



Research @ K-State

Research | Scholarship | Creative Work

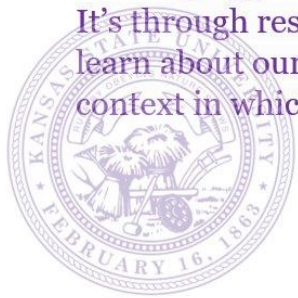
David Rosowsky
Vice President for Research





“

Research is essential to advancing society, strengthening the economy, driving innovation, and addressing the vexing and challenging problems we face as a people, place, and planet. It's through research, scholarship, and discovery that we learn about our history and ourselves, understand the present context in which we live, and plan for and secure our future.”



@DavidRosowsky



Office of the Vice President for Research (OVPR)



Office of Sponsored Programs

Biosecurity Research Institute

Office of Research Development

Facilities/Research Security Office

Research Compliance (URCO)

Comparative Medicine Group

K-State Innovation Partners

Research Communications

Office of the Vice President for Research (OVPR)



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Research Communications

TechCom / Ventures

Core Facilities Director

Research Computing

We Will (2021)



Office of the Vice President
for Research

Office of the Vice President
for Research

Kansas State University

We will

Enable

Seek efficiencies, lower barriers to success,
and remove burdens on investigators.

Serve

Provide concierge-level service that enables
faculty and researcher success.

Lead

Be national leaders within our specialties in
research administration.

Advocate

Communicate the value of K-State research
to internal and external constituents.

Exemplify

Be an exemplar office on campus for efficiency,
effectiveness, integrity and professionalism.

KANSAS STATE | Office of the Vice President
UNIVERSITY | for Research



Select Initiatives, OVPR

OFFICE OF
SPONSORED
PROGRAMS

(PAS + SPA)

OSP



**3 BILLION DOLLARS
THOUSAND JOBS**

K-State's plan will bring
\$3 billion in investments and **3,000 jobs to Kansas**
in the next 10 years.

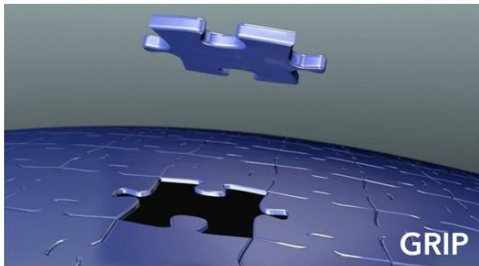
NSF ENGINES

BRINGING TOGETHER BIOSCIENCES
IN THE REGION

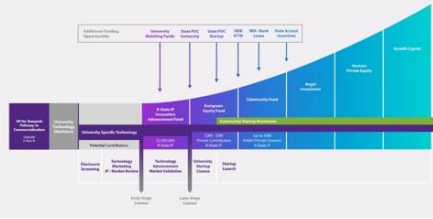
• BIOSECURITY • BIODEFENSE • BIOMANUFACTURING



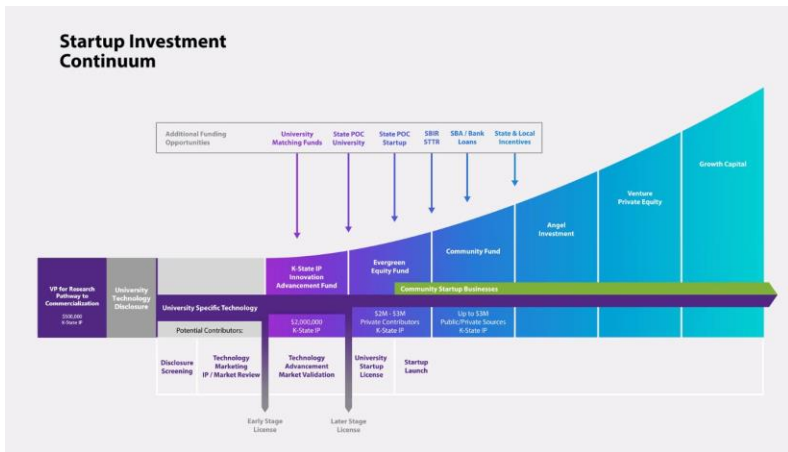
GRIPSM AI in the Disciplines



Startup Investment
Continuum




What's new and what's on the horizon, OVPR



TAP Grants @ KSU

TRAVEL | ACCELERATION | PLANNING



CORE: Multi-point investment strategy in core and shared-use research facilities



Kansas State University
WATER INSTITUTE

Research Growth Plan, Next-Gen K-State Strategic Plan

- Why does it matter?
- Where do we stand?
- What are the targets, and why?
- How will we get there?

KANSAS STATE UNIVERSITY

RESEARCH GROWTH PLAN: 2023-2030

An internal plan intended to underpin and support the *Next-Gen K-State* strategic plan, drive and monitor progress, and achieve the stated goals for research growth



Office of the Vice President for Research
September 2023

Why research matters:



K-STATE:

- ✓ Comprehensive Public Research University
- ✓ Land-Grant Research University
- ✓ Carnegie R1 Research University
- ✓ One of three Regents' research universities

3 Pillars of the Land-Grant Mission: Teaching, Research, Outreach



Lens and Prism.

“More than just a pillar of the land-grant university, I believe research is the central pillar, the tallest and most important, that from which knowledge is created and disseminated. It is through their research and scholarship that faculty distinguish themselves as teachers and mentors, offering a lens through which students can see beyond the lecture. That same research and discovery feeds the engagement and outreach mission of the university, a prism that disperses new and needed knowledge.”

-D. Rosowsky, vice president for research, Kansas State University

Where we stand:



PEER AND ASPIRANT UNIVERSITIES AND KU (FOR COMPARISON):

Kansas State University	2021 HERD	2021 IPEDS	Ratio
Kansas State University	\$204M	1254	\$163K/FTE
Peer Institution:	2021 HERD	2021 IPEDS	Ratio
Auburn University	\$266M	1497	\$178K/FTE
Iowa State University	\$360M	1485	\$242K/FTE
Oklahoma State University	\$199M	1353	\$147K/FTE
University of Arkansas (<i>not</i> incl. medicine)	\$164M	1355	\$121K/FTE
University of Missouri (incl. medicine)	\$389M	2168	\$179K/FTE
University of Nebraska (<i>not</i> incl. medicine)	\$307M	1591	\$193K/FTE
Aspirant Institution:	2021 HERD	2021 IPEDS	Ratio
Colorado State University	\$447M	1428	\$313K/FTE
Louisiana State University (Baton Rouge)	\$297M	1840	\$161K/FTE
NC State University	\$547M	2033	\$269K/FTE
Oregon State University	\$277M	1404	\$197K/FTE
Purdue University (West Lafayette)	\$679M	2167	\$313K/FTE
University of Georgia	\$494M	2789	\$177K/FTE
Other:	2021 HERD	2021 IPEDS	Ratio
University of Kansas (incl. medicine)	\$386M	2466	\$156K/FTE
AVERAGE:	\$358M	1774	\$201K/FTE

Growth target, and why:

RGP:

\$240K/FTE by 2030



\$121K-\$242K/FTE



\$161K - \$313K/FTE

Avg: \$201K/FTE

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Today: lower-third of peers, bottom of aspirants

Goal: top-third of our peers, mid-range of aspirants

Assuming modest growth in research-active faculty, with perhaps some redistribution

\$250K/FTE x 1300 FTE = \$325M


Our target (conservative): \$300M

Our target (aggressive): \$350M

How we will get there:

FILE 2023

KANSAS STATE UNIVERSITY
RESEARCH GROWTH PLAN: 2023-2030
An internal plan intended to underpin and support the Next-Gen K-State strategic plan



As part of the Next-Gen K-State strategic plan, we will launch, drive, and report progress on an ambitious multi-year research growth plan.

The specific goals of the plan are to increase annual research expenditures (as reported to the annual NSF HERD Survey, the nationally recognized research expenditures metric for universities) from about \$200M annually to \$250M by 2025, and to \$300M by 2030. Extramural funding (also referred to as sponsored programs and awards, which includes all competitive grants but excludes internal grants, unrecovered SRO, research equipment and facilities investments, new faculty startup and lab renovations, etc.) is expected to grow at a similar rate. This is shown in Table 1 below. FY 22 has been selected as the baseline year as it is the most recent year for which all data have been collected and reported.

"Five percent per year" Plan for Research Growth at Kansas State University

YEAR	Total Expenditures	Extramural Funding	
	\$ Millions	TOTAL EXPENDITURES TARGETS	EXTRAMURAL FUNDING ³ TARGETS
FY 22	210		180
FY 23	221		189
FY 24	232		198
FY 25	243	2025 TARGET: \$250M	208
FY 26	255		219
FY 27	268		230
FY 28	281		241
FY 29	295	2030 TARGET: \$300M ^{1,2}	253
FY 30	310		266

¹ Achieving this growth depends on both growth in awards and growth in all reported expenditures, as described in the Research Growth Plan.
² This represents about a 50% increase over current baseline levels at the start of the plan.
³ Extramural funding includes all new or added award dollars (grants, contracts, cooperative agreements, etc.) received in the fiscal year.

Table 1: Six-year research growth plan/targets

2023-2030 Research Growth Plan 1

- ✓ College investments
- ✓ OVPR investments
- ✓ Next-Gen K-State investments

KANSAS STATE UNIVERSITY RESEARCH GROWTH PLAN: 2023-2030

An internal plan intended to underpin and support the *Next-Gen K-State* strategic plan, drive and monitor progress, and achieve the stated goals for research growth



GOAL:
50% growth in
research expenditures
Baseline + 5% growth annually

OVPR Initiatives/Strategies/Investments:



GRIP

EPP (KBOR Pillar 3)

Pathway 2 Commercialization (P2C)

Global Food Systems (GFS)

Faculty Development Awards

University Small Research Grants

Biomanufacturing (BTEC)

NBAF Collaboration Funds

Transdisciplinary team support

GRIPex: AI

TAP

Faculty clusters

Biosciences equipment

BDM

Research cores

Innovation Fellows

Social sciences

TechCom/Ventures

plus:

Faculty startup participation

Matching funds



Invest | Support | Enable

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Matching funds

*There are many (and increasing) opportunities for non-STEM faculty in the **social sciences, humanities, and arts** at K-State.*

Why is this a priority?

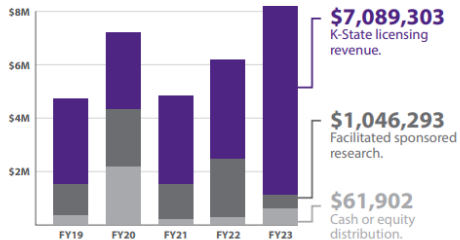
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Total cash generated by K-State's technology commercialization efforts in FY2023.

\$8,197,498



\$7,089,303
K-State licensing revenue.

\$1,046,293
Facilitated sponsored research.

\$61,902
Cash or equity distribution.

K-State's CY2022

AUTM rankings...

58th Sponsored research.

56th Intellectual property disclosures.

29th Patents issued per 100 disclosures (2019-2021).

21st License/options per 100 disclosures (2019-2021).

27th Total licensing revenue.

16th License revenue per active license.

227

Economic partnerships created to advance companies since 2009.



29

Companies attracted to Kansas since 2009.



20

Startups launched or invested in since 2009.

Private capital invested in client companies

\$47,238,466

cumulative

\$635,500

FY2023



1,699

Total **new jobs** created by Innovation Partners' client companies.



\$68,473

Average salary of the jobs that have been created by client companies.



\$110M

Total **payroll** of the new jobs generated by client companies.

\$6,866,417

Equity for services and capabilities held by Innovation Partners and the university.





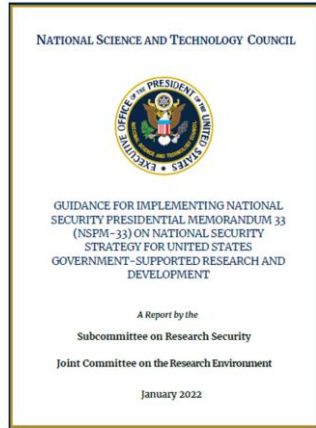
Administration Actions:

NSPM-33
NSF Implementing CHIPS & Science



Congressional Actions:

DETERRENT Act
ESRA
House Committee on CCP
NDAA



Funding
Proposals
Policies
Awards
Research security
University Research Compliance Office
Federal agency links
Research Security Enclave
Controlled Unclassified Information
Research Security and Integrity Working Group
Training
Other resources
Research Weekly
Research Compliance
Cayuse
Other resources

Research Security Enclave

As the United States government is moving forward with requirements for safeguarding sponsored research information K-State has developed a solution for the technical requirements. The Research Information Security Enclave, or RISE, is a cloud-based system that uses Microsoft Azure cloud to meet the appropriate standards for each sponsored-research effort.

Information and standards supported by RISE

- NIST 800-171
- Controlled Unclassified Information
- Department of Defense Cybersecurity Maturity Model Certification

Types of efforts supported by RISE

- Algorithm development
- Artificial intelligence
- Prototyping
- Collaboration
- Conferences
- Data storage
- Databases
- High-performance computing
- Machine learning

[More information on controlled unclassified information.](#)

[CUI budget information.](#)

Contact

cui@k-state.edu

For technical questions contact [Kevin Shippy](#).

For other CUI questions, contact [Brad Woods](#).

Faculty accolades (\$1M+ awards in FY24, new or active, as of mid-3Q)

Amount:	Agency:	Lead PI:	Project title:
1,199,118	NSF	Sherri Martinie (EDUC)	Creating Communities of Practice to support NOYCE scholars in becoming more adaptable mathematics teachers
1,199,992	USDA NIFA	Arslan Munir (ENG)	FogAg: A Novel Fog-Assisted Smart Agriculture Framework for Multi-Layer Sensing and Real-Time Analytics of Water-Nitrogen Colimitations in Field Crops
15,583,472	FFAR	Dorivar Ruiz Diaz (AGR)	Increasing Water Productivity, Soil Carbon and Sustainability of Integrated Multi-Crop Systems Using Field Scale Research
2,896,478	NSF	Melanie Derby (ENG)	R11 Track-2 FEC: Supporting rural livelihoods in the water-stressed Central High Plains: Microbial innovations for climate-resilient agriculture (MICRA)
1,250,000	DOE	Chuancheng Duan (ENG)	Highly Replicable, and Integrated System for Mitigating Methane Emissions from Natural Gas-fired Lean-Burn Engines (NG-FLBEs)
1,440,320	NIH	Paul Smith (A&S)	Theory and Simulation of Local Electroneutrality and Ion Atmospheres in Biological Systems
4,049,849	USDA	Ignacio Ciampitti (AGR)	Quantifying Nutrient Budgets in the Farmer-to-Farmer Digital Conservation Network (F2F_DCN)
1,920,710	NSF	Sanzhen Liu (AGR)	RESEARCH-PGR: PlantTransform: The Genetic Basis of Maize Regeneration and Applications to Plant Transformation
1,856,093	NIH	Katsura Asano (A&S)	Mechanism of stringent translation initiation: a probe for its biological relevance
1,614,569	USDA	Peter Tomlinson (AGR)	Conservation of Natural and Sustainable Environmental Resources with Verified Engagement (CONSERVE)
1,155,452	NSF	Hongyu Wu (ENG)	R11 Track-2 FEC: Sustainable Engineering Infrastructures and Solutions for Tribal Energy Sovereignty
1,447,198	NSF	Nancy Larson (ENG EXT)	EPA TCTAC Subaward between Wichita State University and Kansas State University
4,197,000	DOE	Yurii Maravin (A&S)	Research at Kansas State University into the Basic Nature of Matter, Energy, Space, and Time
6,124,977	DOD	Jeffrey Clark (EDUC)	Applied Research and Innovation Scholarship for Engineering Students in Aerospace, AI, and Cybersecurity (ARISE)
2,000,000	Commerce	Jeffrey Tucker (ENG)	K-State Technology Enterprise Innovation Network
22,182,200	USAID	Jagger Harvey (AGR)	Feed the Future Innovation Lab for Climate Resilient Cereals (CRCIL)
2,814,103	USDA	Gregg Hadley (EXT)	Kansas Food Assistance Nutrition Education Plan
2,609,568	Dept. of Ed.	F. Todd Goodson (EDUC)	Redesigning Experiences Forging Opportunities for Recruitment and Mentorships
5,250,911	Dept. of Ed.	Socorro Herrera (EDUC)	Re-Envisioning Action and Innovation through Community Collaborations for Equity across Systems
5,000,000	EPA	Blase Leven (ENG EXT)	Technical Assistance to Brownfields Communities, Geographical Areas 5-11 & 11
1,534,919	USDA	Daran Rudnick (AGR)	Master Irrigator and TAPS Education and Outreach

⋮

Congratulations!

Coming this month, Seek:

Research @ K-State

Research | Scholarship | Creative Work



David V. Rosowsky, Ph.D.

@DavidRosowsky

Reviewing page-proofs of the next issue of Seek, @KState's award-winning research magazine, and the issue looks amazing. We are so excited to share it with you. And what will we see on the cover of this issue? Stay tuned. It's inspired...

#Research #Discovery #Innovation #Impact



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*Thank
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