepreneurs, companies and colleges and universities

toward building our state’s future economy. Congratulations to the AMT team for securing this award and both demonstrating and improving Kentucky’s competitiveness and capacity for research and innovation.”

KSTC’s initial proposal was recognized as a finalist from nearly 200 national applications for an NSF Engines award. The NSF invited KSTC to pursue an NSF Engines Development Award based on the merits of the initial Type-2 application. The NSF AMT award will be used by KSTC and funded partners University of Louisville and the Kentucky Career and Technical College System to strengthen partnerships and proposed models in order to secure future NSF Engines funding.



These kinds of initiatives add to the remarkable strides being made by Kentucky’s entrepreneurs, companies and colleges and universities toward building our state’s future economy. Congratulations to the AMT team for securing this award and both demonstrating and improving Kentucky’s competitiveness and capacity for research and innovation.”



ANDY BESHEAR
Governor of Kentucky

KCV Receives \$8.25M from the NSF to Boost Kentucky's Research Infrastructure

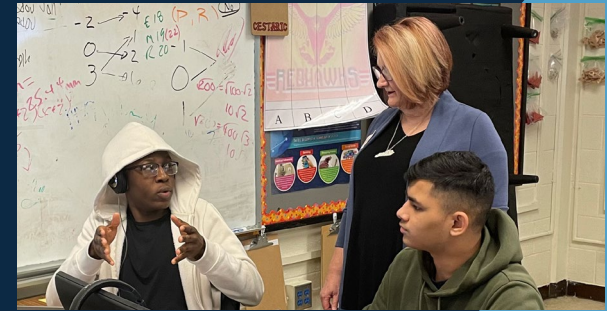
Another significant achievement came with Kentucky Commercialization Ventures (KCV) EDGE receiving \$8.25M to bolster research grant infrastructure at Kentucky State University, Morehead State University and Northern Kentucky University. The funding will enhance Kentucky's capacity for cutting-edge research and commercialization and will address inequities in research funding. This investment underscores KSTC's ongoing efforts to support and expand Kentucky's research and innovation capabilities.

"The GRANTED award is exactly the type of investment in our HBCU that we have been advocating for locally and nationally," shared Kentucky State University President Koffi Akakpo. "It will significantly impact KSU's capacity to compete for research grants and expand our involvement in the research enterprise."

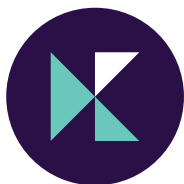
National Recognition Highlights Kentucky's Excellence in Innovation

This year, two Kentucky educators were honored by the National Science Board for their exceptional contributions to science and technology education with the Science and Society Award. AdvanceKentucky STEM Coordinator Sheri McGuffin and Somerset Community College Professor Eric Wooldridge received the award for creating high-impact, accessible additive manufacturing educational training programs that have reached over 5,000 students, 201 teachers, and 140 schools across the state.

We received additional recognition when the Kentucky APEX Accelerator was honored with two Nunn-Perry Awards from the Department of Defense for their work supporting two teams in the Mentor-Protégé Program. Only six teams received the award nationally. This is the second year in a row that the Kentucky APEX Accelerator has been recognized with this award.



Top: AdvanceKentucky's Sheri McGuffin talks with Seneca High School students about their 3D printing projects. Middle: Sheri McGuffin and Eric Wooldridge (middle) pose with National Science Board Chair Dan Reed and NSF Director Sethuraman Panchanathan at the National Science Board awards gala. Bottom: J.C. Watkins (far right) accepts the Nunn-Perry Award on behalf of the Kentucky APEX Accelerator.



**KENTUCKY
COMMERCIALIZATION
VENTURES**

kycommercializationventures.com

Kentucky Commercialization Ventures (KCV) is an unprecedented engine for statewide innovation, empowering ideas that impact lives and transform the commonwealth. As a science and technology public-private partnership, we bring guidance, opportunities, resources and programs to higher education institutions across the state that do not have dedicated tech transfer resources, turning their research into products, services, startups and investments supported by intellectual property (IP).

Our programs include fellowships, internships, entrepreneurial training

programs and funding to reduce barriers to research and commercialization resources as well as to advance innovations. This year we've expanded our services to build institutional capacity for pursuing, securing and administering federal research grants through a program funded by the National Science Foundation (NSF) – KCV EDGE.

KCV EDGE builds on the success of our centralized technology transfer resources and leverages partnerships to build competitiveness and capacity in regional institutions for securing and managing research grants. The KCV EDGE model of shared, scaled services acts as a cost-

effective, operational, and inclusive growth mechanism for partner institutions by providing lean, targeted approaches to commercialization, funding, and partnership opportunities. The potential impact is immense for regional, rural, minority-serving, and technical institutions, enhancing the research landscape for developing research institutions across the country and building communities of success for future generations.

**Partner
Institutions:**





Clockwise from top left. KCV Executive Director Kayla Meisner with Governor Andy Beshear and former KY Innovation Executive Director Monique Kuykendoll Quarterman at the WKU Innovation Campus; Jericho Wilkerson, Licensing & New Ventures Manager, with KCV-supported innovators, Dr. Kimberly Greene and Dr. Daniel Boamah, at WKU; Myron Adams, Licensing & New Ventures Manager, with KCV-supported innovator, Dr. Nicholas Caporusso, at NKU; KCV team and partners at Kentucky State University engaging with students during the 2023 KCV Roadshow; Wilkerson with James Wilson, USPTO Midwest Regional Office Acting Regional Director, at Morehead State University Space Science Center.



Addressing Inequities in Research Funding

The NSF awarded more than \$8.25M to KCV for a program that addresses inequities in academic research funding by supporting underrepresented higher education institutions with research infrastructure. The project, Granting Emerging and Developing Institutions a Competitive EDGE (Equitable and Diverse Grant Ecosystem) – KCV EDGE, provides holistic support for research grant administration to partner institutions Kentucky State University, Northern Kentucky

University and Morehead State University.

The program builds on KCV’s centralized technology transfer services for Kentucky’s public colleges and universities. KCV EDGE also leverages partnerships with the Kentucky Cabinet for Economic Development, University of Louisville, University of Kentucky and others to build competitiveness and capacity in regional institutions for securing and managing research grants.



KCV Team with USPTO Deputy Director Derrick Brent at 2023 Licensing Executive Society Annual Meeting.

“This award is a testament to the work of Kentucky Commercialization Ventures and the many higher education researchers who are already creating opportunities for Kentucky to build upon the economic momentum we’re experiencing throughout the state,” said Governor Andy Beshear. “We know there are great ideas coming from faculty, staff and students on campuses across Kentucky. By helping all of our postsecondary institutions succeed in pursuing additional research funding, KCV EDGE will strengthen Kentucky’s competitiveness as a center for research and innovation while creating high-quality jobs in the region.”



We designed KCV EDGE to dismantle these barriers and give our regional, rural, minority-serving, and community and technical institutions a competitive advantage when pursuing federal research grants. Through their success, we can transform research infrastructure in the commonwealth and beyond.



KAYLA MEISNER
KCV Executive Director



2023-24 Successes

69

Presentations

18

Ideas

11

Total Proposals Submitted

820

Coaching Sessions

1

IP Assets

3

Led by KCV

6

Supported by KCV

546

Academic

274

Non-Academic

1

Patent Cooperation Treaty
Application Filed

2

KCV-Assisted
Partners

789

Opportunities Shared
with Partners

1

Commercialization Transaction

\$17.11M

Total Value of Proposals Submitted

12

Success Stories

\$8.26M

Secured



kyipa.org



Eddie Fieldhouse, founder and CEO of The Kentucky Hug, providing opening presentation at KYIPA/USPTO Spirits & IP: Bourbon Event in Louisville, KY.

The Kentucky Intellectual Property Alliance (KYIPA) is a community of inventors, attorneys, businesses, nonprofits, artists, educators and tinkerers who believe in the power of intellectual property (IP) to protect the innovations developed in Kentucky. The alliance’s mission is to facilitate the creation, protection and advancement of intellectual property in Kentucky by serving as a connecting

organization for statewide companies, organizations and innovators.

KYIPA was founded in 2021 through an agreement between the United States Intellectual Property Alliance (USIPA) and the Kentucky Science & Technology Corporation (KSTC). Several organizations have supported KYIPA since its founding, including the Kentucky

Cabinet for Economic Development and its KY Innovation team, University of Louisville, University of Kentucky, and KSTC’s Kentucky Commercialization Ventures initiative. Kentucky was one of the first states to establish an affiliated state intellectual property alliance and is now one of 18 such organizations nationally.



Key Metrics

187

Members

3

Virtual Events

4

In-Person Events

7

Web Resources Created

73

Legal Consultations &
Education Sessions

Bourbon & IP: A Perfect Pairing

In November 2023, KYIPA held Spirits and Intellectual Property: Bourbon with partners at the United States Patent and Trademark Office (USPTO). The event was held in person in Louisville along with a virtual attendance option. Guest speakers and panelists discussed the history of bourbon in Kentucky, the importance of brand protection for spirits, trends in sustainability, and spirits-related patenting and licensing.

Following an afternoon of sessions, we hosted a networking event and social hour at the Frazier History Museum, including a bourbon tasting and fireside chat featuring USPTO's James O. Wilson and Kentucky Distillers Association's Jessica Pendergrass.

In all, more than 300 people participated in the event which was deemed so successful by the USPTO that additional Spirits and Intellectual Property sessions were introduced.



Top: USPTO and KCV team members at the KYIPA/USPTO Spirits & IP: Bourbon Event. Bottom: Jessica Pendergrass (Kentucky Distillers Association), James Wilson (USPTO), Ricky Mason and Chris Redd (Network N' Chill) during fireside chat on IP and Bourbon at the Frazier History Museum.



**KENTUCKY SCIENCE &
ENGINEERING FOUNDATION**

ksef.kstc.org

The Kentucky Science and Engineering Foundation (KSEF) is elevating Kentucky's competitiveness in pursuing federally supported research grants and contracts, including Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. These programs, also known as America's Seed Fund, are highly competitive and the sole source of non-dilutive federal funding for small businesses.



The KSEF team at the 2024 America's Seed Fund Road Tour.

KSEF prepares small businesses to compete for federal awards and provides support through proposal accelerators and microAwards that allow businesses to prepare a stronger SBIR/STTR application. With our support, Kentucky small businesses received more than \$15M in federal SBIR/STTR grants in 2023.

KSEF receives funding from the Kentucky Cabinet for Economic Development and is designated as Kentucky's U.S. Small Business Administration Federal and State Technology (FAST) Partner. We also work with R&D organizations such as the NSF EPSCoR Jurisdictional Committee to support Kentucky's Science & Technology Plan and support R&D endeavors across the state, including Kentucky State University's recent \$7M award from the NSF. We continue to seek funding for collaborative R&D for critical efforts in climate change and more.

2023-24 Successes

220

Companies Received Consultations

1,149

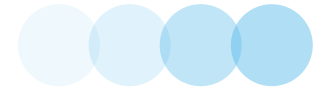
Total Consultation Hours Provided

5

Proposals Submitted by KSEF Team

\$16.5M

Potential Award Amount of
Proposals Submitted



Proposal Labs

8

Agency-Specific Proposal Labs
Representing 7 Federal Agencies

77

Participating Companies

20	1	11
DOD	DOE	USDA

30	15
NIH	NSF

99

Proposals with Intention to Submit

MicroAwards

40

Applications Received

18

Contracts Executed

\$90,000

Funds Committed

\$5,000

Average Award Amount*

Federal Awards

35

2023 Total Awards

26	9
(\$6.2M)	(\$8.9M)
Phase I	Phase II**

**The 9 Phase II Awards resulted from 20 Phase I Awards in 2022, a 2.2:1 conversion ratio

\$15.1M

2023 Federal Awards

*Average award amount is based on requested reimbursement and does not equal total of funds committed.



Connecting Kentucky Entrepreneurs to America's Seed Fund

In May 2024, KSEF hosted the regional stop of the U.S. Small Business Administration (SBA) America's Seed Fund Road Tour. The Road Tour connects entrepreneurs working on advanced technology to the country's largest source of early-stage funding. America's Seed Fund provides over \$4 billion in funding known as America's Seed Fund.

America's Seed Fund Road Tour plays an important role in increasing engagement between entrepreneurial ecosystems across the country and federal agencies who fund SBIR/STTR awards, resulting in greater networks to support the small businesses focusing on high-impact research. More than 200 people from 7 states attended, including representatives from 15 federal agencies.

"We really appreciate working with our local partners like KSTC and view this as a catalyzing event," said Erick Page-Littleford, acting director of the SBIR/STTR program office at the SBA. "We start here but once we leave, these entrepreneurs are able to work with our local FAST partners to continue their journey and access America's Seed Fund."



The 2024 America's Seed Fund Road Tour brought together more than 200 attendees and 15 federal agencies.



Clockwise from Top Left: Entrepreneurial mentors network at the 2024 America's Seed Fund Road Tour; Representatives from the USPTO consult with innovator in a one-on-one meeting; Erick Page-Littleford, director of the U.S. SBA Office of Investment & Innovation, speaks with America's Seed Fund Road Tour attendee.

KNOWLEDGE AS A DRIVER FOR INNOVATION

We must understand big challenges to boldly address them, and by increasing access to and building capacity for the pursuit of knowledge, KSTC is developing the expertise to solve challenges in Kentucky and beyond. We're reducing barriers to research, creating an environment that encourages creativity and helping Kentuckians safeguard their innovative ideas.

Establishing Kentucky as a Hub for Soilless Plant Production

The Kentucky Science and Engineering Foundation (KSEF) played a crucial role in securing Kentucky State University (KSU) its largest-ever federal research grant—a remarkable \$7 million from the National Science Foundation (NSF). The project, Driving AgTech Research and Education in Kentucky (DARE-KY), will establish Kentucky as a hub for soilless

plant production methods including hydroponics and aquaponics — a rapidly growing sector of AgTech that could revolutionize food production. By collaborating with various state partners including KSEF, KSU's endeavor will not only investigate these innovative agricultural technologies but also train the next generation to harness their potential.



Leaders and partners on the Driving AgTech Research and Education in Kentucky (DARE-KY) grant pose at the Kentucky State University press announcement.



Empowering the Next Generation of Innovators

Kentucky Commercialization Ventures (KCV) works not only with university faculty and administrators, but also empowers students to bring their innovative concepts to life. Boaz Burnett, a student at Murray State University, received help from KCV in pursuing his big idea. Burnett began by attending UNITE's CAMP 2030, a pivotal national event for aspiring innovators through a sponsorship from KCV's GOAL Fund. He then completed KCV's Innovation Fellowship where he received mentorship, knowledge and the skills needed to further his innovation, CineSolo. CineSolo is a mobile-first wireless touchscreen monitor. Similar to the flip-out displays found on many cameras, this device is designed to reduce creative friction and allow for more control of filming.

Top: Boaz Burnett (second from left) poses with team members at Unite 2020. Bottom: Governor Andy Beshear signed this proclamation naming October 2023 Intellectual Property Month.



Recognizing the Importance of Intellectual Property in Kentucky

In October 2023, Governor Andy Beshear issued a proclamation to declare October as Intellectual Property Month in Kentucky. Intellectual property (IP) is critical to our thriving innovation ecosystem and bolsters Kentucky's growing economy by incentivizing investment in knowledge and inventions that drive social and economic impact. Through strong public-private partnerships with KY Innovation, KSTC and its Kentucky Intellectual Property Alliance, well as many other public and private partners, the Commonwealth of Kentucky is creating an equitable intellectual property ecosystem that encourages and protects ideas generating the most social and commercial good from industry leaders, inventors, creators and entrepreneurs.



advancekentucky.com

AdvanceKentucky works with school districts across the Commonwealth to increase enrollment and success in STEM classrooms. We focus our efforts on critical areas that provide opportunities for students as they transition through their academic career. Our three main programs, College Readiness Program, Access to Algebra and Computer Science Initiatives, provide professional development, mentoring and student recruitment.

Program Impact To Date

6,300

Teachers Served

155,000+

Students Enrolled

\$29.1M

Earned through Student Incentives,
Teacher Stipends and Tuition Value



AP Computer Science Principles consultant Brande Jones works with teachers at Fall Forum.



AdvanceKentucky’s College Readiness Program increases the number of students enrolling in and earning qualifying scores in AP mathematics, science, English, Capstone, and computer science courses. We strengthen the teaching of these courses through initiatives such as student exam prep sessions and teacher professional learning experiences – including an AP Master Series that has brought together over 400 teachers representing 43 states and 9 countries. We also introduced a special cohort of 1,200 students and 32 teachers from 29 high schools to support the rollout of the new AP Precalculus course. Teachers received high-quality professional development and students were able to attend a regional AP Exam Prep Session.



Left: AP Precalculus consultant Julie Harrison works with students at an AP Exam Prep Session hosted by Eastern Kentucky University. Right: Students learn about Eastern Kentucky University at an AP Exam Prep Session.

2023-24 Successes

41

Schools Served

99

Courses Served

2,428

Students Served



Access TO Algebra

Access to Algebra is a three-year program incorporating training, incentives and funding to increase participation and success in 8th grade Algebra and other accelerated math courses, especially for students traditionally underrepresented in advanced courses. The program’s ultimate goal is to increase the number of students prepared for advanced STEM coursework in high school. This year, Access to Algebra worked alongside the Kentucky Department of Education to support House Bill 162—the

Numeracy Act— which was passed in the 2024 Legislative Session. The Numeracy Act provides funding to expand the number of participating schools, additional middle school math LTF trainings, the creation of a mentoring program, and the formulation of an Algebra I Cohort of teachers. As a result of the Numeracy Act, AdvanceKentucky has been appointed to the Statewide Committee for Mathematics Achievement, providing input on math education policies in Kentucky.



Left: Math teachers from Hopkins County examining rate of change. Right: Grace James Academy for Excellence teachers completing Unit Dog lesson from Laying the Foundation.

2023-24 Successes

576

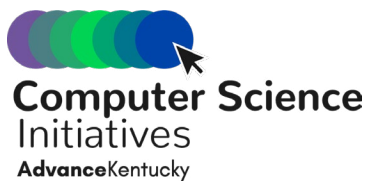
8th Grade Students Met College Readiness Benchmark on PSAT 8/9

73

Middle School Math Teachers Trained

\$72K+

Awarded in Student and Teacher Incentives



The Computer Science Initiatives program is making computer science education available for all Kentucky students by serving as the regional partner for Code.org, helping school districts deploy computer science plans and preparing teachers to teach computer science. This year, the team held the first-ever Coding at the Capitol event in Frankfort and collaborated with the University of Louisville, Kentucky Department of Education and Lighthouse Beacon

to develop a new a CS+Engineering professional development program that aims to make engineering education more accessible to middle and high schools across the state. This initiative focuses on equipping educators with comprehensive training and curriculum resources to effectively teach the Engineering by Design curriculum made available through International Technology and Engineering Educators Association.



CS+Engineering facilitator Stephen Drawbaugh of Oldham County and Engineering I teacher Travis Smith with AdvanceKentucky STEM Coordinator Sheri McGuffin tour UofL's Engineering Garage.

2023-24 Successes

201

Teachers Participated in 3D Printing Professional Development

15

Teachers Completed the 3D Printing Technician Certification

58

Teachers Completed Engineering by Design Training in Partnership with Kentucky Department of Education



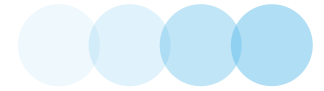
kyapex.com

The Kentucky APEX Accelerator promotes inclusive economic development across Kentucky by assisting companies in the process of providing products and/or services to federal, state and local government agencies. We accomplish this mission by coaching, training and equipping businesses with the tools they need to succeed in government contracting. Our services also include increasing access to subcontracting opportunities and facilitating opportunities for small businesses to work with large prime contractors.

Our support extends to all 120 counties across the commonwealth, with regional offices in Lexington, Morehead, Covington, Louisville, Elizabethtown, Bowling Green and Paducah. We are the only program in the state specifically designated to assist businesses in securing government contracts and/or subcontracts at no cost to the client.



Left: Kentucky APEX Accelerator team members Anna Leigh O'Brien and Jon Olsen networking at an outreach event hosted by Lexington-Fayette Urban County Government. Right: Team members Lynn Louis and Eric Byrd hosting an exhibitor table at the 2023 SOAR Summit in Corbin.



2023-24 Successes

2,894

Active Clients

421

New Clients

93

Counties Served

57

Training Events

1,202

Training Event Attendees

3,835

Consulting Hours

\$737.6M

in Federal Contracts

4,693

Federal Contracts

\$3.07B

in Non-Federal Contracts

373,092

Non-Federal Contracts



Kentucky APEX Accelerator Executive Director Nancy Brown speaking at the 2024 CDA graduation ceremony on UK's campus.



The graduates deserve the highest praise for effectively leveraging the knowledge and opportunities offered through the CDA, significantly increasing their chances of success in the competitive world of contracting in the Kentucky region and beyond.



NANCY BROWN
Kentucky APEX Accelerator
Executive Director

Helping Construction Businesses Compete

In May 2024, twenty participants completed the 2024 Construction Diversity Accelerator (CDA), a 10-week program designed to give underrepresented construction businesses the skills needed to be competitive in their industry. This year marked the third cohort to participate in the accelerator, which is hosted by the University of Kentucky (UK), Turner Construction and the Kentucky APEX Accelerator.

CDA participants completed a capstone project — a mock bid proposal on an active Turner Construction project on UK's campus. In addition to submitting written mock bid proposals, project teams also participated in a post-bid interview with a committee of industry experts.

Seven Kentucky APEX Accelerator consultants supported this year's participants throughout the program and provided more than 75 hours of one-on-one coaching specific to each company's unique needs and goals. Areas of assistance included business readiness assessments, finalizing a business capability statement, registration in government systems and completing government certifications. Over the course

of the program, we also shared more than 150 local bid notices for construction and related trades through our Bid Match service, which pairs clients with contract opportunities in their industries and regions.

As a result of coaching received through the CDA, 10 businesses became eligible to compete for local and state government contracts and two participants were awarded new federal contracts. Additional companies are working toward eligibility, completing government certifications and receiving ongoing training as they pursue government contracts.

These successes reflect the goal of the CDA to foster continued growth for participating businesses beyond graduation. This year's graduates entered a network of alumni with access to upcoming contract opportunities, training events and other resources made available by the Kentucky APEX Accelerator, Turner Construction and UK in collaboration with various community partners.

Right page: Nancy Brown, Anna Leigh O'Brien, and Terry Samuel with graduates of the 2024 CDA cohort, program partners from UK and Turner Construction, and other community resource partners who supported the program.





kyvalor.com

Kentucky VALOR (Veterans Accelerated Licensure Occupational Recruitment) launched in 2022 to help transitioning service members find meaningful employment in the commonwealth. Our team travels nationally and internationally to recruit service members and their spouses to build a unique talent pipeline across the state. Ultimately, we bridge the gap between job-seeking veterans and employers.

KY VALOR also helps veterans use their military experience and education to obtain licensures and certifications through 44 accelerated pathways only available in Kentucky. These exclusive pathways were developed under a grant from the U.S. Department of Labor and

lead to 55 licensed/certified occupations covering more than 180 Military Occupational Specialties. Kentucky is one of only three states with these military-friendly pathways.

We partner with employers throughout the state to connect veterans with high-paying, fulfilling careers. With a one-on-one, personalized approach, we match transitioning service members with jobs and communities based on their unique career goals, financial concerns and family needs. Military spouses can also register to receive this free support.



KY VALOR Executive Director Molly Bode on a recruitment visit at Fort Novosell, AL.



Key Metrics

324

Employment Partnerships Established

30

Bases Visited

1,068

Service Members and Spouses
in Recruitment Pipeline

12

States Visited for Veteran
Recruitment

62%

of Service Members Placed in Jobs
Within One Year

4

Countries Visited for Veteran
Recruitment



While other organizations said they wanted to help me, VALOR was the only one who actually put in a serious effort on my behalf. My experience with VALOR was incredible, and it relieved so much of the pressure I was experiencing with my job search.



NICK COFFMAN
KY VALOR Client



KY VALOR



Renewing Kentucky's Commitment to Our Veteran Workforce

During the 2024 Legislative Session, KY VALOR received an additional \$1M to extend its work through June 30, 2026. There are currently more than 1,000 service members and spouses active in our recruitment pipeline. The transition timeline for active duty service members can take anywhere between 18 and 24 months, and this continued funding ensures that KY VALOR can continue to support their transition to civilian careers in the commonwealth.

This renewed funding will be distributed through the Kentucky Department of Veterans Affairs (prior funding flowed through the Department for Local Governments). While KY VALOR has worked with the Kentucky Department of Veterans Affairs since its inception, this move formalizes the partnership to better serve Kentucky's veteran job-seeking population and make our commonwealth even more military friendly.



Left page: The KY VALOR team with employer partners FEAM Aero at Aviation Day at the Capitol. Above Left: Workforce Development Manager Nicki Stewart recruiting at Fort Huachuca, AZ. Above Right: Stewart talking with service members at Joint Base Lewis-McChord, WA.

A ROBUST TALENT PIPELINE TO MEET THE CHALLENGES OF TOMORROW

Kentucky's ability to remain competitive in an ever-changing economic landscape hinges on a skilled workforce. Through our programs, KSTC is preparing Kentucky's workforce to meet future challenges by developing the technical skills of students and entrepreneurs as well as helping employers tap into unique talent pipelines to fill workforce needs.

Advocating to Equip Students with Computer Science Skills

In September 2023, AdvanceKentucky collaborated with Code.org to host the "Coding at the Capitol" event in Frankfort. More than 100 students, educators, policymakers, industry professionals and community members from across the commonwealth gathered to explore the pivotal role of computer science education in shaping Kentucky's future.

"Coding at the Capitol showcases the impressive talents of Kentucky's Students and underscores the importance of equipping them with computer science skills," said Senate President Pro Tempore David Givens. "Thanks to the outstanding work of AdvanceKentucky, the Kentucky Science and Technology Corporation, and Code.org, we are shaping a brighter future for our state, preparing our students for success in STEM fields and beyond."

Expanding Business Opportunities with Kentucky APEX Accelerator

The Kentucky APEX Accelerator provides one-on-one coaching that builds the skillset of Kentucky business owners, giving them the tools they need to tap into new markets and navigate the complex world of government contracting. This year, the Kentucky APEX Accelerator was named a partner in the University of Kentucky's new "Growing Our Own" project, which aims to build Kentucky's disadvantaged business enterprise supplier pipeline. This initiative is designed to foster economic inclusion and create more opportunities for underrepresented businesses.



Thanks to the outstanding work of AdvanceKentucky, the Kentucky Science and Technology Corporation, and Code.org, we are shaping a brighter future for our state, preparing our students for success in STEM fields and beyond.



DAVID GIVENS
Kentucky State Senator Dist. 9

Building a Unique Talent Pipeline in Kentucky

Kentucky VALOR is dedicated to recruiting service members and their spouses to fill workforce gaps across Kentucky. KY VALOR's approach includes national and, for the first time this year, international recruitment efforts. By pairing candidates with open positions and facilitating the transition from military to civilian employment, KY VALOR ensures that skilled veterans and their families find high-paying, rewarding opportunities in Kentucky.

Nick Coffman, a veteran who benefited from VALOR's support, shares his experience: "I was referred by a former work colleague who learned that I was looking for new employment. Based on that recommendation, I reached out and quickly found that while other organizations said they wanted to help me, VALOR was the only one who actually put in a serious effort on my behalf. My experience with VALOR was incredible, and it relieved so much of the pressure I was experiencing with my job search."



Student and teacher participants showcase what they've learned during Coding at the Capitol.



keyhorse.vc

Keyhorse Capital invests seed and early-stage venture capital to support entrepreneurs willing to build and scale innovative companies in Kentucky. We invest in idea to growth-stage companies and technologies across industries and sectors.

In partnership with the Cabinet for Economic Development and KY Innovation, we manage several initiatives to increase the availability of equity investment capital for fast-growth and scalable young businesses across the state.

Funds Include:

- **The Idea Fund** – “Pre-Seed” startup funding initiatives in partnership with the Kentucky Innovation Hubs, accelerators and pitch competitions
- **Kentucky Enterprise Fund** – “Seed” stage investments in scalable startups and early-stage companies
- **Kentucky Growth Capital Fund** – Follow-on and “Series A” investments in early growth-stage companies
- **Invest Blue Investor Network** – Special purpose investments and syndication support for Kentucky entrepreneurs and new investors ... launching FY25



Kentucky State Senator Chris McDaniel gave the keynote address at the 2nd Annual KY Backed Event.



Funding Kentucky's Early Ideas

This year, Keyhorse Capital launched the KSBCI 2.0 Fund with KY Innovation to make direct equity investments in young scalable companies in Kentucky. In the fund's first year, Keyhorse Capital invested \$11.2M in 22 companies, with an emphasis on small and disadvantaged businesses, which attracted \$21.6 in co-investments.

We successfully launched the Traction Advisor Program as a pilot with the Blue North Innovation Hub. The Program provides experienced, later-stage, venture-backed entrepreneurs with a framework to help early-stage entrepreneurs achieve meaningful traction and validation in preparation for an early-stage fundraising round.

In partnership with the Innovation Hubs and Commonwealth Seed Capital (CSC), Keyhorse Capital launched the KYBacked Marketplace to support portfolio companies by offering targeted perks, managing companies by stage, facilitating peer reviews of tech stacks, and providing an independent resource platform, delivering \$821,000 in savings for Kentucky startup companies.

Investment Program Totals to Date

\$63M

in Investments

\$90K

Average Salary for New Jobs Created

\$2B+

In Follow-On Capital

\$93M

Amount of Awards

FY24 Investment Program Totals

195

Applications Reviewed

\$115.7M

Funds Requested*

114

(67 KEF + 47 KSBCI) Awards**

\$33.6M

Amount Awarded

*"Requested" calculation is artificially capped at KEF maximum permissible investment (\$500K) and KSBCI 2.0 planned maximum (\$2.5M); Actual funding requested by companies in FY24 exceeded \$300M and included companies who did not self-identify as either Kentucky Based or Interested in Relocating to Kentucky.

**Due to the nature of investment rounds and KSTC's matching requirements, not all investment or grant awards move forward to completed investment transactions.

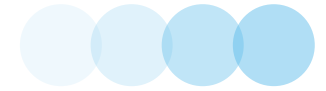


Narrowing the Capital Gap

Historically, the deal count and amount of capital invested at the Series A/Growth stage in Kentucky have been markedly low compared to peer states such as Indiana, Tennessee, and Ohio. Series A funding in Kentucky represents the first significant round of venture capital financing for startups that have demonstrated a viable product and some market traction. At this critical juncture, Kentucky-based startups have often struggled to raise capital from local investors, hindering their ability to accelerate growth.

However, with the KSBCI 2.0 fund, Keyhorse Capital has been able to narrow this gap by nearly quadrupling the amount of critical growth capital to companies throughout the commonwealth. This funding has enabled these startups to continue scaling and attract co-investments from across the country.

Top Left: Keyhorse Capital Managing Partner Kelby Price welcomes local and regional investors, entrepreneurship support organization leaders, and founders to the 2nd Annual KY Backed Event. Bottom Left: Community members were recognized for their entrepreneurial ecosystem support during the Swinging for the Fences Awards. Right: Attendees learned about early-stage investing (top) and networked with peer entrepreneur supporters such as Christin Godale, Executive Director of Covington Life Sciences Partners (bottom).



Portfolio Milestones



Beltways, creators of the world’s fastest, smartest and safest modular accelerating walkway completes an initial pilot project with Cincinnati/Northern Kentucky International Airport (CVG).
Hebron, KY



Forecastr, an out-of-the-box finance function for businesses, secured a partnership with Microsoft, allowing them to make their SaaS available to startups in Microsoft for Startups’ Founders Hub program. Co-founders Steven Plappert & Logan Burchett were recognized as Emerging Entrepreneurs by the Kentucky Entrepreneur Hall of Fame and raised \$4.5M.
Louisville, KY



Hempwood, a manufacturer of high-strength hemp-based sustainable building materials and flooring products, expands its customer base and wins Kentucky Association of Manufacturers (KAM) 2024 “Coolest Thing Made in Kentucky” tournament.
Murray, KY

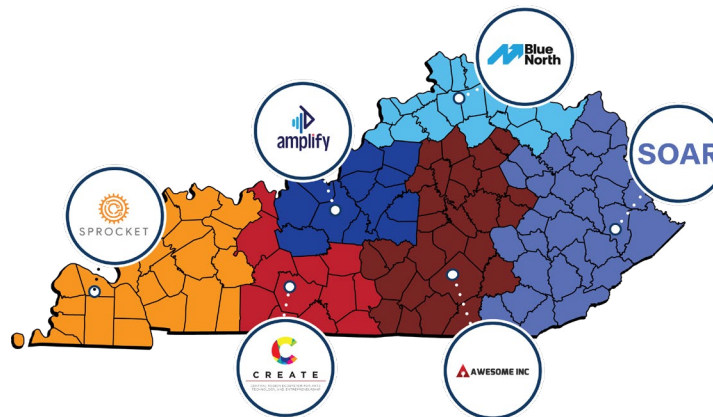
FY24 Investments





KENTUCKY INNOVATION HUBS

kstc.org/kentucky-innovation-hubs



Funded both publicly and privately, the Kentucky Innovation Hubs form a collaborative network of six regional centers across the state dedicated to driving economic development through entrepreneurship and innovation. Each Hub serves as the “front door” to entrepreneurial support services in its region, leveraging local partnerships and regional organizations to assist entrepreneurs across various industries and stages of development. These efforts help entrepreneurs advance their businesses and contribute to the state’s economic growth.

In partnership with the Cabinet for Economic Development, we support the Innovation Hubs by enabling the development of new and innovative

technologies, products, companies, and quality jobs across the commonwealth. KSTC increases the deal flow of technology-based and innovative businesses in Kentucky, enhances understanding of startup processes and investment practices, and provides value-added services to the startup investment community.

We connect the Hubs to each other and to startup resources and programs, and we educate them on best-in-class processes to deliver their services to startup clients. Our support includes Startup Resources Series monthly webinars, the Startup Resources Tool Kit, shared Startups Funded reports, quarterly Innovation Hub Update webinars, and collaboration calls.



Awesome Inc 5 Across February 2024 Pitch Competition winner Value Buddy CEO Ace McGill with KSTC President Terry Samuel. Photo Courtesy of Awesome Inc.



Innovation Hubs

Amplify is a place for founders, investors and other entrepreneurial stakeholders in Louisville and surrounding regions to connect, collaborate and access meaningful resources that help them start, build and grow their businesses.

Awesome Inc creates and grows high-tech startups through community events, technology education courses, and a shared workspace environment, ultimately making a significant impact on the lives of entrepreneurs in Central Kentucky.

Blue North serves as the “thread” for their Northern Kentucky business ecosystem by building a close-knit community that connects entrepreneurs to critical resources and reduces barriers to opportunity. Their mission is to give founders’ ideas time to grow and prosper.

CREATE fosters an innovation environment in and around Bowling Green that brings collaborators together to share their networks, design and test new ideas, commercialize proven solutions, and grow those solutions.

SOAR Innovation has many programs and tools to help entrepreneurs in Eastern Kentucky start their journey and get the essentials set up with the least amount of time and money. SOAR Innovation’s mission is to help founders be successful.

Sprocket is a digital economic development organization in Western Kentucky. Their mission is to help entrepreneurs move their businesses forward through support programs and connections that give small businesses the advantage needed to compete in the digital economy.



Left to right: Startup Appalachia Pitch Competition 2nd place winner and crowd favorite, Insight Emergency Solutions (Corey Shepherd, Abby Daniel, Claire Holbrook, and Rilyn Rayburn). Photo courtesy of SOAR Innovation; Dave Knox of Blue North at the 2nd Annual KY Backed event; Honoring 2023 Emerging Entrepreneurs Steven Plappert and Logan Burchett with Forecastr at the Kentucky Entrepreneur Hall of Fame.



Key Metrics

4,969

Startups Served

2,390

Startup Connections

491

Startups Advanced

99

New Startups Created/Attracted

382

New Jobs Created*

534

Events Hosted

19,409

Event Attendees

191

Startups Funded

\$161.7M

Investment in Startups

** New Jobs Created is an estimate based on founder surveys and other qualitative data.*

Providing the Resources Needed for Startups to Scale

The Startup Resources Series presents subject matter experts on a wide variety of startup resources, available either statewide or nationally. These monthly webinars create awareness about resources and support for the Innovation Hubs and Entrepreneur Support Organizations (ESOs), which coach, guide, and connect entrepreneurs to the right resource at the right time and at the right stage of their business.

This assistance can save a founder untold time and money while helping them advance their startup. By leveraging the expertise and resources provided, founders can make informed decisions, avoid common pitfalls, and accelerate their path to success. These resources typically cover a wide range of topics essential for startup success. In FY24, 12 Startup Resources Series webinars were held with 640 attendees.

The themes presented throughout the year focused on different founder populations, talent attraction, international expansion, funding sources and preparation, and startup sales. Topics included equitable entrepreneurial resources in rural communities, B-Corp and Public Benefit Corp programs, and veteran entrepreneur resources.



Benefits for Entrepreneurs When Well-Coached by an Innovation Hub:

- Access to Expertise – direct access to experienced professionals who can provide valuable insights and guidance.
- Accelerated Growth – faster progress through the startup lifecycle due to expert advice and well-curated resources.
- Resource Optimization – efficient identification and use of the right resources at the right time, tailored to the specific needs of the startup.
- Cost Efficiency – reduction in costs associated with trial-and-error and inefficient resource use.



Left: Akash, founder of Smart MS3, shares his startup idea with an interested community member at Sprocket's Next50K Reception. Photo courtesy of Sprocket.
Right: Attendees at the Civic Imagination Conference at WKU Innovation Campus. Photo courtesy of CREATE.

STRATEGIC INVESTMENTS IN KENTUCKY'S INNOVATION ECOSYSTEM

Transforming industries and positively impacting communities requires more than just visionary ideas; it demands strategic investment in both cutting-edge technologies and the people behind them. At KSTC, we're providing resources for Kentucky's entrepreneurs and robust investment in Kentucky's early-stage startups.

Strengthening Kentucky's Investment Community

Our Keyhorse Capital team invests in early-stage founders with pre-seed and seed capital. This year the team joined forces with the University of Kentucky to launch Invest Blue. Through a grant from the U.S. Economic Development Administration, we are cultivating a diverse community of mission-driven angel investors dedicated to supporting Kentucky startups. This collaboration not only fuels the growth of emerging ventures but also strengthens the investment ecosystem in the region.

In March 2024, the Keyhorse Capital team hosted the second annual KY Backed event. Held in Covington in partnership with the Cabinet for Economic Development, Commonwealth Seed Capital and Blue North, this event brought together more than 50 entrepreneurial leaders, investors, and innovators to support

Kentucky's outreach efforts. We provided opportunities to learn more about early-stage investing and connect with local and regional investors interested in a more robust venture environment and economic growth in the commonwealth.



Raechele Smalls, Invest Blue Director, at the 2024 KY Backed event.



We are among the fastest-growing startups in Kentucky. I'm very proud of our massive growth, thanks in part to the guidance and startup resources available here.



STEVENS BONHOMME
Founder and CEO,
Feedcoyote

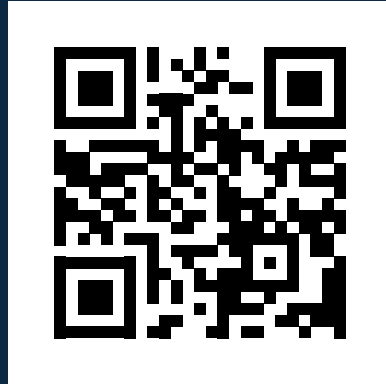
Guidance and Resources to Support Fast-Growing Startups

Kentucky's six regional Innovation Hubs act as vital entry points for entrepreneurs, offering access to a comprehensive suite of resources, capital, and talent to help turn their ideas into scalable businesses. The Innovation Hubs are essential in connecting entrepreneurs with the tools they need to navigate the startup journey.

Stevens Bonhomme, Founder and CEO of Feedcoyote, credits the resources and guidance available in Kentucky for the significant growth in his startup: "We are among the fastest-growing startups in Kentucky. I'm very proud of our massive growth, thanks in part to the guidance and startup resources available here." Bonhomme received support from three innovation hubs – Awesome Inc, Amplify and Sprocket – and received funding from Keyhorse Capital.



Keionna Baker (Amplify), Larry Horn (Amplify), Bryce Butler (Access Ventures) and Louisville Mayor Craig Greenberg at Venture Connectors.



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