Commercialization and Business Planning Guide for the Post-Award Period

Designed Especially for the Technology Entrepreneur

prepared for
The Advanced Technology Program

National Institute of Standards and Technology
Technology Administration
United States Department of Commerce

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September 1998
Book design, figures, and tables by Jenny C. Servo, Ph.D.

Graphic design by Linda S. Sherman Design, Inc.

Previous Copyrights Knock their Socks Off: Making Winning Presentations to Investors (1993); Business Planning for Scientists and Engineers (1995) and Indicators of Commercial Potential (1996) by Dawnbreaker Press.

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I would like to thank Rosalie Ruegg, Richard Spivack, and Robert Sienkiewicz for making it possible to develop this book. In particular, I would like to thank Rosalie for her vision, trust, and patience during the completion of this project. I would like to express my gratitude to Jeanne Powell for providing editorial insights during the final stages of the project. I would also like to thank the Principal Investigators of the ATP as well as SBIR and EM-funded companies with which we have worked. Your questions have led to the development of a book which I hope will be of unique assistance.
About the Advanced Technology Program (ATP)

Started in 1990, the Advanced Technology Program (ATP) is a unique partnership between U.S. industry and government—one that is designed to advance the nation’s competitiveness. ATP invests in industrial projects that, although high-risk, have the potential of yielding high payoffs for the nation. The program is industry-driven, with all projects envisioned, planned, and carried out by U.S. businesses. Both small and large companies, individually or as members of a joint venture, are eligible to participate in the program.

Companies become involved with the Advanced Technology Program through announced competitions. All competitions are open to single-company applicants (small, medium, and large firms), as well as to joint ventures. A rigorous peer-review process is used to evaluate proposals against publicly announced selection criteria. Awards are made for proposals that score high on technical, business, and national economic merit. From 1994 through 1998, most of ATP’s funding was applied to focused program areas. Focused Program Competitions channeled support to a technology cluster of related projects. These clusters included:

- Adaptive Learning Systems
- Catalysis & Biocatalysis Technologies
- Component-based Software
- Digital Data Storage
- Digital Video in Information Networks
- Information Infrastructure for Healthcare
- Manufacturing Composite Structures
- Materials Processing for Heavy Metals
- Microelectronics Manufacturing Infrastructure
- Motor Vehicle Manufacturing Technology
- Photonics Manufacturing
- Premium Power
- Selective-Membrane Platforms
- Technologies for the Integration of Manufacturing Applications
- Tissue Engineering
- Tools for DNA Diagnostics
- Vapor Compression Refrigeration Technology
In each year from 1990 through 1998, ATP also held a General Competition; these annual competitions were open to all technologies. ATP is currently experimenting with alternative forms of competition.

ATP awards vary in size. Awards to individual companies are limited to $2 million for a three-year period, and are limited to covering direct research and development costs only. Fortune 500 companies, or the equivalent, must provide at least 60 percent of total project costs. Irrespective of the size of the company, single applicants must cover their own indirect costs. This helps to assure their commitment and encourages faster commercialization. Awards to joint ventures can cover a period of up to five years. Joint ventures often take the form of a supplier chain, acting as a virtual corporation for purposes of this project. Joint ventures must provide more than 50% of the resources required to complete the project. Again, this is to assure a high level of commitment on the part of award recipients.

Historically, small businesses have fared well in this program. Of the 352 single applicant awards made between 1990 and 1998, 146 were made to small businesses. Of the 119 joint ventures funded during this same period, 39 were led by small businesses.

ATP funding is for research, not product development. As a result, companies whose ATP funding is ending must locate other sources of funds in order to make their technologies commercially successful. The objective of this guide is to assist ATP awardees during this post-award period. Our aim is to help companies deepen and refine their business plans, as well as attract funding to continue with the development and commercialization of their technologies.
First, commercialization awards do not generate the deadweight loss and innovation-hindering effects associated with exclusive rights. Second, awards do something commercialization patents do not: they provide ex ante financing for start-ups and small businesses that cannot raise money on their own due to the capital constraints mentioned above. They also provide nonmonetary assistance in commercializing, such as business planning advice and help accessing professional investors. In order to mitigate the risks associated with government "picking winners," awards require obtaining prior Commercialization Handbook. An Introductory Guide for Researchers. PRESENTED BY: The Intellectual Property Management Offices of Ontario’s Post-Secondary Research Institutions and OCE Inc.: The Ontario Centres of Excellence 1ST EDITION, MARCH 2005. Acknowledgments. These institutions collaborate on three key functions: To train technology transfer professionals through an internship program; manage a proof-of-concept fund for the "last step" to enable technologies to attract commercial partners; and share best practices for technology transfer offices. Collectively, the Centres of Excellence promote the economic development of Ontario through directed research, commercialization of technology and training for highly qualified personnel. Commercialization and Business Planning Guide. for the Post-Award Period. Designed Especially for the Technology Entrepreneur. prepared for The Advanced Technology Program. National Institute of Standards and Technology Technology Administration. United States Department of Commerce. ATP invests in industrial projects that, although high-risk, have the potential of yielding high payoffs for the nation. The program is industry-driven, with all projects envisioned, planned, and carried out by U.S. businesses. Both small and large companies, individually or as members of a joint venture, are eligible to participate in the program. Companies become involved with the Advanced Technology Program through announced competitions. Commercialization is defined in the SBIR and STTR Policy Directives and we have listed the definition here. Although it is brief, there’s a lot to it! We will briefly review what each of these agencies requests regarding commercialization in their solicitation documents starting with the Department of Defense (DoD). The DoD provides an overview of solicitation guidelines for Phase I in a document referred to as the DoD Instructions or Preface. Describe the market and addressable market for the innovation. Discuss the business economics and market drivers in the target industry. How has the market opportunity been validated? Describe your customers and your basic business model. A commercialization plan and program rollout is often facilitated by a business incubator or an accelerator. These companies specialize in helping start-ups and early-stage companies sort out how to bring their offering to market or scale their business. They are part of the business start-up ecosystem, along with government programs, sales and marketing consultants, coaches, law firms, angel investors, banks, and institutional investors. The Trouble with the Start-up Ecosystem. The reason for the focus on technology is obvious. It boils down to market potential, scalability of the business model and access to financing. New technology businesses have the potential to grow faster and larger than most other types of businesses.