

# Ideation, Point Solution, and Market Stimulation

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# Ideation, Point Solution, & Market Stimulation

- The law requires SBIR/STTR programs to consider commercial potential in making selections for awards. NASA does this in three ways:
  1. Ideation: Encouraging the formation of ideas/concepts that could meet NASA mission needs.
  2. Point Solution: Solving one particular NASA problem. Widely used to implement a new innovation quickly; also known as **Infusion**.
  3. Market Stimulation: Creating a demand for the innovation both in NASA and outside of NASA; often called dual-use technologies.
- During the solicitation development process, subtopic authors are asked to identify how they envision the subtopic meeting one or more of the categories above.
- The goal is to ensure that innovations that are submitted to the program have the ability to address different markets while also meeting NASA needs.

# Why is this Important?

- Small businesses need to understand and develop their commercialization plan early. Questions you should ask:
  - Can my business be successful and sustainable if my innovation becomes part of NASA's industry/technology supply chain or if the innovation leads to a mission or program infusion?
  - Will I need to consider moving the innovation beyond NASA to achieve sustainability of the technology and my business?
    - Identify other non-NASA markets to such as other Federal Agencies, commercial market, etc...
- NASA provides several commercialization opportunities such as:
  - Post Phase II funding from NASA SBIR/STTR Program to support additional R&D for the innovation and scale up to be ready for infusion opportunities
  - Phase III funding from a NASA Program that infuses the technology
- **Understanding these things are critical as small businesses must start planning at the early stages to determine their ability to commercialize and capitalize on the SBIR investment at Phase I and II.**

# Phase I Evaluation Criteria



- NASA selects proposals offering:
  - The most advantageous research and development paths that address NASA needs
  - The best scientific/technical merit and feasibility and the proposal's benefit to NASA interests
- Each proposal is evaluated and scored on its own merits using these factors :
  1. Scientific/Technical Merit and Feasibility
  2. Experience, Qualifications and Facilities
  3. Effectiveness of the Proposed Work Plan
  4. Commercial Potential and Feasibility
  5. Price Reasonableness

# Commercial Review



- All acceptable Phase II SBIR and STTR proposals are reviewed by a committee of outside consultants familiar with NASA technologies and external commercial markets
- The intent of the commercial review are:
  - Provide NASA with an assessment of the ability of the proposing company to commercialize their technology outside of NASA and to become a sustainable provider to NASA
  - Provide the company with an assessment of their plan by giving advice for improvements and also how to recognize additional potential commercialization opportunities
- The results of the commercial review accounts for 5% of the scoring for each proposal

# Commercial Criteria

- Ability of a company to commercialize technology based on:
  - Understanding of the internal and external market place
    - Market segmentation
    - Competitive landscapes and barriers to entry
  - Ability to demonstrate a viable plan to address and penetrate market
    - Pro-forma revenues
    - Identified possible risks and discussed mitigations
  - Ability to carry out commercialization plan
    - Capitalization / Staffing / Capital Commitment from outside sources
    - Intellectual Property protection
    - Has or plans to seek mentoring / assistance
    - Cash Flow and Balance Sheet
  - A high commercial score means:
    - A company has identified and understands an addressable market
    - A company has provided a viable plan to address the market
    - A company has a capitalization plan and potential to carry out that plan



# Proposal Commercial Section



- Commercialization reviews are based on the evaluation of Part 7 of the SBIR/STTR proposals
- Elements of Part 7: Phase III Efforts, Commercialization and Business Planning
  - Commercial Potential – Market
  - Commercial Intent – Plan
  - Commercial Capability – Execution
  - Intellectual Property
  - Assistance and Mentoring
  - Capital Commitments

# Part 7: Commercialization

## 1. Commercial Potential – Market

- The market segmentation and the commercial Total Addressable Market (TAM)
- The proposed innovation targeted customers (e.g., NASA, other federal agency, commercial)
- The competitive landscape, identify potential competitors

## 2. Commercial Intent – Plan

- Provide a development timeline to bring the innovation to market
- The applicable business model (spin-out, license, OEM, etc.) to bring the innovation to market;
- The risks to the plan and what mitigations can be taken

## 3. Commercial Capability – Execution

- The current and future company capitalization efforts
- As applicable, the description of the approach, path to market and revenues from past commercialization(s) resulting from SBIR/STTR awards (disclosed in the CMS)



# Part 7: Commercialization

Important Changes – In addition, address separately:

- **Intellectual Property:**

- How the offeror will protect the intellectual property that results from the innovation

- **Assistance and Mentoring:**

- Describe existing and future business relationships
  - Formal Partnerships, Joint Ventures, Licensing Agreements with other companies/organizations
- Plans for securing needed technical or business assistance through
  - Mentoring, partnering, or through arrangements with State assistance programs, SBDCs, Federally-funded research laboratories, Manufacturing Extension Partnership centers, Federal programs or other assistance providers

# Letters of Capital Commitment



- *Letters of support and general interest from outside parties are discouraged*
  - They will not be reviewed or considered as part of the evaluation

**However** – Letters of Capital Commitment/funding support are considered as part of the evaluation process

These letters should:

- specify the level of funding commitments, other sources to be provided and any funding contingencies/conditions, in addition to timing of the funding being made available to the SBC
- Letters of commitment must be signed by a duly authorized representative of the outside funding source and SBC with the authority to obligate funding

# Commercialization Assistance



- **Commercialization Technical Assistance**

- In accordance with the Small Business Act (15 U.S.C. § 632), NASA will authorize the recipient of a Phase II award to purchase technical assistance services through an outside vendor, such as access to a network of non-NASA scientists and engineers engaged in a wide range of technologies, or access to technical and business literature available through on-line data bases, for the purpose of assisting such concerns in:
  - Making better technical decisions concerning such projects
  - Solving technical problems which arise during the conduct of such projects
  - Minimizing technical risks associated with such projects
  - Developing and commercializing new commercial products and processes resulting from such projects
- **Up to \$10,000 per proposal is available for a Phase II award**
  - This amount does not count toward the maximum Phase II award amount

# I – Corps

- When applying for Phase I, you have an opportunity to apply to be in the NASA I-Corps Program.
- The NASA SBIR/STTR Program is partnered with the National Science Foundation (NSF) to offer the NSF Innovation Corps program (I-Corps™).
  - I-Corps focuses on educating teams on how to translate technologies from the laboratory to the marketplace. **Its all about “Customer Discovery” and validating your business proposition.**
  - Participation in I-Corps will require selected companies to conduct in person interviews with potential customers/buyers and report back to NSF on these meetings. Selected companies are also required to take I-Corp based training during the duration of the program.
- Selected companies will be awarded training grants, separate from their Phase I contract, that must be completed prior to the conclusion of Phase I contracts
- The program is described further at <http://sbir.nasa.gov/content/I-Corps>

# Post-Phase II Opportunities



- The NASA SBIR/STTR Program has three initiatives for supporting its small business partners beyond the basic Phase II award
  - Phase II Extended (Phase II-E) contract option
  - Phase II Sequentials
  - Civilian Commercialization Readiness Pilot Program (CCRPP)
- Please refer to <http://sbir.nasa.gov/content/post-phase-ii-initiatives> for eligibility, application deadlines, matching requirements and further information



# Questions