

SBIR Action Plan™ Development Service

Case Study



Researched and Prepared¹

By

Aurora International Consulting (AIC)

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SBIR Action Plan™ Development Service Case Study

SBIR Action Plan™ Development Service

Service Description

This service is designed to help your firm institute and effectively implement a proposal development system which results in the company winning multiple Small Business Innovation Research (SBIR) contracts/grants in its technology development interest area.

The service outcome will enable your firm to:

- Identify and respond to SBIR request for proposal (RFPs) that match the company's business experience/expertise
- Save time and money preparing Phase I applications
- Use SBIR dollars to fund the company's research and development operations
- Gain a new, steady revenue source

Service Price

The SBIR Action Plan™ price is \$2,500.

For More Information

Let us know how we can help your company succeed. You can either drop us a line from the **Contact Us** page on AIC's website (www.auroraintercon.com) or contacting Mr. Darrell Williams today, at staff@auroraintercon.com.

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Client's Company Business Background and Consulting Service Needs

The New Horizon Technology Development Group (NHTDG) is a start-up research & development (R&D) firm, which specializes in developing technology solutions for the Drinking Water Safety and the Drinking Water Security markets.

NHTDG wanted to utilize its company's resources to win environmental technology development contracts from the Small Business Innovation Research (SBIR) program. The company viewed SBIR as a significant funding source to produce innovative environmental technologies, to support the firm's internal R&D / new products development program and to generate revenues.

Client's Consulting Service Needs

With no previous experience participating in the SBIR program, NHTDG needed to:

- (1)** Identify and target federal agencies which offered contracting opportunities matching its company's core capabilities and technology interest area.
- (2)** Develop a cost-effective, comprehensive strategy that would result in the company winning SBIR contracts.
- (3)** Establish and institute a proposal development & submission process that would enable the company to automatically respond to released SBIR contracting opportunities.

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Proposed Service Solution

Based on AIC's experience and expertise in the SBIR program, the following service solution was proposed: Researching and preparing a SBIR Action Plan™ Notebook. The Notebook contains the necessary information and instructions on how to prepare, as well as submit, winning SBIR Phase I proposal applications.

Service Performance

AIC worked with the client to:

- (1) Identify and target participating federal agencies offering SBIR contracting opportunities for the development of technology solutions focused on Drinking Water Safety and Drinking Water Security.
- (2) Prepare a SBIR Action Plan™ Notebook. The Notebook contained the following:
 - Profile of the Primary Targeted Federal Agency, the Environmental Protection Agency (EPA)
 - Business Plan Executive Summary
 - Scientific, Technical and Market Research Information Sources
 - Sample EPA SBIR Application Commercialization Plan
 - Sample EPA SBIR Application Budget Proposal
 - Copy of AIC's SBIR Proposal Development Guide- EPA SBIR Program Edition©.

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SBIR Action Plan™ Notebook Content

Targeted Participating SBIR Federal Agencies:

Primary Target Agency- US Environmental Protection Agency

Secondary Agencies- National Institutes of Health, US Department of Agriculture, US Department of Defense

I. **Agency Profile.** Information about the Environmental Protection Agency's SBIR program, it specifically included: **(1)** a one-page agency profile sheet, **(2)** a copy of the agency's SBIR program proposal application instruction materials, **(3)** a copy of the agency's FY 2005 topic announcement for Drinking Water and Wastewater Security and **(4)** a list of past EPA SBIR award winners with contracts focused on Drinking Water Safety and Drinking Water Security.

II. **Business Plan Executive Summary.** A summary of the company's business operations, which included a detailed market research (i.e., industry trends, product market size, competitors, etc.) & marketing strategy section, and a management structure section. The Summary will be used to provide information for the SBIR Phase I proposal application.

III. **Research Information Sources.** The Sources provide NHTDG with the necessary information needed to support its technical approach, which is a key part of the SBIR proposal application, and identify a market (i.e., Potential Buyers) for proposed technology products. This section included: Environmental Technology Trade & Professional Associations List; Private Market Research (e.g., Standard & Poor's Industry Surveys); Independent Industry Trade Publications List; Federal Government and EPA Industry Reports; and Peer-Review Environmental Technology Journals Listings.

IV. **Sample EPA Budget.** Based on EPA's SBIR application requirements, a sample budget was developed that will be used by NHTDG as an example on how to prepare future application budgets.

V. **Sample EPA Commercialization Plan.** Taken from NHTDG's Business Plan Executive Summary, the sample shows the company how to and where to place market research information in the Commercialization Plan.

VI. Aurora International Consulting's SBIR Proposal Development Guide- EPA SBIR Program Edition©. The Guide shows NHTDG how to complete each question on the agency's SBIR proposal application.

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NHTDG's Business Plan Executive Summary (Abbreviated)

Nature of the Business

New Technologies Development Group (NTDG) is engaged in research and development (R&D) focused on the development of environmental technology products. In particular, the firm specializes in developing and commercialize innovative environmental technologies.

NTDG anticipates earning its revenues by 1) gaining government research & development contracts (i.e., SBIR Funding) and 2) offering consulting services to both government and private sector clients.

Business Stage

C Corporation X

Years In Business

6 months or less X

Marketing Section:

Industry Definition

Environmental technologies advance sustainable development by reducing risk, enhancing cost-effectiveness, improving process efficiency, and creating products and processes that are environmentally beneficial or benign. The environmental technology industry includes air, water, and soil pollution control; solid and toxic waste management; site remediation; engineering, design, and consulting services; environmental monitoring; recycling; and industrial and clean process technology. This industry is large and fragmented and has evolved in response to growing concern about the risks and costs of pollution and the enactment of pollution control legislation in the United States and around the world.

Industry Conditions & Trends

The international market for environmental technologies is fueled by several important policy and market drivers of demand: greater global focus on sustainable development; liberalization of environmental technologies trade via bilateral and multilateral efforts; growing industrialization and environmental awareness in key emerging markets; and broader application of environmental "best practices" by multinationals.

The domestic water and wastewater industry is generally estimated to be around \$100 billion per year. The global market for water and wastewater treatment equipment, processes and services will expand from US\$ 287 billion in 2004 to \$ 303 billion in 2005 and grow further to \$ 412.4 billion by 2010, according to the German research company Helmut Kaiser Consultancy.

The drinking water market provides limited profit potentials of less than 12%, but it offers a relatively safe, long-term investment with small, annual fluctuations. Companies and public institutions, that combine drinking water with other utilities, such as wastewater and energy, can achieve a higher return of more than 15%

Drinking water security research is one of EPA's priorities and is involved in developing better surveillance and laboratory networks for drinking water supplies to counter potential terrorist threats. The other priority would be decontamination research, to develop better technologies and methods for decontaminating terrorist attack. EPA will also continue threat and consequence assessments and testing potential biodefense and other decontamination technologies.

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Targeted Buyers

Community water systems (CWS) are public water systems that serve the same residents year round: Publicly owned water agencies that serve more than 100,000 people. Public Water Authority: provide, distribute, transmit, treat, pump, or store raw or potable water to or for the benefit of the general public and commercial, industrial, and other water users

Description of Target Consumer/Product End User

- Large & Very Large Community Water Systems
- Publicly Owned: towns, cities or other forms of local governments
- Water Source: Surface & Ground
- 3,797 systems serving 81% of the US population

Product Needs

Water systems are in need of real-time monitoring and detection systems. Early detection systems may be essential in alerting water systems about potential biological, chemical and radiological contamination

Competition

In the United States, the environmental technologies business sector encompasses some 115,000 enterprises. Small and medium-sized enterprises account for the majority of the companies in the U.S. environmental technologies industry. Approximately 95 percent of the businesses are considered small, with an average of 12 employees and annual revenue just below \$5 million

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Management Team and Operational Structure

Management Team

CEO/President	Provides strategic direction for the enterprise, monitors the firm's progress, and implements necessary changes for improvement.
Vice President	Ensures that the operational and personnel policies, procedures, strategies are implemented efficiently and effectively
Marketing Director	Responsible for executing the company's marketing and business development program

Team Member Profile

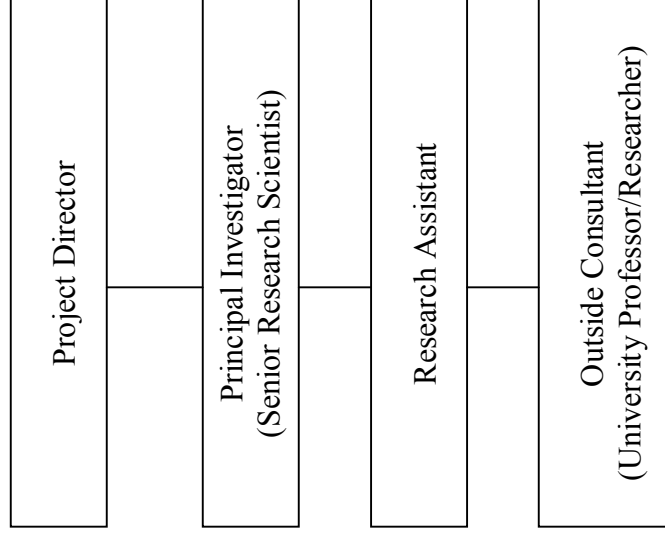
Name:	Charles Wright
Education	B.A. Georgetown University; MBA University of Pennsylvania
Special Training	Product Development Cycle; Organizational Development
Knowledge & Skills Area	Marketing & Business Development, Joint Ventures
Primary Role & Duties	CEO
Professional Accomplishments:	Generated 10 millions in sales for four product development firms in the US
Salary & Project Hourly Rate	Salary Project Hourly Rate
	70,000 55.00

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Professional Staff

- Project Director** Responsible for providing each project with the necessary resources, staffing and equipment
- Senior Research Scientist** In charge of leading the research & development process involved in creating a new technology product
- Consultant** Provide consulting services in the areas of expertise needed to complete the proposed project.

Research and Development (R&D) Personnel Structure



Responsible for work performance of each assigned project.

Responsible for leading the scientific and technical development of the project.

Provides research assistance for product development.

Consultants will enhance the capabilities of the internal staff.

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Sample EPA SBIR Application Commercialization Plan

Brief Description of the Company & SBIR Project (EPA Application Question²)

NHTDG is engaged in the research & development (R&D) of environmental technology products.

The company was founded in June 2005. As a start-up, NHTDG anticipates earning its revenues by 1) winning government research & development contracts and 2) offering consulting services to both government and private sector clients.

Under the EPA SBIR program, NHTDG intends to design and develop a product and/or system to identify and provide near-real time warning of chemical and biological threats to drinking water systems.

Commercial Applications (EPA Application Question)

The proposed technology will be used as part of a Community Water System's Early Warning System (EWS). The product will be designed to detect and screen for a variety of toxic substances and infectious microorganisms.

Water systems are in need of real-time monitoring and detection systems. Early detection systems are essential, as well as play a vital role, in alerting water systems about potential biological, chemical and radiological contamination.

NHTDG is expected to file a patent for its proposed technology.

Competitive Advantage (EPA Application Question)

NHTDG's proposed technology can be used to monitor finished water assets (i.e., water distribution system) to detect potential threats to downstream users introduced to the system after treatment. It can also be used to monitor water or wastewater influent to detect potential for upset treatment processes or for potential pass-through of harmful contaminants.

² Application Questions that appear on EPA's SBIR Proposal Application Commercialization Plan Section

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Markets (EPA Application Question)

Based on market research, NHTDG intends to offer its technology to publicly owned large and very large community water systems.

Targeted Buyers

Primary Market: Community water systems (CWS) are public water systems that serve the same residents year round: Publicly owned water agencies that serve more than 100,000 people. **Public Water Authority:** provide, distribute, transmit, treat, pump, or store raw or potable water to or for the benefit of the general public and commercial, industrial, and other water users. There are 3, 900 water utilities serving populations over 100,000.

Description of Target Consumer/Product End User

- Large & Very Large Community Water Systems
- Publicly Owned: towns, cities or other forms of local governments
- Water Source: Surface & Ground
- 3,797 systems serving 81% of the US population

Secondary Market: The company is focused on serving the US Department of Interior, which is investing \$4.9 billion to address drinking water systems in national parks and the Private Owned Water systems sector, which is growing 20% annually.

Commercialization Strategy (EPA Application Question)

NHTDG will utilize the promotional vehicles that various trade associations (i.e., American Water Works Association, Association of Water Technologies, Association of Metropolitan Water Association, etc.) offer companies to promote their services and products. For example, NHTDG will use association conferences and trade publications to reach, inform and stimulate its target buyers to purchase its proposed technology. Please see the actual promotional strategy below.

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Promotional Strategy

Promotional Methods

Specific Action

Direct Mail	Direct mail promotions to administrators and public officials in charge of water systems
Public/Media Relations	Article placements; media releases (Association Publications)
Personal Selling/Networking	Trade show booth; participating in panel expert at conferences (Associations)
Sponsorships	Sponsorships at regional and national conferences (Associations)

Distribution Channel

The company plans to utilize the services of a contract manufacturer. This strategy involves outsourcing the production and distribution of the product to the contract manufacturer. NHTDG will use its contacts within the Water & Wastewater Equipment Manufacturers Association to locate an outsourcing service provider.

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Sample EPA SBIR Application Budget Proposal

EPA SBIR Phase I Budget Limit = \$70,000

A. Direct Labor	Estimated Hours	Rate/Hour	Est. Cost
Jay James Principal Investigator	700	60.00	\$42,000
Joanne Green Senior Engineer	300	50.00	\$15,000
Total:			\$57,000
B. Overhead (Fringe Benefits Included)	0.07 % of Direct Labor Costs		\$4,900
C. Other Direct Costs			\$1,245
D. Travel			0
E. Consultant	\$40.00/Hour @ 40 Hours		\$1,600
F. G& A			0
G. Profit	.05 percent		\$3,237.25
TOTAL PROPOSED PRICE			\$67,982.25
TYPE NAME AND TITLE:			
SIGNATURE			
THIS PROPOSAL IS SUBMITTED IN RESPONSE TO DOD SBIR PROGRAM SOLICITATION NO. Y4100002345 AND REFLECTS OUR BEST ESTIMATES AS OF THIS DATE:			
DATE SUBMITTED:			

This sample shows NHTDGD how to prepare future EPA SBIR Budget Proposals. It also shows the company how reach a budget limit that does not exceed the agency's budget level, which would cause the entire proposal to be rejected.

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Scientific, Technical Market Research Information Sources (Abbreviated List)

Sources that provide NHTDG with the information / data the company will need to support its technical approach when proposing specific technology solutions. It also helps the company show SBIR proposal reviewers that the company is aware of the State of Art in its technology interest area.

Trade & Professional Associations

1. *American Water Works Association*- Water utility managers, superintendents, engineers, chemists, bacteriologists, and other individuals interested in public water supply; municipal- and investor-owned water departments; boards of health; manufacturers of waterworks equipment; government officials and consultants interested in water supply. Develops standards and supports research programs in waterworks design, construction, operation, and management. Conducts in-service training schools and prepares manuals for waterworks personnel.
2. *American Public Works Association*-Chief administrators, commissioners, and directors of public works, city engineers, superintendents, and department heads of transportation, water, waste water, solid waste, equipment services, and buildings and grounds; federal, provincial, and state administrators and engineers; consultants and educators; associate members are equipment manufacturers' representatives, utility company officials, and contractors; student members are engineering and public administration students interested in the theory and practice of the design, construction, maintenance, administration, and operation of public works facilities and services.
3. *Association of Metropolitan Water Association*-The Association of Metropolitan Water Agencies (AMWA) is an organization of the largest publicly owned drinking water systems in the United States. AMWA's membership serves more than 120 million Americans with drinking water from Alaska to Puerto Rico.
4. *Association of Water Technologies*-Provides regional water treatment companies with technical education, industry communication, access to information, group purchasing discounts, legislative affairs, and sound management techniques. Also supplies certification of professional water technologists and regulatory monitoring.
5. *Association of State Drinking Water Administrators*- ASDW is the professional association that represents the collective interests of the nation's state drinking water programs responsible for the implementation of the federal Safe Drinking Water Act.

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Market Research Resources

Standard & Poor's Industry Surveys- Each industry report is about 30 pages in length and follows a standard format: Current Environment, Industry Profile (e.g., Industry Trends, How the Industry Operates, Key Industry Ratios and Statistics) How to Analyze a Company in the Industry, Glossary with Definitions of Terms Used in the Industry) Industry References including Periodicals, Trade Associations, and Government Agencies Comparative Company Analysis, with and Definitions for the Analysis Tables.

Environmental Business Journal-Environmental Business International offers strategic business information in the form of newsletters and comprehensive research reports.

Farkas Berkowitz & Co. - Farkas Berkowitz & Company is a management-consulting firm serving companies that provide design, construction, and operational services for government and industry. Established in 1983, our firm assists clients with strategy, mergers and acquisitions, and operations improvement

The Environmental Technologies Industries office of the US Department of Commerce has environmental industry market analysis reports for many countries.

Trade Publications

Environmental Business Journal-Contains primary business research for executives and investors, including market analysis, business strategy, company profiles and survey results.

Journal American Water Works Association-Contains technical papers, discussions, news, and reports of water treatment technology

Water World- serves engineers, managers, consultants and operations people in the Municipal water/wastewater industry with information about products and services, technology, applications, legislation and regulations.

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Applying SBIR Action Plan Notebook

Since the targeted federal agencies use similar SBIR proposal applications and offer related Drinking Water Safety SBIR contracting opportunities, NHTDG is now positioned to win multiple contracts. In particular, the company is able to use the Notebook information to submit SBIR Phase I proposals to the following participating federal agencies:

(1) *Environmental Protection Agency's (EPA) SBIR Program*

EPA annually releases SBIR solicitation (request for proposal (RFP)) for Homeland Security Drinking Water technology solutions.

(2) *US Department of Defense's SBIR Program*

Since 2002, DOD's SBIR program has issued request for proposals (RFPs) for Drinking Water technology solutions.

(3) *US Department of Agriculture's (USDA) SBIR Program*

The proposal will be developed under USDA's SBIR Rural and Community Development topic section and Homeland Security sub-topic section. NHTDG's proposals will focus on providing Drinking Water Safety & Security for small and rural communities.

(4) *National Institutes of Health's SBIR Program*

NHTDG will monitor NIH's SBIR grant solicitation to see if the Centers for Disease Control and Prevention's National Center for Environmental Health (NCEH) will issue a request for proposal (RFP) for Drinking Water Safety. NCEH past SBIR solicitations included request for proposals for Drinking Water Safety. Therefore, if NCEH offers an RFP, then the company plans to use its SBIR Action Plan™ Notebook to prepare and submit a Phase I proposal.