

Federal grants are an overlooked option for bootstrapping startups

BY ROBERT A. ADELSON

Are you an entrepreneur, academic or inventor trying to commercialize your new product or technology? Are you having a hard time finding funding?

If so, you are not alone. First-time entrepreneurs face huge hurdles seeking venture or angel funding for unproven inventions or technologies. You must get by with personal savings, friends and family until a strategic partner, investor, first sales or licensing revenue arises.

Yet for the startup technical venture there is another source of funding often overlooked: federal government funding under Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

Federal agencies reserve 2.5 percent of their research and development funding — more than \$1 billion per year — for SBIR and STTR grants to small technical companies with less than 500 employees.

For the STTR program, the small company must also collaborate with nonprofit research institutions. Recipients must also be independently owned and operated, have their principal business location in United States, be

more than 50 percent owned by U.S. citizens or permanent resident aliens, and employ the principal researcher.

In Phase I of the awards, up to \$100,000 becomes available over six months for an SBIR grant, or over one year for an STTR grant. As long as your grant proposal supports the federal agency mission, monies are paid to support research to establish technical merit, concept feasibility and development efforts leading to prototype fabrication and testing.

After Phase I, the recipient company can apply for a Phase II grant to continue R&D efforts and evaluate commercial potential. Generally up to \$750,000 is paid over two years (on occasion, up to \$4 million) for SBIR or up to \$500,000 over two years for STTR Phase II grants.

Grants to startup companies mean R&D funding on good terms:

- No debt/repayment obligations
- No equity, options or securities granted
- No downstream royalties owed
- Retained rights to intellectual property.

The government wants the research performed on specific tasks needed or other tasks that meet the agency's mission.

Grants are no panacea to startup companies. The process is time-consuming and involves long waits for evaluation through government red tape and paperwork. Yet hundreds of large successful public companies got their start with these government grants.

Before grants are made, people appointed by the agencies as experts in the field review and grade the proposals submitted. Thus, achieving a grant is a valuable validation of your company's technology. It can set your company apart and leapfrog your efforts to gain a strategic partner, angel or venture funding.

The SBIR program seeks commercialization. Partnering can begin in Phase I grant proposals. Then, with validation and more funding in Phase II, which is geared toward creation of a working prototype, the awardee is positioned to approach key stakeholders — users, suppliers and potential customers.

Peer review and access to agency knowledge is likewise valuable as a source of collegial interaction and collaboration. In preparing your proposal, agencies may be approached and, after review, those proposals which are scored receive extensive written comment.

Up to two revisions are allowed. So if your proposal

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Grants: SBIR, STTR have \$1 billion annually

is scored, you should get a thorough debriefing and prepare at least one revision, responding to each comment point by point, carrying out changes asked or answering comments forthrightly in the opening of your revised proposal.

How to win grants

To seek an SBIR/STTR grant, you must respond to a federal agency solicitation for proposals. The National Institutes of Health and Department of Defense publish three solicitations per year,

NASA, National Science Foundation, Environmental Protection Agency and all other agencies publish one to three general or special focus solicitations.

Your response must follow the directions. The agencies will only fund what meets their objectives and needs. Your principal investigator and listed collaborators must have academic or experience credentials to lend credibility.

Yet securing government support does not mean detouring from your business objectives. Most solicitations

include a catchall for proposals that:

- Define a problem fitting agency mission
- Define a concept that the reviewer can visualize. Stress novelty
- Show utility and meet agency's requirements
- Define success — show parameters where proof of concept is achieved.

The grant programs offer potential for technical collaboration, seed funding, product validation and investor credibility that can all be well worth the effort.

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