SBIR/STTR PROGRAM

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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

- Initial Ideas
- Idea Development - Research
- Start up
- Seed Funds
- Product Rollout
- WC Infusion
- Successful Venture

Time

Commercialization
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 $$$

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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

<table>
<thead>
<tr>
<th>Agency/Mission</th>
<th>Funds</th>
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<tbody>
<tr>
<td>TOTAL</td>
<td>$2.4 B</td>
</tr>
<tr>
<td>DOD</td>
<td>$1.2 B</td>
</tr>
<tr>
<td>NIH</td>
<td>$682 M</td>
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<tr>
<td>NASA</td>
<td>$204 M</td>
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<tr>
<td>DOE</td>
<td>$164 M</td>
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<tr>
<td>NSF</td>
<td>$124 M</td>
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<tr>
<td>DHS, EPA, DOC, DOT, USDA, and DOEd</td>
<td>$69 M</td>
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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: ≤33% of R&D work (subcontract limit)
- Phase II: ≤50% (subcontract limit)

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

- Small business: ≥40% (For both Phase I & II)
- Research Institution: ≥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:

<table>
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<tr>
<th></th>
<th>Ph I</th>
<th>Ph II</th>
<th>Total</th>
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<tbody>
<tr>
<td>SBIR</td>
<td>50K</td>
<td>500K</td>
<td>550K</td>
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<tr>
<td>STTR</td>
<td>90K</td>
<td>600K</td>
<td>690K</td>
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</table>

Plus potential commercialization royalties

Source - Robert Berger Consulting
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](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
Questions?