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NASA Commercialization Ratings

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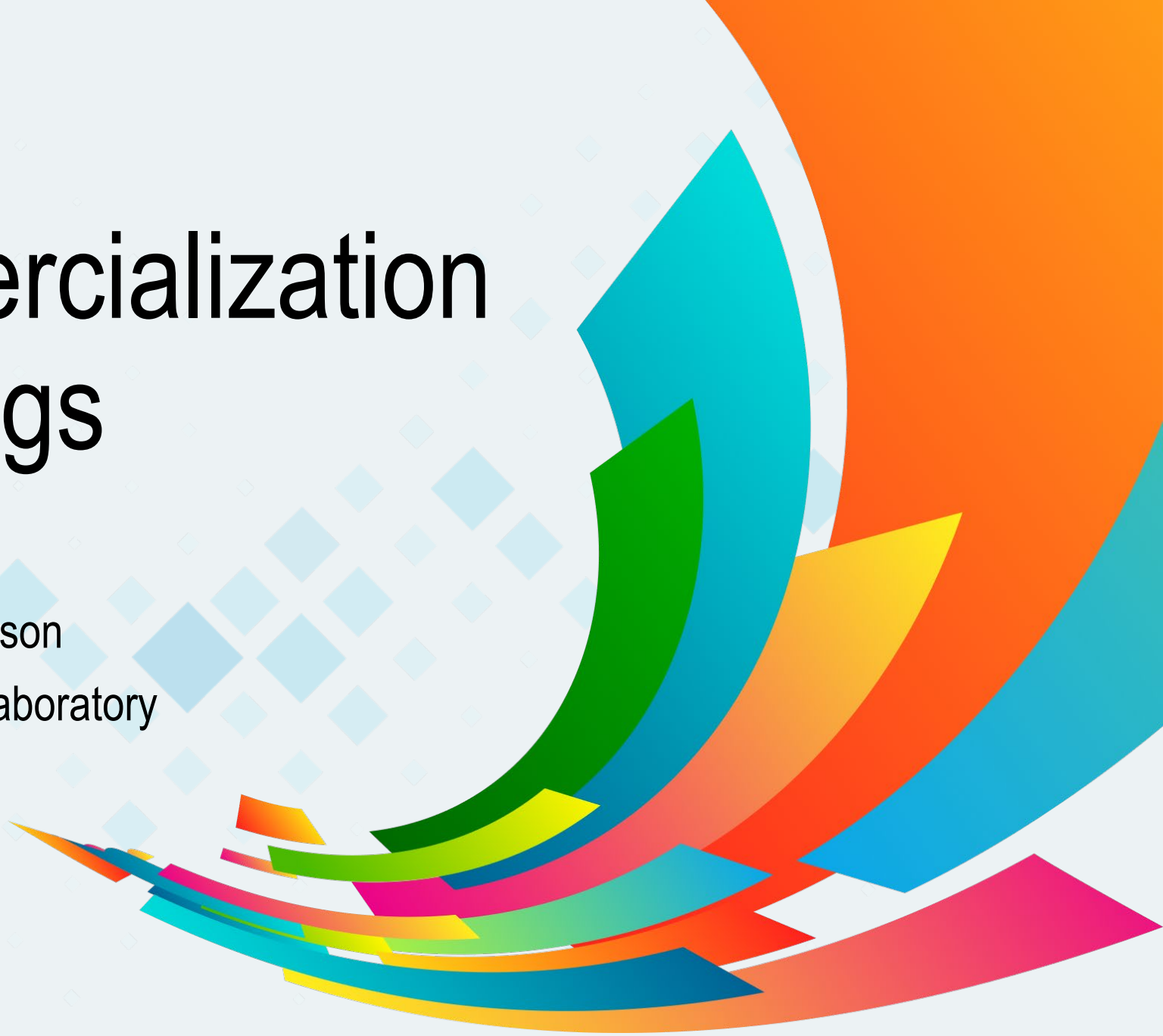

What is Commercialization?

- Commercialization is defined as: (1) the transition of technology into products and services for NASA mission programs, (2) other government agencies and (3) non-government markets
- The law requires SBIR/STTR programs to consider commercial potential in making selections for SBIR/STTR awards.
- The SBA set a goal for the program to increase private-sector commercialization of innovations derived from Federal research and development (R&D) funding.

Why Commercialization?

- Where does Commercialization fit in?
  - It typically takes 3 to 7 years for a new technology effort to make it into a NASA flight mission.
  - NASA is focused on technology investments that will lead to available technology when required for flight.
  - NASA wants companies to succeed and become sustainable sources of NASA technology and become part of our industry/technology community.
  - Commercialization of technology beyond NASA is a good proxy for sustainability of the potential flight technology.
- Commercialization can be achieved a number of ways:
  - Post Phase II funding from NASA SBIR/STTR Program
  - Funding from a NASA Program that infuses the technology
  - Post Phase II funding from another Federal Agency
  - Post Phase II funding from a commercial enterprise in the form of sales or additional R&D
  - Commercial sales

Phase I Evaluation Criteria

- Evaluation Criteria
  - NASA intends to select for award those proposals that offer the most advantageous research and development to stimulate technical innovation to the Government and the SBIR/STTR Program. NASA will give primary consideration to the scientific and technical merit and feasibility of the proposal and its benefit to NASA interests. Each proposal will be evaluated and scored on its own merits using the factors described below:
    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 the external commercial markets.
- The purpose of the commercial review is two-fold:
  - Provide the proposing company with an assessment of their commercial plans, give advice for improvement and also how to recognize additional commercialization opportunities.
  - 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.
- The results of the commercial review is worth 5% of the scoring factors for each proposal.

Commercial Criteria

- Ability of a company to commercialize their technology is based on several factors:
  - 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 the market
    - Pro-forma revenues
  - Ability to carry out the commercialization plan
    - Capitalization
    - Staffing
    - Cash Flow and Balance Sheet statements
- A high commercial score means that:
  - A company has identified and understands an addressable market for their technology; and
  - A company has specified a viable plan to address the market; and
  - A company has a capitalization plan and ability to carry out their commercialization plan.

Effect of Commercial Review and Score

- SBIR proposals have shown an improvement in commercial reviews since commercial review feedback has been made available.
- To further incentivize commercialization, the results of the commercial review are worth 5% of the scoring factors for each proposal.
- NASA will consider adjustments to the commercial score weighting in future solicitations.

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

Part 7: Commercialization

1. **Commercial Potential - Market:** Describe:

(1) market segmentation and analysis, by providing the scope in dollars, and describe the commercial Total Addressable Market (TAM) that is appropriate to the proposed innovation, the segment in dollars of the TAM addressable by the proposed innovation and the projected percentage of the offeror's market share in 2-3 years after entry into the identified market;

(2) the proposed innovation in terms of target customers (e.g., NASA, other federal agency, commercial enterprise); and

(3) the competitive landscape, by identifying potential competitors by company name within the identified market, discussing the barriers to entry and how many years it would take a competitor to enter this segment in terms of capitalization, technology, and people, and describing how the proposed innovation is different from the potential competition.

Part 7: Commercialization

2. **Commercial Intent - Plan:** Describe:

1) the commercial development plan by providing a development timeline to bring technology to market, discuss consultants, incubators and research institutions to achieve the plan;

2) the applicable business model (spin-out, license, OEM) the offeror would use to bring the innovation to market, the channels of distribution (direct sales, distributors, etc.) that would be used in bringing the innovation into the identified market, the pro-forma 2-3 year revenue dollar projections based on the proposed innovation's penetration of the identified market and any follow-on development (long term > 5 years) plans to expand your proposed innovation's market presence;

3) the risks to the commercial development plan and what mitigations, if any, can be taken over a reasonable period of time to lessen the risks and

4) Intellectual Property protection methods, plans or processes within your company.

Part 7: Commercialization

3. **Commercial Capability – Execution:** Describe:

1) the current and future company capitalization by discussing the technical, operations/manufacturing and business staff conducting the project; the physical plant, including facilities and the capital equipment, tooling and test equipment used to conduct the investigation; how the innovation will enter into production (i.e., in house or through a licensee) and what changes (if any) will be made to company capitalization for commercialization;

2) Existing and future business relationships in terms of any formal Partnerships, Joint Ventures, Licensing Agreements with other companies/organizations and;

3) As applicable, the approach, path to market and revenues from past commercialization(s) resulting from SBIR/STTR awards disclosed in the Commercial Metric Survey (CMS).
   - The CMS is required by the SBA as part of the proposal submissions process and must be completed via the Proposal Submissions Electronic Handbook. Also, companies with no SBIR/STTR awards or only fairly recent awards will not be penalized under past performance for lack of past SBIR/STTR commercialization.
   - *Note: Information received from the SBIR/STTR awardees completing the survey is kept confidential, and will not be made public except in broad aggregate, with no firm-specific attribution.*

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 SBIR 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 $5,000/proposal available after Phase II award
    - This amount *does not* count toward the maximum Phase II award size

Commercialization Assistance

- **I-Corps**
  - The NASA SBIR/STTR Program is partnering with the National Science Foundation (NSF) to offer the NSF Innovation Corps program (I-Corps TM).
    - I-Corps focuses on educating teams on how to translate technologies from the laboratory into the marketplace.
  - Participation in I-Corps will require selected companies to conduct either 30 interviews (shortened version for the SBIR program) or 100 interviews (full version for the STTR program) to enable contractors to understand the commercial potential of their ideas.
  - 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.
  - NASA awarded 17 grants to SBIR and STTR Phase I contractors through the FY18 solicitation.
    - The amount of funding is $25,000 for the full I-Corps program for STTR firms, and up to $10,000 for the shortened version for SBIR firms.

Post-Phase II Opportunities for Continued Technology Development

- The NASA SBIR/STTR Program has three initiatives for supporting its small business partners beyond the basic Phase II award. These are the Phase II Extended (Phase II-E) contract option, the Civilian Commercialization Readiness Pilot Program (CCRPP) contract, and Phase II Sequentials.

- Please refer to http://sbir.nasa.gov/content/post-phase-ii-initiatives for eligibility, application deadlines, matching requirements and further information.

Proposal Advice

- The proposal process begins right now, not after the solicitation is released.
- Writing a winning a proposal is a long term process that involves:
  - Understanding the needs and interests of NASA
  - Interacting with the technical community
    - Help us write our subtopic descriptions by letting us know what you are capable of providing.
    - Find out how you can best be a benefit to NASA science and technical needs.
- Read the solicitation carefully
  - Do not assume it is the same as last year.
  - Reread it again, your competition did.
- Provide all of the required information, including Part 7 – Commercialization for Phase II proposals.
- Explain (early and concisely) how your effort will benefit NASA interests.
- You never finish writing a proposal, you just run out of time.

Thank you for your participation