

KSTC



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SCIENCE & TECHNOLOGY
C O R P O R A T I O N



SBIR/STTR PROGRAM

Mahendra Jain
mjain@kstc.com

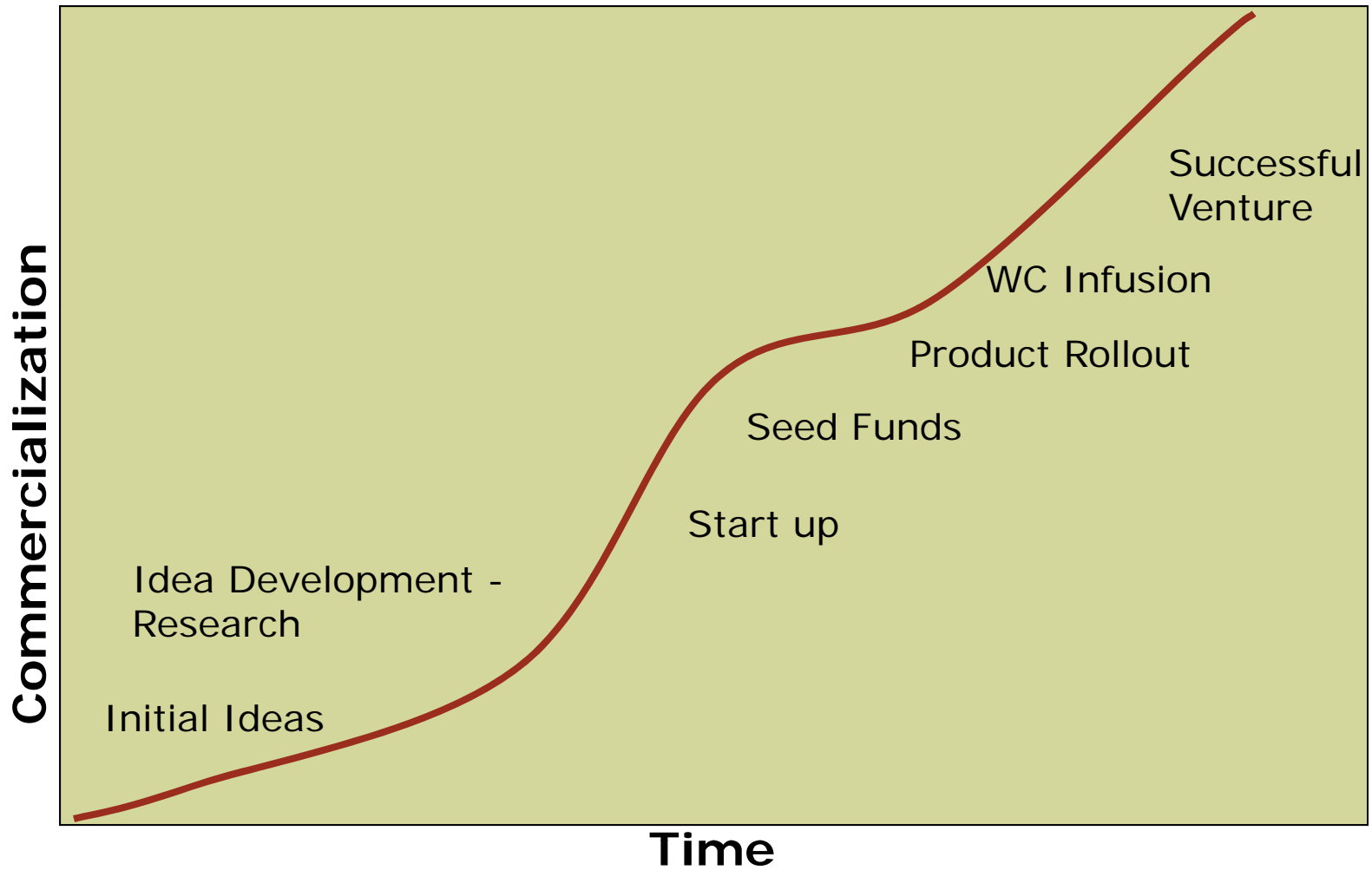
<http://kstc.com>
<http://ksef.kstc.com>

University of Louisville
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Federal SBIR/STTR Program

- Federal SBIR/STTR Program
- Participating Agencies
- Why and How to participate?
- Kentucky SBIR/STTR Assistance and Matching Funds Programs?
- Q/A

Stages of Innovation & Investment



Funding New Ideas.....

- Are these ideas winning ideas?
- How to evaluate new ideas?
 - technical strength
 - enabling strength
 - commercial strength
- Whether all ideas succeed?

SBIR and STTR Programs

- **SBIR – Small Business Innovation Research**
- **STTR – Small Business Technology Transfer**

SBIR/STTR Purpose - Original

- **Stimulate technological innovation**
- **Use small business to meet Federal R/R&D needs**
- **Foster and encourage participation by the socially and economically disadvantaged / women owned SBCs**
- **Increase private sector commercialization of innovations derived from Federal R/R&D, thereby increasing competition, productivity, and economic growth**

SBIR/STTR Purpose - Now

- **Program has evolved to have greater emphasis on commercialization - Requires evaluation of commercial potential in Phase I and Phase II applications**
- **Seed capital for early stage R&D with commercialization potential - Awards comparable in size to angel investments in the private sector**
- **Accepting greater risk in support of agency missions**

SBIR/STTR Program Administration

- **Legislation**
- **Policy Directive Development**
- **Implementation**

Federal **SBIR** and **STTR** Funds

Phase I: Feasibility, 6-12 months

\$150K

Phase II: Prototype development, 2 years

\$1M

Phase III: Commercialization

(Non-SBIR/STTR \$\$\$)

Federal Agencies – SBIR/STTR

- Department of Defense - DoD
- National Institute of Health - NIH
- National Aeronautics Space Administration - NASA
- Department of Energy - DOE
- National Science Foundation - NSF
- Department of Homeland Security - DHS
- U.S. Department of Agriculture - NIFA
- Environmental Protection Agency - EPA
- Department of Transportation - DOT
- Department of Education - DOEd
- Department of Commerce – NIST, NOAA

SBIR Program (started 1983)

- Applies to agencies with $>$ \$100M in extramural R&D
- Reauthorization through 2017
- Funding Amount: *2.7% of agency extramural R&D budgets (FY 2013)*

STTR Program (started 1994)

- R&D conducted jointly by a small business and a non-profit research institution (RI)
- RI – university or a federally funded R&D center
- Agreement on IP sharing and collaboration required
- Applies to agencies with >\$1B in extramural R&D: DOD, NIH, NSF, DOE, NASA
- Reauthorization through 2017
- Funding Amount: 0.35% of *agency extramural R&D budgets* (FY 2013)

Federal SBIR/STTR Funds

TOTAL	\$ 2.4 B
Department of Defense (DOD)	\$ 1.2 B
National Institutes of Health (NIH)	\$682 M
National Aeronautics Space Administration (NASA)	\$204 M
Department of Energy (DOE)	\$164 M
National Science Foundation (NSF)	\$124 M
Others: DHS, EPA, DOC, DOT, USDA, and DOEd	\$ 69 M

Federal Application Process

Phase I and Phase II (SBIR/STTR)

or

Fast Track (Phase I and Phase II combined)

Contracts

- Agreement to provide a product or service that is of direct benefit to the awarding agency

Grants

- Agreement to accomplish something for the public good in exchange for money, property or services

Who Can Apply?

- **For-profit (not necessarily profitable) small business**
 - ❖ **At least 51% US-owned**
 - ❖ **500 or fewer employees**
 - ❖ **Located in the US**
- **Owned and controlled by one or more small business**
- **Majority owned by multiple VC/HF/PEFs (SBIR only will receive 15% awards by most agencies (25% by NIH, NSF and DOE))**
- **What if there is a change in size standard?**

Principal Investigator Employment

SBIR – Primary employment with the small business at the time of award

STTR – With small business or research institution

- Agencies vary in their requirement(s); read the agency solicitation carefully!

Subcontract under SBIR vs. STTR

SBIR – Small business performs all work:

- No subcontract is required
- Phase I: $\leq 33\%$ of R&D work (subcontract limit)
- Phase II: $\leq 50\%$ (subcontract limit)

STTR – Small business collaborates with a non-profit research institution and performs:

- Small business: $\geq 40\%$ (For both Phase I & II)
- Research Institution: $\geq 30\%$

Applicant Registrations

- Applications must be submitted through Grants.gov or the other suggested system
- Registration at Grants.gov is a 3 step process:
 - ❖ Obtain a DUNS number
 - ❖ Complete a SAM (formerly CCR) registration must be updated annually
 - ❖ Complete Grants.gov registration
 - ❖ If applicable, register with eRA Commons
 - ❖ Complete registration at sbir.gov
- Start this process as early as possible!

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	500K	550K
• STTR	90K	600K	690K

Plus potential commercialization royalties

How Faculty Can Participate?

Faculty Initiates

- Find a topic, partner with a small business and lead the proposal preparation
 - Start a company (faculty @university)
 - Start a company (faculty on entrepreneurial leave)
-

Business Initiates

- ❖ Faculty as a subcontractee (technical work)
- ❖ Faculty as a consultant
- ❖ Faculty lab - service contract

Preparing a Proposal ... 1

1. Identify a problem and a solution (approach to the problem)
2. Review federal agency solicitation; discuss technology with PM
3. Assure that the agency is interested in what you want to do
4. Assure that you can document the state-of-the-art. Do a literature and patent search. Talk to other researchers
5. Develop a technical plan for prototype development and commercialization. Identify the technical objectives for demonstrating proof of concept in Phase I

Preparing a Proposal ... 2

6. Identify competing products and the market
7. Identify the PI and assemble the project team
8. Prepare the list of what you need to know in order to be sure that your idea will work
9. Assure support and commitment letters from partners
10. Retain a proposal writer, editor, and/or reviewer and a schedule to get the proposal conforming the agency format ready before the deadline

Review Of Proposals

- **Granting Agencies (NIH, NSF, USDA, EPA....)**
 - ❖ Tier review and approval system
 - ❖ Peer reviewers and panel (External)
- **Contracting Agencies (DoD, NASA.....)**
 - ❖ Tier review and approval system
 - ❖ Internal reviewers
- **Scoring System**
 - ❖ Varies between agency to agency

Agency Differences

- Receipt dates, number of solicitations
- Type of award (grant or contract)
- Proposal review process
- R&D topics
- \$ of award (both Phase I and Phase II)
- Proposal success rates
- Payment types and schedules
- Gap funding / Profit or fee allowed

How to be Competitive

- Understand the philosophy of the agency
- Understand the review process
- Understand the reviewer's psychology
- Develop and follow a strategic plan
- Implement necessary tactics
- Follow the rules

Learn the Rules

- **Read the Proposal**
- **Attend Proposal Development Workshop**
- **Work with a Mentor**
- **Recruit a Proposal Writer, Reviewer, and Editor**

Agency Components

Department of Defense (DoD)

**Army, Navy, Air Force, DARPA, CBD,
DTRA, MDA, SOCOM, OSD.....**

National Institute of Health (NIH)

**20 Institutes and 7 Centers
(23 of 27 make SBIR awards)**

Upcoming Federal Deadlines

NIH: August 5

NIH: May 7 (Aids Related Topics)

NSF: June 11 (SBIR); June 13 (STTR)

DoD: June 26 (SBIR)

DOE: September 4

Kentucky SBIR/STTR Program

Pre-application Assistance
Post-award Matching Grant

Kentucky Phase Zero Grant Program

Purpose

- Enable small businesses and faculty entrepreneurs to prepare high-quality, competitive SBIR/STTR Phase I proposals for any of eleven participating federal agencies

Grant Amount

- Up to \$4,000

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

Kentucky Phase Double Zero Grants

Goal

- Help SBIR/STTR Phase I winners prepare and submit high-quality, competitive Phase II proposals

Grant Amount

- Up to \$4,000

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

Solicitation Open/Close Dates

- **None**
- **Applications are accepted year-round**
 - ❖ Reviews occur once per month
 - ❖ KSEF Submission Deadlines are posted online at <http://ksef.kstc.com>
- **Application submission to KSEF no later than six to eight weeks prior to the federal agency deadline**

Kentucky SBIR/STTR Matching Funds Program

(Funded by CED-OCI since 2006)

Provides matching funds for both federal SBIR and STTR Grant awards:

- **Phase I**

Matches up to 100%, but not 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 over two years to support full-scale R&D and business-related tasks. **Second year matching requires private investment in equal amount of matching grant.**

Kentucky SBIR/STTR Matching Funds

Matching Funds Program Goals

- Augment work done on federal grants
- Increase chances for successful Phase II application
- Additional technology development to commercialization
- Incentivize companies to locate in Kentucky

Uniqueness of the State Matching Program

- Allows both technical and business related tasks
- Allows costs for patents
- Equipment purchases up to \$25K in Phase I and \$100K in Phase II

Kentucky SBIR/STTR Events

**SBIR Connect: 2nd Thursdays
(iHub, 204 S. Floyd)**

**Phase I Proposal Development
Workshop – NIH Focus
(June 11-12, Louisville)**

Useful Websites

- **SBIR Website**
<http://www.sbir.gov>
- **Other Useful Website**
<http://www.zyn.com/sbir>
- **Kentucky SBIR/STTR Resource**
<http://www.kysbir.com>
<http://ksef.kstc.com>

Kentucky Science and Technology Corporation (KSTC)

<http://www.kstc.com>

The screenshot displays the KSTC website homepage. At the top, the logo for Kentucky Science & Technology Corporation (KSTC) is shown. Below the logo is a navigation menu with the following items: Home, About KSTC, Companies, Researchers, Educators, Kentucky Space, IdeaFestival, and Contact Us. A search bar is located below the navigation menu. The main content area is divided into four columns, each representing a different program or service:

- COMPANIES:** CAPITAL AND RESOURCES FOR EARLY STAGE, HIGH-GROWTH ORIENTED TECHNOLOGY COMPANIES. The image shows a pen and a document.
- RESEARCHERS:** FUNDING PROGRAMS FOR R&D, NEW PRODUCT DEVELOPMENT AND COMMERCIALIZATION. The image shows laboratory glassware.
- EDUCATORS:** PROGRAMS THAT HELP SCHOOLS ADVANCE AND TRANSFORM MATHEMATICS AND SCIENCE EDUCATION. The image shows a person using a microscope.
- IDEAFESTIVAL:** WORLD-CLASS EVENT ATTRACTING LEADING GLOBAL INNOVATORS AND THINKERS. The image shows a group of people at an event.

Below these columns are three main sections:

- Current Programs:** This section features three program cards:
 - Enterpri:** 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.
 - Kentucky EPSCoR:** Kentucky EPSCoR is a leader in building infrastructure to enhance national R&D.
- Current News:** This section features a news item titled "The Power of Angel Investing" with a sub-heading "KSTC Offering Angel Investing Overview Seminar". It mentions a "full day seminar" and lists the "ANGEL RESOURCE INSTITUTE" as a partner.
- 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.

At the bottom right, there is a section for "Upcoming Events".

Questions?