

SBIR / STTR @ NSF

A Special Webinar to Help SBIR Applicants To Understand NSF

presented by the

SBIR Resource Center^(R)

29 May 2013

[http://www.sbir.us/library/NSF/NSF Webinar.pdf](http://www.sbir.us/library/NSF/NSF%20Webinar.pdf)

sponsored by

Virginia's Center for Innovative Technologies (CIT)

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NSF Mission and Implications

Established “to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense... NSF's stated goals are discovery, learning, research infrastructure and stewardship--provide **an integrated strategy to advance the frontiers of knowledge**, cultivate a world-class, **broadly inclusive science and engineering** workforce and expand the scientific literacy of all citizens, build the nation's research capability through investments in advanced instrumentation and facilities, and support excellence in science and engineering research and education through a capable and responsive organization.

“An essential element in NSF's mission is support for science and engineering education, from pre-K through graduate school and beyond. **The research we fund is thoroughly integrated with education to help ensure that there will always be plenty of skilled people available to work in new and emerging scientific, engineering and technological fields, and plenty of capable teachers to educate the next generation.**”

MISSION CRITICAL

**“Empowering the Nation Through Discovery and Innovation:
NSF Strategic Plan for Fiscal Years (FY) 2011-2016.” ***

Download and read this document from:

http://www.nsf.gov/news/strategicplan/nsfstrategicplan_2011_2016.pdf

** to be updated in FY2013 i.a.w Public Law 111-352.*

Fastlane

- * Pre-registration
 - applicant
 - subcontractors

- * Fastlane operations
 - training facility
 - separate sections on separate site pages
 - special care with the budget(s)
 - check the “blowback” and adjust to get what you want

- * SBIR next deadline 11 June 2013

- * STTR next deadline 13 June 2013

NSF Proposal & Award Policies & Procedures Guide

- * A revised version, NSF 13-1, was issued on October 4, 2012 and is effective for proposals submitted, or due, on or after January 14, 2013.
- * Significant changes have been made to the PAPPG to implement revised merit review criteria (affects the Project Summary and Project Description sections of proposals and annual and final reports).
- * SBIR/STTR program solicitations contain some supplemental proposal preparation guidance and/or guidance that deviates from (and supercedes) the guidelines established in the PAPPG.

TOPICS

* **SBIR - BC/EA/EI/NM**

- Biological and Chemical Technologies (BC)
- Education Applications (EA)
- Electronics, Information and Communication Technologies (EI)
- Nanotechnology, Advanced Materials, and Manufacturing (NM)

* **STTR - BC/EA/EI/NM** (*same as SBIR this time*)

- LAST CYCLE: (Jan. 2013): Accelerating Sustainability using Enabling Technologies (ASET).
- PRIOR CYCLE: (Nov. 2012) Enhancing the Bioeconomy using emerging Biological Technologies (EBBT)

EVALUATION CRITERIA

Three PRIMARY Principles Apply

- 1) projects “of the highest quality” and have the “potential to advance, if not transform, the frontiers of knowledge.” (“Intellectual Merit”)
- 2) contribute more broadly to achieving societal goals (“Broader Impacts”)
- 3) assessment/evaluation based on appropriate metrics (both criteria)

Reviewers will be challenged to keep in mind the *likely correlation* between the effect of broader impacts and the resources provided to implement projects. NSF says: “*If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.*”

See http://nsf.gov/bfa/dias/policy/merit_review/

Intellectual Merit of the Proposed Activity

- 1) Is the proposed plan a sound approach for establishing technical and commercial feasibility?
- 2) To what extent does the proposal suggest and develop unique or ingenious concepts or applications?
- 3) How well qualified is the technical team (Principal Investigator, key staff, consultants, and subawardees) to conduct the proposed activity?
- 4) Is there sufficient access to resources (materials and supplies, analytical services, equipment, facilities, etc.)?
- 5) Does the proposal reflect state-of-the-art in the major research activities proposed (are advancements in state-of-the-art likely)?

Broader Impacts/Commercial Potential of the Proposed Activity

- 1) What may be the commercial and societal benefits of the proposed activity?
- 2) Does the outcome of the proposed activity lead to a marketable product or process that warrants significant NSF support?
- 3) Given the stage of the proposed effort, is the team well-balanced between technical and business skills?
- 4) Has the proposing firm successfully commercialized SBIR or STTR-supported technology where prior awards have been made? (Or, has the firm been successful at commercializing technology that has not received SBIR or STTR support?)
- 5) Has the proposer evaluated the competitive advantage of this technology vs. alternate technologies that can meet the same market needs?
- 6) Does the proposal lead to enabling technologies (instrumentation, software, etc.) for further innovation?
- 7) How well is the proposed activity positioned to attract further funding from non-SBIR sources once the project ends?

9.a FastLane Cover Sheet

(includes Certification Page - may print as multiple pages)

9.b FastLane Project Summary

> > > FastLane Table of Contents *(automatically generated by FastLane)*

9.c Project Description - contains Parts 1-6 (limited to 15 pages)

9.c Part 1. Identification and Significance of the Innovation

9.c Part 2. Background and Phase I Technical Objectives

9.c Part 3. Phase I Research Plan

9.c Part 4. Commercial Potential

9.c Part 5. Consultants and Subawards/Subcontracts

9.c Part 6. Equivalent or Overlapping Proposals to/from other Agencies

9.c Part 7. Lineage of the Innovation

9.d References Cited

9.e Biographical Sketches

9.f Budget, Sub-budgets, and Budget Justification

(subaward page(s) submitted separately to NSF via FastLane)

9.g Current and Pending Support of PI and Senior Personnel

9.h Facilities, Equipment and Other Resources

9.i Supplementary Documents

9.i.1 Company Commercialization History

9.i.2 Data Management Plan

9.i.3 Small Business Administration (SBA) Company Registry Docs.

9.i.4 Letter(s) of Support for Technology

9.i.5 Post Doc Mentoring Plan (if needed)

9.i.6 Human Subjects and Vertebrate Animals (if needed)

(For STTR Only) 9.i.7 Written Cooperative Agreement

LIMITATIONS - 1

Applicant:

- Limit on Number of Proposals per Organization: 2 (SBIR & STTR)
- Submission of the same project idea to both NSF SBIR & STTR solicitations is “strongly discouraged”
- Indirect costs < 150% of direct labor

PI:

- Only one (1) proposal per PI
- Full-time (51%) employed by the small business
- Employment elsewhere of greater than 19.6 hours/week not allowed
(*assumes a 40-hour work week*)

LIMITATIONS - 2

Disallowed:

- Cost sharing prohibited
- Independent Research and Development (IR&D)
- Patent and patent related expenses
- Sales and marketing expenses
- Business development
- Manufacturing and production expenses
- Fees/profit exceeding seven percent (7%)

Project Bid / Duration Limits:

SBIR: Phase I = \$150K / 6 months
Phase II = \$750K / 24 months

STTR: Phase I = \$225K / 12 months
Phase II = \$750K / 24 months

RESPONSE TO CRITERIA - 1

INTELLECTUAL MERIT

All NSF projects should be of the highest quality and have the potential to *advance*, if not *transform*, the frontiers of knowledge.

YOUR RESPONSE

- * relate the project to its place in prior, current and future research
- * specifically address the *advance / transformative nature*
- * ID and discuss the Innovation to be exploited
- * provide clear/complete theory of operation (the secret sauce)
- * ID and discuss specific resources necessary for project success (personnel, instrumentation, test beds, institutional support, etc.)
- * ID and discuss data collection, analysis and decision methods.

RESPONSE TO CRITERIA - 2

BROADER IMPACTS

NSF projects, in the aggregate, should contribute more broadly to achieving societal goals.

YOUR RESPONSE

Explicitly address progress, plans and resources, in all activities of the project, intended to address the *Broader Impacts* criterion which are not intrinsic to the research. This includes distribution/implementation of the results and the expected economic and societal impacts.

RESPONSE TO CRITERIA - 3

BOTH CRITERIA

Each criterion is necessary, but not sufficient without the other. Applicant's ability (includes resources, training, education, commitment/propensity, etc.) to perform in BOTH areas will be of great importance to NSF reviewers.

REVIEWER GUIDANCE

When evaluating NSF proposals, reviewers are charged to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed and what benefits would accrue if the project is successful.

YOUR RESPONSE

Reveal and discuss the your history and goals relative to both the scientific and application arenas; provide your plans for both including how you will acquire the needed resources to affect those plans.

* Homework:

- literature surveys
- tech forecast / tech assesment
- distribution pathway analysis
- business model analysis (*break even*)
- letters of support for technology
- subcontractor/benefactor/PI letters of commitment

* White Paper to NSF Manager (*2-pages sent early*)

- ID end item/service product
- outline the financial/market opportunity
- ID technical opportunity
- ID the innovation to be exploited
- outline your planned R&D approach
- outline important team talents & resources
- ask for their advice

* Other Issues (budget, philanthropy, checklist, review, etc.)

THE VALUE QUESTION

At a recent SBIR Conference we heard

“We try to determine if the offering is worth a \$1.1 million* investment to the American taxpayer.”

– *Erroll Arklic, NSF Program Manager*

* *\$1.1 million was the maximum available agency contribution over the life of a single NSF SBIR project, at that time.*

ADDITIONAL PREPARATION

- * **How To Win SBIR AwardsSM** - *America's best SBIR training event*
 - 23 July 2013 in Hanover, MD (*NIH emphasis added*)
 - 27 August in Tampa, FL (*ALL agency event*)
 - 10 Sept. 2013 in Columbia, SC (*DoD emphasis added*)

- * **SBIR LabTM** (*shared consulting for "hands-on" application development*)
 - for NIH/PHS 2013-1 – 25, 26 & 27 July 2013 in Rockville, MD
 - for DoD 2013.3 --12, 13 & 14 Sept. 2013 in Annapolis, MD

- * **SBIR CheckListSM** - *proposal polishing*
 - 7 June in Rockville, MD

- * **National SBIR Conferences**
 - 5 - 7 Nov. 2013 in Columbia, MO (*all agencies*)
 - 28 to 30 Oct. 2013 NIH SBIR/STTR Conference in Sioux Falls, SD

- RELATED ---

- * **R&D Project Planning, Cost Estimating & ControlSM**
 - 18 July 2013 in College Park, MD

- * **Crafting Federal Cost/Budget ProposalsSM**
 - 15 August 2013 in College Park, MD

INTELLIGENT PURSUIT

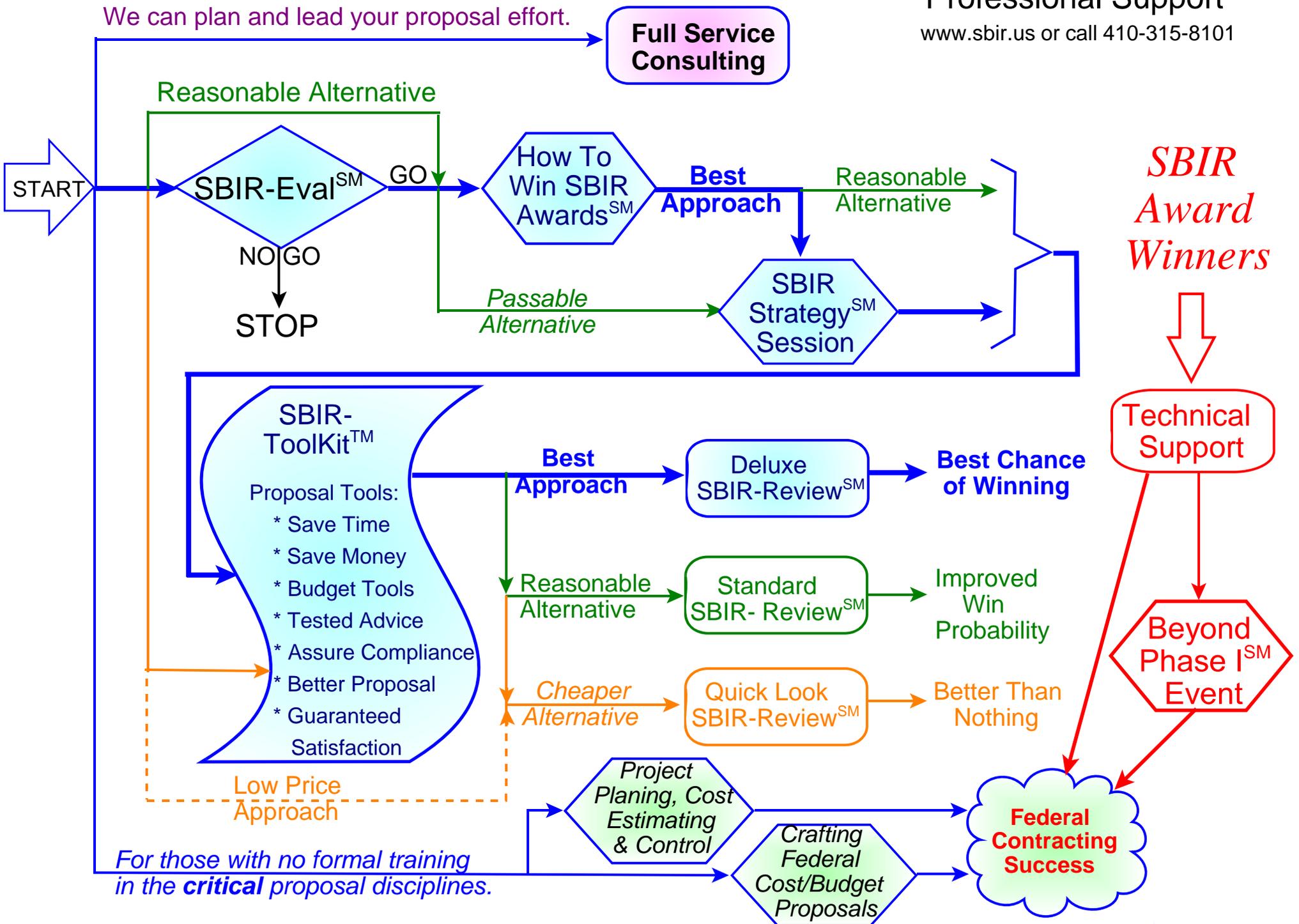
An Integrated Resource System

- **Proposal Development Tools** - 23 software titles,
(each crafted to match specific agency solicitation)
- **Tutorial Packages** - self-paced software - 3 titles
(accounting, IP/legal, SBIR/STTR Program database)
- **Bid Support Services** - most at *fixed-price*
(strategy advice, proposal reviews, proposal leadership, opportunity search, mentoring/coaching, etc.)

ENGINEERED, TESTED & PROVEN EFFECTIVE
(by hundreds of users) SINCE 1993:

Flow Chart of Support Alternatives

SBIR Resource Center^(R)
 Professional Support
 www.sbir.us or call 410-315-8101



The Intelligent Approach

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SBIR Resource Center^(R)

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www.sbir.us or just "[SBIR.us](http://www.sbir.us)"

When You Are Serious About SBIR