

KSTC

K E N T U C K Y
SCIENCE & TECHNOLOGY
C O R P O R A T I O N



Science and Health Research Funding: State Initiatives at KSTC

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Western Kentucky University
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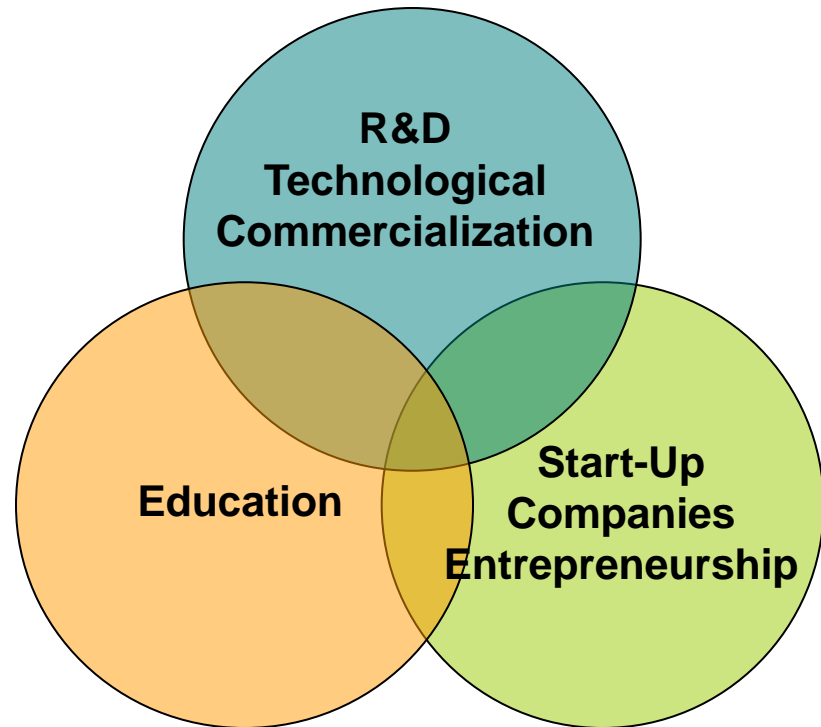
Presentation Contents

- Kentucky Science and Engineering Foundation
 - Research & Development Excellence (RDE)
 - RDE Grants
 - Technology Capacity Building Program
 - SBIR/STTR Phase Zero and Double Zero Grants
 - Human Resource Development Program
 - Information Resource Development Program
- Kentucky Commercialization Fund
- SBIR/STTR Grant Program
 - Federal SBIR/STTR Grants Program
 - KY SBIR/STTR Matching Funds Grants

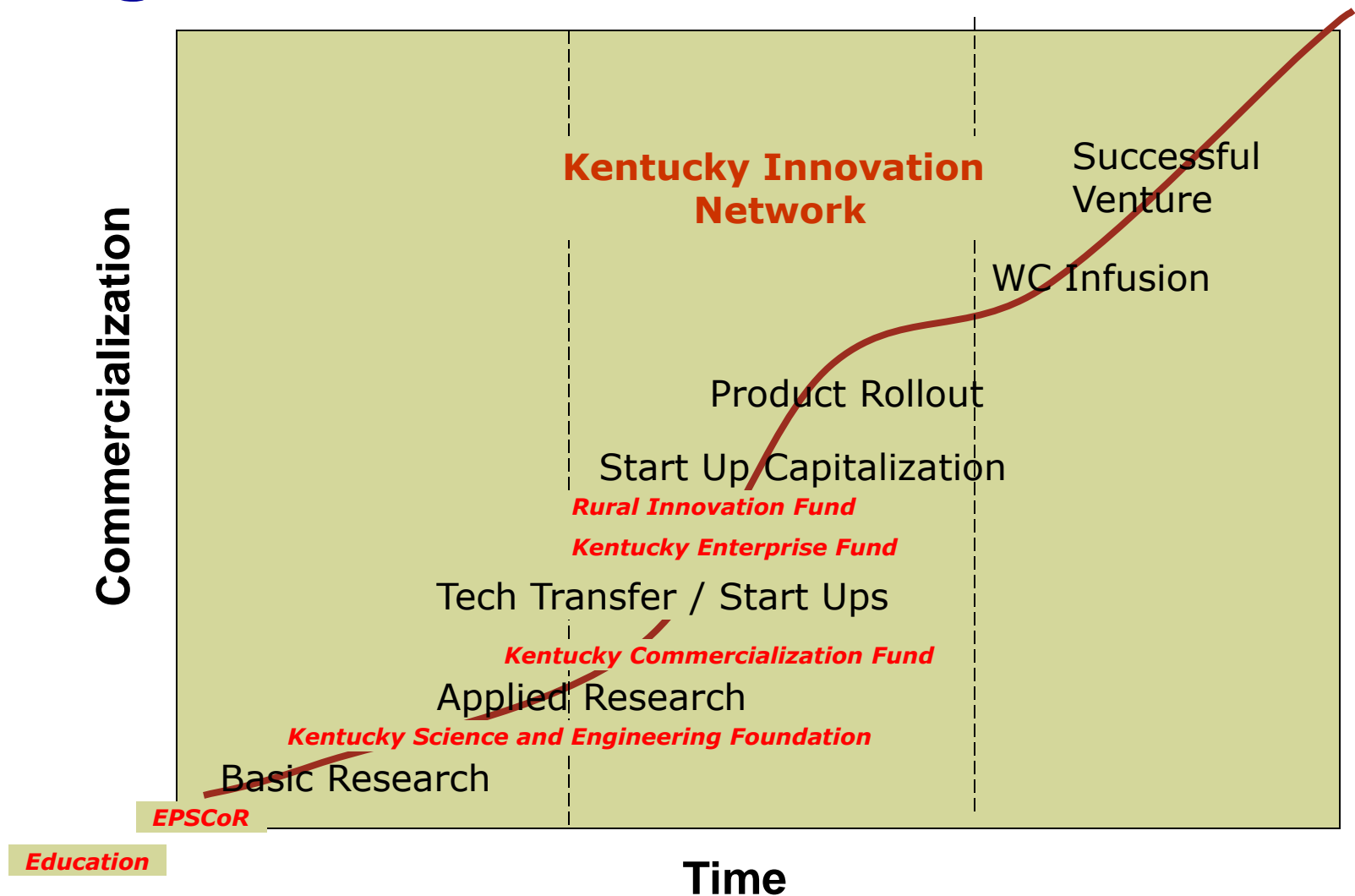
KSTC Mission and Functions

To strengthen the capacity of people, companies and organizations to develop and apply science and technology and compete responsibly in the global marketplace.

**KSTC is an independent,
non-profit company
founded in 1987**



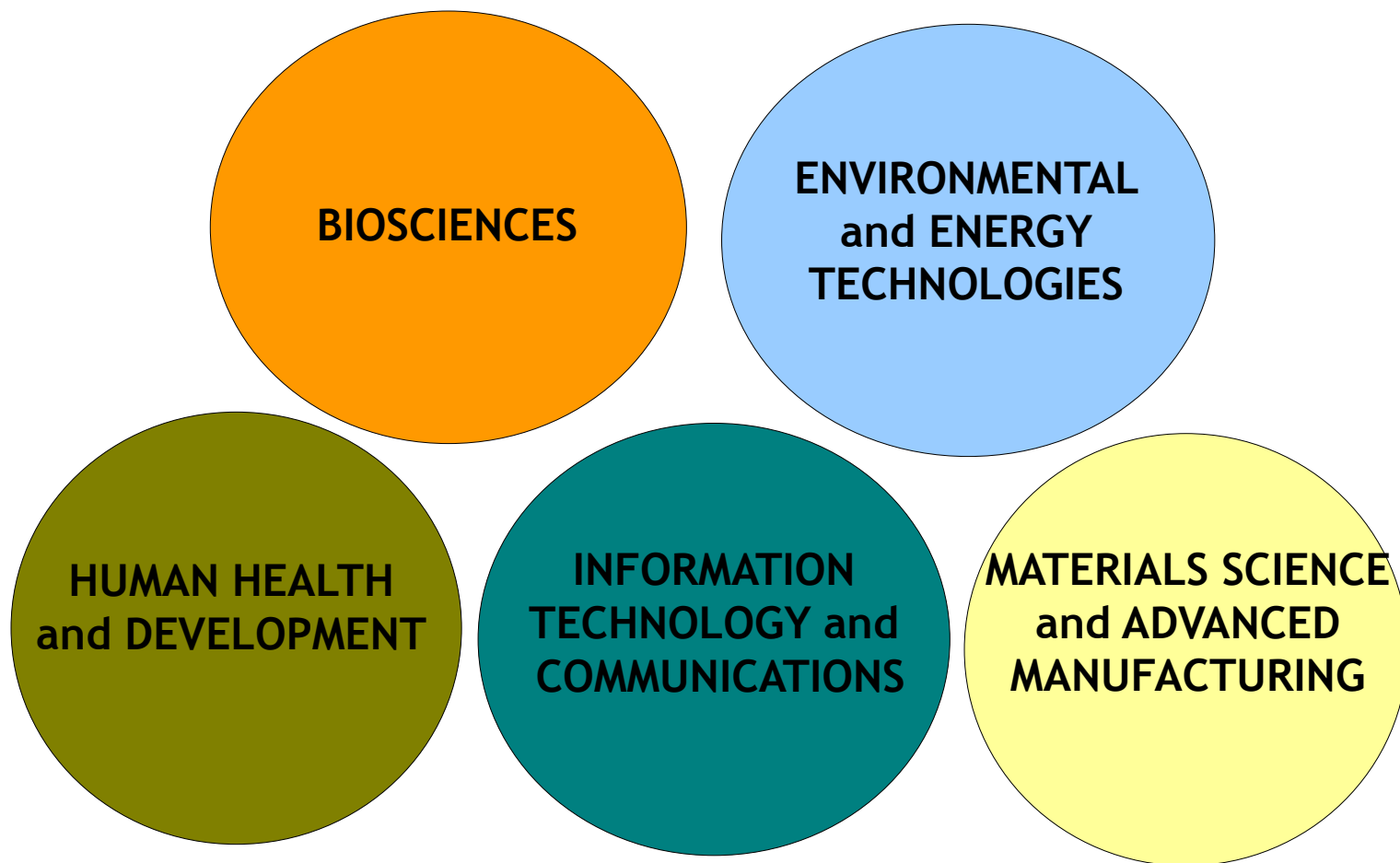
Stages of Innovation and Investment



↓ CPE ----- KBE Programs ----- OOE ↓

- Kentucky EPSCoR
- Kentucky Science and Engineering Foundation (KSEF)
 - R&D Excellence
 - SBIR/STTR Phase Zero and Phase Double Zero
- Kentucky Commercialization Fund
 - Commercialization of university technology
- Kentucky Enterprise Fund
(and Rural Innovation Fund)
- Kentucky Innovation Network
 - 13 Centers
 - Central HQ at KSTC
- SBIR/STTR Matching Funds Program
 - Phase I
 - Phase II
- Kentucky New Energy Venture Fund (KNEV)

Funding in Research Focus Areas



Kentucky Science and Engineering Foundation (KSEF) Goals

- Proactively Fund Home-Grown, Peer Reviewed Research Ideas that Lead to:
 - ✓ Excellence in Science and Engineering
 - ✓ Publications in Reputed Journals
 - ✓ National and International Recognitions
 - ✓ Accelerate New R&D Collaborations
 - ✓ Increase Fund Generating Capacity to attract Follow-on Funding
 - ✓ Train Students and Post-doctoral Fellows
 - ✓ Capture Innovations in Intellectual Property / Patents
 - ✓ Technologies with Commercial Potential
- Enhance Capacity of Organizations and People to Successfully Compete at Federal Level

Kentucky Science and Engineering Foundation: KSEF

Program	Purpose	Funding	Eligibility
R&D Excellence (RDE) Program	Funding for:	Up to \$50,000 per year	
Emerging Ideas	Research leading to advancing basic knowledge		University faculty and entrepreneurs
Emerging Technologies	Research leading to developing a technology		Small tech businesses

KSEF: Application and Approval Process

- Letter of Intent submission – PI and Co-PI Information, Research project title and abstract, Key words and Reviewer's areas of research expertise and interest
- Three-tier Administrative Review of LOI
- LOI not meeting the deadline, and not complying with eligibility and or format are not invited to submit full proposals
- Accepted applications are subjected to an established peer review process involving national and international subject matter experts
- Three-tier approval of recommendations for grants



KSEF: Reasons NOT to Invite an LOI

- Late receipt (based on electronic time stamp)
- PI having an active grant on full proposal due date
- PI/Co-PI having submitted more than one LOI (all LOI are disqualified) or having received three or more grants in last five years
- The proposed work is a continuation of previously funded KSEF project (to PI/Co-PI/Collaborator)
- Proposal for infrastructure development or not based on stipulated R&D scientific work
- PI/Co-PI not in compliance for timely reporting
- Incomplete LOI sections and/or abstract contains more than 300 words
- PI ineligible to apply
- Fewer than, or lack of, five key words and five areas of research for potential reviewers

KSEF: Reasons for Disqualification of a Submitted Full Proposal for Peer Review

- Late receipt (based on electronic time stamp)
- Failure to submit the application by omission
- Proposal exceeding the page limit (eight page technical)
- Failure to include cited references in the list
- Failure to follow the required proposal format (font size, spacing, lines per vertical linear inch, margins , etc)
- Inclusion of legible figures in the text
- Failure to comply with a scientific proposal format and missing sections = submitting a poor quality product
- Failure to submit proposal within the scope of RDE program
- Exceeding total page limit of 22 pages (printed PDF)
- Submitted proposal is different than the accepted LOI
- Failure to submit signed cover and budget pages within two working days

Kentucky Commercialization Fund (KCF) Goals

Purpose: Help Universities in Commercializing Promising Technologies by Providing Funding to Move Pre-screened Successful Research Technology from Lab to the Marketplace by its transfer out of the university either to a new start up or to an existing business.

Funds are provided for:

- Market opportunity assessment
- Technology valuation
- Commercialization plan development
- Technical or business consultation*
- Testing and validation of technology*
- Intellectual Property (IP) protection upon exhaustion of university funds

* *Through sub-awards*

Kentucky Commercialization Fund: KCF

Program	Purpose	Funding	Eligibility
<p>Kentucky Commercialization Fund (KCF) Program*</p> <p>*2x Payback required upon technology commercialization</p>	<p>Investment for commercializing the university developed technologies</p>	<p>Up to \$75,000 per year; not to exceed \$150,000 over two years</p>	<p>University faculty</p>

KCF: Application Process

- Pre-proposal submission – Technical feasibility, market need & commercial viability, among others
- Face-to-face (or phone) interview with each PI/Team
- Only selected applicants get invited to submit a full proposal (Assessment letter from the university for commercialization of the technology is required)
- Applications will be subjected to both technical and business reviews by an external peer review panel
- Award Agreements are to be signed within 45 days



KCF: Reasons NOT to Invite a Pre-Proposal

- Late receipt (based on electronic time stamp)
- PI/Co-PI having submitted more than one pre-proposal (all pre-proposals may be disqualified)
- The proposed work is a continuation of previously funded KCF project (to PI/Co-PI/Collaborator)
- Pre-proposal for basic research, early-stage applied research or infrastructure development
- PI/Co-PI not in compliance for timely reporting
- Incomplete Pre-proposal sections and/or length greater than seven PDF pages
- PI ineligible to apply (post-doc, adjunct faculty)
- Fewer than or lack of five key words and five areas of research for potential reviewers
- IP status not clearly stated or results widely published

KCF: Reasons for Disqualification of a Submitted Full Proposal for Peer Review

- Late receipt (based on electronic time stamp)
- Failure to submit the application by omission
- Failure to submit signed cover and budget pages within two working days
- Failure to attach a letter from OTT or pertinent office regarding university ownership of the technology, IP status, and associated commitment to commercialize the technology
- Failure to follow the proposal format (font size, spacing, lines per vertical linear inch, margins , etc)
- Inclusion of legible figures in the text
- Failure to comply with a scientific proposal format and missing sections = submitting a poor quality product
- Failure to submit proposal for the stipulated tasks
- Submitted proposal is different than the accepted Pre-Proposal

SBIR/STTR Funding Program

Federal SBIR and STTR Program

Phase I:

Feasibility, 6-12 months, \$150K

Phase II:

Prototype Development, 2 years, \$1M

Phase III:

Commercialization – Non-SBIR/STTR \$\$\$

Subcontract under SBIR vs. STTR

- **SBIR**: Small business is required to perform –
 - Phase I: $\geq 67\%$ of R&D work
 - Phase II: $\geq 50\%$
- **STTR**: Small business collaborates with a non-profit research institution and performs -
 - For both Phase I & II Small business: $\geq 40\%$
 - Research Institution: $\geq 30\%$

Funding Implications For Research Institutions

Maximum dollars available (from \$150K / \$1M grant)
per project:

	<u>Ph I</u>	<u>Ph II</u>	<u>Total</u>
SBIR	50K (33%)	500K(50%)	550K
STTR	90K (60%)	600K(60%)	690K

Plus potential commercialization royalties through
licensing arrangements.

How Faculty Can Participate in the SBIR/STTR Programs

1. Partner with a small business
2. Via faculty member's company, while faculty member stays at university
3. Via faculty member's company, while on leave of absence from university

In all three, the faculty member can
initiate the process, find topic, write proposal

Kentucky SBIR/STTR Program

Pre-application Assistance

- Phase Zero Grants (three grants per calendar year)
- Double-Zero Grants (three grants per calendar year)

State Funded Matching Grant

- Maximum five Matching Grants per Company

SBIR/STTR Phase Zero/Phase Double Zero (PZ/DZ) Grant Program

Purpose: Enable small businesses and faculty entrepreneurs to prepare a high-quality, competitive SBIR/STTR Phase I or Phase II proposal for any of eleven participating federal agencies.

SBIR/STTR Phase Zero Grant (up to \$4,000)

SBIR/STTR Phase Double Zero Grant (up to \$4,000)

PZ/DZ: Multiple Application Submissions

- Maximum three Phase Zero grants /calendar year: maximum total NTE \$8K
- Maximum three Phase Double Zero grants /calendar year: maximum total NTE \$8K
- Only one Phase Zero or Phase Double Zero grant for developing a specific SBIR/STTR proposal/idea

Details at <http://ksef.kstc.com> and www.kysbir.com



Kentucky SBIR/STTR Matching Funds Program

Program Initiated and Funded by CED-OOE since 2006:

- Provides matching funds for both SBIR and STTR Grant awards
- Phase I
 - Matches up to 100% but not to exceed \$150,000 for exploration of technical merit or feasibility of an idea or technology
- Phase II
 - Matches up to 100% but not to exceed \$500,000 per year for 2 years to support full-scale R&D and business-related tasks

Details at <http://www.kysbirmatchfunds.com>

Kentucky Knowledge Based Economic Development Programs

For complete details, visit following websites:

- <http://www.kstc.com>
- <http://cpe.ky.gov>
- <http://www.thinkkentucky.com/DCI/SBIR/SBIRSTR.aspx>

Kentucky Science and Technology Corporation (KSTC) <http://www.kstc.com>

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**COMPANIES**
CAPITAL AND RESOURCES FOR EARLY STAGE, HIGH-GROWTH ORIENTED TECHNOLOGY COMPANIES

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**EDUCATORS**
PROGRAMS THAT HELP SCHOOLS ADVANCE AND TRANSFORM MATHEMATICS AND SCIENCE EDUCATION.

**IDEAFESTIVAL**
WORLD-CLASS EVENT ATTRACTING LEADING GLOBAL INNOVATORS AND THINKERS

Current Programs

STARTUPS | R&D

**Enterprise**
KEF is a pre-seed and early-stage capital venture fund focused on emerging innovation-driven companies.

**KSEF**
KSEF competitively funds research and development activity.

**KENT EPSCoR**
Kentucky EPSCoR is a leader in building infrastructure to enhance national R&D.

Current News

The Power of Angel Investing
KSTC Offering Angel Investing Overview Seminar
This full day seminar provides an introduction to the angel investing process. The agenda will address topics such as:

**ANGEL RESOURCE INSTITUTE**

KSTC's Mission

KSTC is an entrepreneurial company dedicated to enhancing the capacity of people, companies and organizations to develop and apply science and technology and compete responsibly in the global marketplace.

Upcoming Events

KENTUCKY
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CORPORATION

KSTC

www.kstc.com

Useful Websites

- KSTC and KSEF Websites

<http://www.kstc.com>

<http://ksef.kstc.com>

- SBIR Websites

<http://www.sbir.gov>

<http://www.zyn.com/sbir>

- Kentucky SBIR/STTR Resource websites

<http://www.kysbir.com>

<http://ksef.kstc.com>

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Questions?