

# SBIR/STTR R&D Funding for Startups

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# Background Information

**Role:** Ph. D. Electrochemistry leader of early stage R&D and university partnerships

**Technology areas:** medical technology, materials, clean energy & chemical processes

**Commercialization:** Licensing & spin off products in energy, medical equipment and consumer products; some in house manufacturing

**Experience:** Received Phase I & II SBIRs from all participating agencies (15 years of SBIR experience)

**Currently:** Awarded 12-15 Phase II SBIR/STTRs annually

**Disclaimer:** Suggestions based on my experience at Lynntech

# SBIR / STTR

SBIR/STTR is a highly competitive program that encourages small business to explore their technological potential and provides the incentive to profit from its commercialization. Provides funding for “cutting edge research”

SBIR: Set-aside program for small business concerns to engage in federal R&D with potential for commercialization.

STTR: Set-aside program to facilitate cooperative R&D between small business concerns and U.S. research institutions -- with potential for commercialization.

# SBIR vs STTR

		<b>SBIR</b>	<b>STTR</b>
<b>Award Guidelines</b>	<b>Phase I</b>	\$100K/6 mos	\$100K/12 mos
	<b>Phase II</b>	\$750K/2 yrs	\$500K/ 2 yrs
<b>Subcontracts</b>	<b>Phase I</b>	$\leq 33.3\%$	$\leq 60\%$
	<b>Phase II</b>	$\leq 50\%$	$\leq 60\%$
<b>Research Partner</b>		Not Required	$\geq 30\%$
<b>Business Employment of PI</b>		>50%	n/a

# ELIGIBILITY

Organized for-profit U.S. business

At least 51% U.S.-owned and independently operated

Small Business located in the U.S.

P.I.'s primary employment with small business during project

500 or fewer employees

# SBIR/STTR Participating Agencies

DOD SBIR/STTR

NIH SBIR/STTR

NASA SBIR/STTR

DOE SBIR/STTR

NSF SBIR/STTR

USDA SBIR

**TOTAL ~ \$ 3 B**

DOC SBIR

EPA SBIR

DOT SBIR

ED SBIR

# Understand the Customer

Tremendous diversity among agency philosophies and reviewer types

## Peer Review

Mostly academic reviewers

NSF  
NIH  
USDA

## End Users

Reviewed in house by  
technical managers

USAF  
ARPA  
ARMY  
NAVY  
DHS  
DARPA

## Peer Review

Special emphasis

DOE  
DOC  
EPA  
(NSF)

# Understand the Customer (cont.)

## National Institutes of Health (NIH)

- Thoroughly address Phase I reviews - usually it's your only feedback
- SBIR/STTR proposals reviewed alongside academic proposals
- Difficult to judge the panel's mindset (short-term patient benefits vs research)
- Commercialization plan should present a credible path to the market
- The proposal score (technical merit) out-weighs commercialization potential
- Emphasis on relevant expertise (consider collaboration with a medical school)
- Phase IIs can be *resubmitted* (only at NIH)

## National Science Foundation (NSF)

- Heavy emphasis on high-risk breakthrough innovation
- Intense business planning required
- Working with commercialization service companies highly recommended
- Commercialization can out-weigh technical merit (2-stage review process)
- Biased towards companies with matching funds and strong marketing & manufacturing relationships

# Understand the Customer (cont.)

## Department of Defense (DOD)

- “Show me” mentality, emphasizing hardware and demonstrations
- Essential to interact closely with the technical monitor (COTR)
- Is the COTR the decision maker? find out who else and meet them
- Meeting & site visits very important
- Phase IIs often are by invitation only (after 3 months sometimes!)
- Always propose a deliverable at the end of Phase II
- Commercialization through a partnership with prime contractor preferred
- Record of previous accomplishments important
- Sometimes DOD are fishing for new ideas
- DARPA is a special case
- DHS very “hands on” with well defined needs

## NASA

- Very similar to DOD
- Heavy emphasis on compatibility with internal programs and deliverables

# Understand the Customer (cont.)

## Department of Energy (DOE)

- Significant program emphasis with defined topics of interest
- Alignment with a National Lab can sometimes help how to pitch Phase II
- Commercialization plan should present a credible path to the market; emphasis on practical demonstrations in Phase II
- No requirement for a deliverable

## Environmental Protection Agency (EPA)

- Emphasis on ideas being commercially realizable in the near term
- Significant business planning required
- Working with commercialization service companies highly recommended
- No deliverable but practical or realistic demonstrations recommended

## Department of Agriculture (USDA)

- Strong peer review and significant emphasis on commercialization
- Emphasis on ideas being commercially realizable in the near term
- No deliverable but practical or realistic demonstrations recommended

# Small Business Innovation Research (SBIR)

## Strategies

- Luck & serendipity - compensate with many “shots on goal”
- Develop proposal writing skills
- Submit multiple applications around a core competency
- DOD & NIH have most of the money
- Follow the proposal instructions closely
- Lengthy application, review and negotiation process
- Describe *a path* to the market in the application
- Research funds only - no business development funds
- Government program needs & deliverables can take priority

# Attitude is Everything

We are committed that every Phase I idea will result in a Phase I award and competitive Phase II proposal.

Thank you