

New Mexico State University

# ARROWHEAD CENTER

LEADING ECONOMIC DEVELOPMENT FOR NEW MEXICO STATE UNIVERSITY



## National Security Technology Incubator Action Plan

National Security Preparedness Project  
Grant No: DE-FG52-07NA28084

DOE/NA/28084-113

Submitted  
by  
Arrowhead Center  
New Mexico State University

February 28, 2008



Live, Learn and Thrive

## TABLE OF CONTENTS

1.0	Introduction.....	1
2.0	Work Breakdown Structure And Tasks .....	1
2.1	Hire Incubator Staff (WBSE 1.0) Dec 28, 2007 – Apr 23, 2008 .....	1
2.2	Define Services and Identify Target Market (WBSE 2.0) Feb 1, 2008 – June 30, 2008 .....	2
2.3	Recruit Clients (WBSE 3.0) Apr 1, 2008 – Nov 28, 2008 .....	2
2.4	Select Clients (WBSE 4.0) May 1, 2008 – Sept 30, 2011 .....	2
2.5	Begin Incubation Program (WBSE 5.0) June 2, 2008 – June 30, 2011 .....	2
2.6	Secure Physical Incubator Space (WBSE 6.0) Feb 29, 2008 – Apr 30, 2009.....	2
2.7	Develop Incubator Infrastructure (WBSE 7.0) Apr 1, 2008 - Nov 25, 2008 .....	2
2.8	Develop Sustainment Plan (WBSE 8.0) Dec 4, 2008 – Dec 24, 2008.....	2

"This material is based upon work supported by the Department of Energy [National Nuclear Security Administration] under Award Number DE-FG52-07NA28084."

"This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States."

## 1.0 INTRODUCTION

This report documents the action plan for developing the National Security Technology Incubator (NSTI) program for southern New Mexico. The NSTI program is being developed as part of the National Security Preparedness Project (NSPP), funded by Department of Energy (DOE)/National Nuclear Security Administration (NNSA). This document is a deliverable due February 28, 2008, as performance measure 1.1.3 of Grant No: DE-FG52-07NA28084 (reference: Arrowhead Center proposal, Page 15).

The purpose of the NSPP is to promote national security technologies through business incubation, technology demonstration and validation, and workforce development. The NSTI program will focus on serving businesses with national security technology applications by nurturing them through critical stages of early development. The vision of the NSTI program is to be a successful incubator of technologies and private enterprise that assist the NNSA in meeting new challenges in national safety and security. The mission of the NSTI program is to identify, incubate, and accelerate technologies with national security applications at various stages of development by providing hands on mentoring and business assistance while simultaneously stimulating economic growth throughout southern New Mexico.

A key to completing the mission is the development of an incubator action plan, a living document that serves as a tool in measuring progress in the development process and delivery of services for the NSTI program. Continuous review and evaluation of the action plan is necessary in the development process of the NSTI. The action plan includes detailed steps in developing the NSTI program based on recommended best practices in incubator development by the National Business Incubation Association (NBIA).

This action plan is comprised of tasks required to implement the NSTI. These tasks were developed within a work breakdown structure. In addition, a timeline is identified for each task.

## 2.0 WORK BREAKDOWN STRUCTURE AND TASKS

This section includes the work breakdown structure (WBS) of the NSTI program development. Table 1 displays the first three levels of the WBS. The following tasks are included in the first level of the WBS and are shown with their WBS Element number (WBSE):

- Hire Incubator Staff (WBSE 1.0)
- Define Services and Identify Target Client Market (WBSE 2.0)
- Recruit Clients (WBSE 3.0)
- Select Clients (WBSE 4.0)
- Begin Incubation Program (WBSE 5.0)
- Secure Physical Incubator Space (WBSE 6.0)
- Design and Develop Physical Facility Services (WBSE 7.0)
- Develop Sustainment Plan (WBSE 8.0)

Descriptions of these tasks are included below. Table 1 (at the end of this section) shows the WBS and associated tasks by start and completion dates.

### 2.1 HIRE INCUBATOR STAFF (WBSE 1.0)

DEC 28, 2007 – APR 23, 2008

A technology entrepreneur will be hired to serve clients, stakeholders, and service providers. An administrative assistant also will be hired to assist in required support service functions for the technology entrepreneur and NSTI program. The technical entrepreneur will be responsible for design, development, implementation, and improvement of the NSTI program.

<b>2.2 DEFINE SERVICES AND IDENTIFY TARGET MARKET (WBSE 2.0)</b>	<b>FEB 1, 2008 – JUNE 30, 2008</b>
NSTI staff will meet with external and internal service providers, stakeholders, and industry experts to identify, target, and recruit businesses for participation in the NSTI program. The team also will develop a portfolio of services for clients. One of the outcomes of this task will be a cross-referenced database of potential clients indexed to proposed services.	
<b>2.3 RECRUIT CLIENTS (WBSE 3.0)</b>	<b>APR 1, 2008 – Nov 28, 2008</b>
NSTI staff will develop and implement a multi-media outreach plan to the identified target businesses through various advertising and marketing venues including trade publications, conferences, and professional events. Staff also will continue to develop and refine standard operating procedures for participation in the NSTI program including forms and templates. This will assist in establishing a standard process for establishing milestones for clients and delivering requested business assistance services.	
<b>2.4 SELECT CLIENTS (WBSE 4.0)</b>	<b>MAY 1, 2008 – SEPT 30, 2011</b>
NSTI staff will finalize the application and admission process for successful applicants into the NSTI program. Once admitted, clients will enter into an agreement with the Arrowhead Center and receive a set of guidelines including code of conduct and tenancy requirements for incubation and graduation.	
<b>2.5 BEGIN INCUBATION PROGRAM (WBSE 5.0)</b>	<b>JUNE 2, 2008 – JUNE 30, 2011</b>
The first clients will begin the four-phase incubation program from orientation through graduation. The four phases (orientation, incubation, maturation, and graduation) will guide participant businesses through their various stages of development from inception, planning and development, successful operation, and delivery of products and services. Selected clients will be able to participate on an affiliate or resident basis according to their needs and stage of development.	
<b>2.6 SECURE PHYSICAL INCUBATOR SPACE (WBSE 6.0)</b>	<b>FEB 29, 2008 – APR 30, 2009</b>
NSTI staff and development partners will plan the configuration, scale, and capacity of the incubator physical plant. An ongoing process of design and refinement will continue through completion to meet specific client needs. Incubator staff will research and plan for necessary infrastructure within the incubator with planned capacity for telecommunications and shared space needs. Temporary space will be required to meet incubation needs before a permanent incubator facility is available for NSTI.	
<b>2.7 DEVELOP INCUBATOR INFRASTRUCTURE (WBSE 7.0)</b>	<b>APR 1, 2008 - Nov 25, 2008</b>
NSTI staff will design and develop facility services, such as telecommunication, mail, and central business support services.	
<b>2.8 DEVELOP SUSTAINMENT PLAN (WBSE 8.0)</b>	<b>DEC 4, 2008 – DEC 24, 2008</b>
Incubator staff will develop a sustainment plan, identifying sources of revenue to include rent, fees, state, and federal funds.	

**TABLE 1. WORK BREAKDOWN STRUCTURE AND TASKS**

WBSE	Task Description	Start	Finish
1.0	<b>Hire Incubator Staff</b>	12/28/07	4/23/08
1.1	<b>Hire Technology Entrepreneur</b>	12/28/07	3/31/08
1.1.1	Obtain internal approval for hiring a technology entrepreneur	12/28/07	1/18/08
1.1.2	Post opening for technology entrepreneur. Advertise and perform job search	1/18/08	1/21/08
1.1.3	Interview candidates and identify short list for hire, or re-interview	2/27/08	2/28/08
1.1.4	Verify employment information and references for candidate finalists	3/3/08	3/10/08
1.1.5	Make final selection and place job offer	3/11/08	3/11/08
1.1.6	Begin employment and training	3/12/08	3/31/08
1.2	<b>Hire Administrative Assistant</b>	2/28/08	4/23/08
1.2.1	Obtain internal approval for hiring an administrative assistant	2/28/08	3/5/08
1.2.2	Post opening for administrative assistant. Advertise and perform job search.	3/6/08	3/14/08
1.2.3	Interview candidates and identify short list for hire, or re-interview	3/17/08	3/21/08
1.2.4	Verify employment information and references for candidate finalists	3/24/08	3/31/08
1.2.5	Make final selection and place job offer	4/1/08	4/3/08
1.2.6	Begin employment and training	4/4/08	4/23/08
2.0	<b>Develop Scope of Services and Identify Target Market</b>	2/1/08	6/30/08
2.1	<b>Develop Referral Services Portfolio</b>	2/1/08	5/20/08
2.1.1	Review Arrowhead and other research on the nature and types of external support services	2/1/08	3/31/08
2.1.2	Meet with external and internal service providers: Gather details on services and mechanics of referrals	4/1/08	4/15/08
2.1.3	Develop a cross-referenced index of all external and internal business support available	4/16/08	4/22/08
2.1.4	Compile a draft portfolio of business support services offered by incubator	4/23/08	4/29/08

WBSE	Task Description	Start	Finish
2.1.5	Meet with external service providers: Formalize relationships and referral processes through written agreements	4/30/08	5/7/08
2.1.6	Produce standard operating procedures outlining the flow of referral processes and delivery of support services	5/8/08	5/15/08
2.1.7	Produce final, marketable portfolio of external and internal business support services offered by incubator	5/16/08	5/20/08
<b>2.2</b>	<b>Develop Incubator Client Criterion</b>	<b>4/2/08</b>	<b>6/10/08</b>
2.2.1	Review Arrowhead and other research on the types of businesses targeted by the incubator	4/2/08	4/15/08
2.2.2	Meet with stakeholders, providers and community leaders: Gather details on ideal, target businesses	4/15/08	4/30/08
2.2.3	Develop a clear profile of a successful candidate for incubator services broad enough to cover the desired ranges	4/15/08	6/10/08
2.2.4	Build a complete list of candidate criterion based on the profile(s) and assign an initial weight to traits	4/30/08	5/15/08
2.2.5	Develop outline of the criterion explaining the weight assigned to each trait	5/16/08	5/30/08
2.2.6	Design and refine application for affiliate client services and resident clients	4/2/08	4/30/08
2.2.7	Design and refine lease and participation agreements	4/2/08	4/30/08
<b>2.3</b>	<b>Develop cross-referenced database of client businesses</b>	<b>5/1/08</b>	<b>6/30/08</b>
2.3.1	Cross reference by technology fit with NNSA focus	5/1/08	5/9/08
2.3.2	Cross reference by location	5/12/08	5/20/08
2.3.3	Cross reference by trade or professional organization membership	5/21/08	5/29/08
2.3.4	Cross reference by subscription or contribution to trade publications	5/30/08	6/9/08
2.3.5	Cross reference by attendance at conferences, colloquiums or other organizational gatherings	6/10/08	6/18/08
2.3.6	Cross reference by association with corporations or government agencies	6/19/08	6/30/08
<b>3.0</b>	<b>Recruit Clients</b>	<b>4/1/08</b>	<b>11/28/08</b>
<b>3.1</b>	<b>Develop Forms and Templates</b>	<b>4/1/08</b>	<b>6/30/08</b>
3.1.1	Review and revise existing multi-purpose forms and other documentation to meet NSTI program goals.	4/1/08	4/7/08

WBSE	Task Description	Start	Finish
3.1.2	Develop client application process for admission	4/8/08	4/14/08
3.1.3	Develop resident client request for space and lease agreement	4/15/08	4/22/08
3.1.4	Develop entrance interview logs collecting standardized and uniform information from applicants	4/23/08	4/30/08
3.1.5	Develop affiliate and resident client handbooks detailing rules, responsibilities, and conduct for clients	5/1/08	6/30/08
3.1.6	Develop standardized performance evaluations for ongoing client progress through the incubation process	5/1/08	6/30/08
<b>3.2</b>	<b>Review Target Market Plan</b>	<b>7/1/08</b>	<b>11/28/08</b>
3.2.1	Use target client database to regularly place press releases, brochures, and announcements with potential clients	7/1/08	9/30/08
3.2.2	Position information in identified trade publications	7/1/08	9/30/08
3.2.3	Position information, attend, sponsor, or present at identified professional gatherings	7/1/08	9/30/08
3.2.4	Position information in identified regional media outlets	7/1/08	9/30/08
3.2.5	Design conferences, expositions, and other forums designed to draw target businesses to the incubator	7/1/08	11/28/08
3.2.6	Position information on related external lists, indexes and databases-government and industry	8/12/08	11/28/08
<b>4.0</b>	<b>Select Clients</b>	<b>5/1/08</b>	<b>9/30/11</b>
<b>4.1</b>	<b>Review and Accept Applicants</b>	<b>5/1/08</b>	<b>4/29/11</b>
4.1.1	Review application within defined oversight structure for applicability to NNSA focus; advance or decline.	5/1/08	4/29/11
4.1.2	Conduct interviews to assess business sustainability and to ascertain the client needs. Advance or decline	5/1/08	4/29/11
4.1.3	Request a business scope presentation by the client to the board of directors and management	5/1/08	4/29/11
4.1.4	Accept or decline applicant	5/1/08	4/29/11
4.1.5	Approve client participation and execute agreements	5/1/08	4/29/11
<b>4.2</b>	<b>Develop and Refine Entrance Procedures and Process</b>	<b>5/1/08</b>	<b>9/30/11</b>
4.2.1	Review existing procedures and processes; refine based on experience with clients and requirements	5/1/08	10/31/08
4.2.2	Review and evaluate for improvement	10/31/08	9/30/11

WBSE	Task Description	Start	Finish
5.0	<b>Begin Incubation Program</b>	6/2/08	6/30/11
5.1	<b>Orient Client Participants into Program</b>	6/2/08	4/30/09
5.1.2	Facilitate orientation and strategic workshops	6/2/08	4/30/09
5.1.3	Conduct Arrowhead Center entrepreneurial workshops	6/2/08	4/30/09
5.1.4	Interact with business support providers	6/2/08	4/30/09
5.2	<b>Incubate Client Participants</b>	10/1/08	5/2/11
5.2.1	Develop company growth strategies and revenue projections	10/1/08	9/30/10
5.2.2	Develop market growth strategies, market segmentation, penetration, and competitive advantage	10/1/08	9/30/10
5.2.3	Develop investment and funding strategy: private and public	10/1/08	9/30/10
5.2.4	Conduct Arrowhead Center entrepreneurial workshops	5/1/09	5/2/11
5.3	<b>Prepare Clients for Graduation</b>	5/3/10	5/31/11
5.3.1	Conduct Arrowhead Center entrepreneurial workshops	5/3/10	4/29/11
5.3.2	Finalize business and operational plans for phase implementation	5/3/10	2/18/11
5.3.3	Update previous strategic planning and scheduling	5/3/10	5/31/11
5.3.4	Begin implementation of sales strategies and marketing	6/1/10	9/9/10
5.3.5	Prepare implementation plan for product to market strategies	9/10/10	12/20/10
5.4	<b>Graduate First Clients</b>	7/1/10	6/30/11
5.4.1	Client achieves high and/or sustainable sales and cash flows and operates beyond micro business capacity	7/1/10	6/30/11
5.4.2	The client is sold or is acquired by another firm	12/23/10	6/29/11
5.4.3	The client issues a successful public offering	12/23/10	6/29/11
5.4.4	The client is stable and exceeds standard incubator time limits	12/23/10	6/29/11
6.0	<b>Secure Physical Incubator Space</b>	2/29/08	4/30/09
6.1	<b>Development of Physical Business Incubator</b>	2/29/08	4/30/09
6.1.1	Identify the footprint for the permanent facility	7/1/08	9/1/08
6.1.2	Coordinate with developer and internal constituents on design	8/1/08	4/30/09
6.2	<b>Identify Temporary Lease Facility</b>	2/29/08	5/1/08

WBSE	Task Description	Start	Finish
7.0	<b>Develop Incubator Infrastructure</b>	4/1/08	11/25/08
7.1	<b>Identify Telecommunications Needs</b>	4/1/08	6/30/08
7.1.1	Research and plan capacity and connectivity to adequately service clients and growth	4/1/08	5/30/08
7.1.2	Identify service providers and identify construction needed, timeline, and fee structure for installation	4/1/08	6/30/08
7.1.3	(Optional parallel development)-cash flow. Investigate NMSU as a provider buying wholesale blocks and reselling	4/1/08	6/30/08
7.1.4	(Optional parallel development) Identify the process for providing services to clients in a temporary facility	4/1/08	6/30/08
7.1.5	Research and plan capacity, available bandwidth and connectivity to adequately service clients and growth	4/1/08	6/30/08
7.1.6	Identify service providers and identify construction needed, mechanics, timeline, and fee structure for installation	4/1/08	6/30/08
7.1.7	(Optional parallel development) NMSU as a provider giving access to university T lines with fees in membership	4/1/08	6/30/08
7.2	<b>Identify Postal and Express Delivery Needs</b>	4/1/08	6/30/08
7.2.1	Research and develop an approach to mail handling	4/1/08	5/30/08
7.2.2	Assess modifications and costs required for configuration	4/1/08	6/30/08
7.3	<b>Design and Develop Central Reception Facilities</b>	4/1/08	10/1/08
7.3.1	Research client and staff needs for reception services	5/1/08	9/1/08
7.3.2	Identify services to provide, operational hours and a system of interface with the client	7/1/08	10/1/08
7.3.3	Identify and estimate costs for required furnishings and equipment with a master design plan in mind	4/1/08	6/30/08
7.4	<b>Design and Develop Shared Conference Room</b>	7/1/08	10/10/08
7.4.1	Research and design physical layout of conference room with capacity to service clients and growth	7/1/08	9/30/08
7.4.2	Identify presentation tools to be built into the facility. A/E PowerPoint projection, overhead and sound	7/31/08	9/30/08
7.4.3	Identify required furniture and equipment coordinating with master decorating plan	7/31/08	10/10/08

WBSE	Task Description	Start	Finish
7.5	<b>Design and Develop Central Printing-Copying-Imaging Facilities</b>	10/13/08	11/3/08
7.5.1	Research and design physical layout of imaging area with capacity to service clients and growth.	10/13/08	10/20/08
7.5.2	Identify physical infrastructure to be included during construction. A/E network hubs, power and remote access.	10/21/08	10/27/08
7.5.3	Develop a system of client access either self service, or a staffed copy center.	10/28/08	11/3/08
7.6	<b>Design and Develop Central Shipping-Receiving Facilities</b>	11/4/08	11/25/08
7.6.1	Contact USPS and other shipping providers for details and physical requirements regarding pick-up and delivery	11/4/08	11/11/08
7.6.2	Develop an approach to shipping and receiving and decide: Client ships direct or a central dock will be established	11/12/08	11/18/08
7.6.3	Plan for implementation and provide feedback to the design of the physical layout where applicable.	11/19/08	11/25/08
8.0	<b>Develop Sustainment Plan</b>	12/4/08	12/24/08
8.1	Develop rent and fees collection process	12/4/08	12/10/08
8.2	Develop schedules for allocation of staff interaction with clients, maintenance and facilities usage	12/11/08	12/17/08
8.3	Develop performance evaluation procedures and status reporting	12/18/08	12/24/08