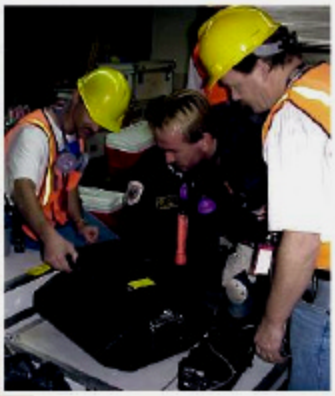
DOE/NV/11718--847

National Center for Combating Terrorism Strategic Plan

September 2003

REALISTIC TRAINING

REALISTIC TESTING



REALISTIC TECHNOLOGY

U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office

Introduction

Transnational terrorism, particularly the use of weapons of mass destruction (WMD) — chemical, biological, radiological, nuclear and high-yield explosives (CBRNE) — poses one of the greatest security challenges facing the United States today. This document defines and describes the National Center for Combating Terrorism (NCCT) at the Nevada Test Site (NTS). The *Strategic Plan* flows from the original concept of November 2001 and incorporates updates, lessons learned, and new ideas generated by the combating terrorism (CT) community.

The purpose of the *NCCT Strategic Plan* is to document the mission, vision, and goals for success; define the build plan; and describe initiatives that support the U.S. Department of Homeland Security,

U.S. Department of Defense, U.S. Department of Energy, U.S. Department of Justice, intelligence community, National Governors Association, and other organizations or departments with CT training, testing, and technology responsibilities.

This document supports the U.S. Department of Energy's National Nuclear Security Administration Nevada Site Office 2003 Strategic Plan initiative to develop new mission opportunities for the long-term future of the NTS and its goal to focus on the development of the NCCT.

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Acronyms

CBIRF	Chemical Biological Incident Response Force
CST	Civil Support Team
CT	Combating Terrorism
CBRNE	Chemical Biological Radiological Nuclear High-Yield Explosives
DMAT	Disaster Medical Assistance Team
EOC	Emergency Operations Center
FY	fiscal year
HAZMAT	Hazardous Materials
NCCT	National Center for Combating Terrorism
NTS	Nevada Test Site
SWAT	Special Weapons and Tactics
WMD	weapons of mass destruction

Mission

Establish and operate a national center to develop and integrate technical and operational aspects of combating terrorism and provide venues for training exercises, test and evaluation, and technology development.

Vision

To be the premier center that integrates the capabilities and expertise of the combating terrorism community for training, testing, and technology development.

Authorization Based on National Need

The NCCT was established by Congress in 2002. It was established at the NTS to provide a large site in the United States capable of supporting the full spectrum of CT activities. The NTS is also an Office of Domestic Preparedness Consortium member with well-established CT facilities, programs, and curricula.

The NCCT significantly reduces gaps in our nation's ability to detect, prepare, prevent, protect, respond, and recover from terrorist acts through research, development, test and evaluation, training, exercises, and intelligence support activities.

Support of National Strategy

The NCCT supports the National Security Strategy, the Homeland Security Strategy, and the National Strategies for Combating Terrorism and Weapons of Mass Destruction by:

- Preparing individuals, teams, and organizations to respond to the effects of WMD (*National Security Strategy*).
- Providing the capability for an effective, integrated response that enhances incident management; planning enhanced interoperability; and coordination based on, and supported by, rapid and effective decision making (*National Strategy for Homeland Security*).
- Preparing to respond to the use of WMD (*National Strategy to Combat WMD*).
- Preparing to minimize the damage and recover from any future terrorist attacks. Harnessing science and technology in support of homeland security (*National Strategy for Homeland Security*).

Strengths and Capabilities

Locating the NCCT at the NTS provides ample capacity for test and evaluation of unique technologies. The NTS is a large (approximately 1,375 square miles), restricted-access site that can support large-scale exercises and high-hazard tests because of its unique permits and lack of encroachment. It has a diverse, highly professional workforce with broad capability from scientists, CT specialists, observers/controllers, test directors, former Special Operations personnel, former emergency responders, and exercise management experts. The existing infrastructure offers a wide range of training scenarios, exercises, and test beds, including classified scenarios. The NTS is a National Nuclear Security Administration site with a federal Field Intelligence Element and counterintelligence office. The NTS provides:

- A complete understanding of CT needs through support to the CT community.
- Applied technology laboratories with validated, field-ready devices developed for the community that can be integrated into exercises and tests.
- Strong relationships with the National Laboratories.
- University of Nevada, Las Vegas support with degree programs in science and CT senior management, and field operations certification of NTS adjunct professors.

Description of the Center

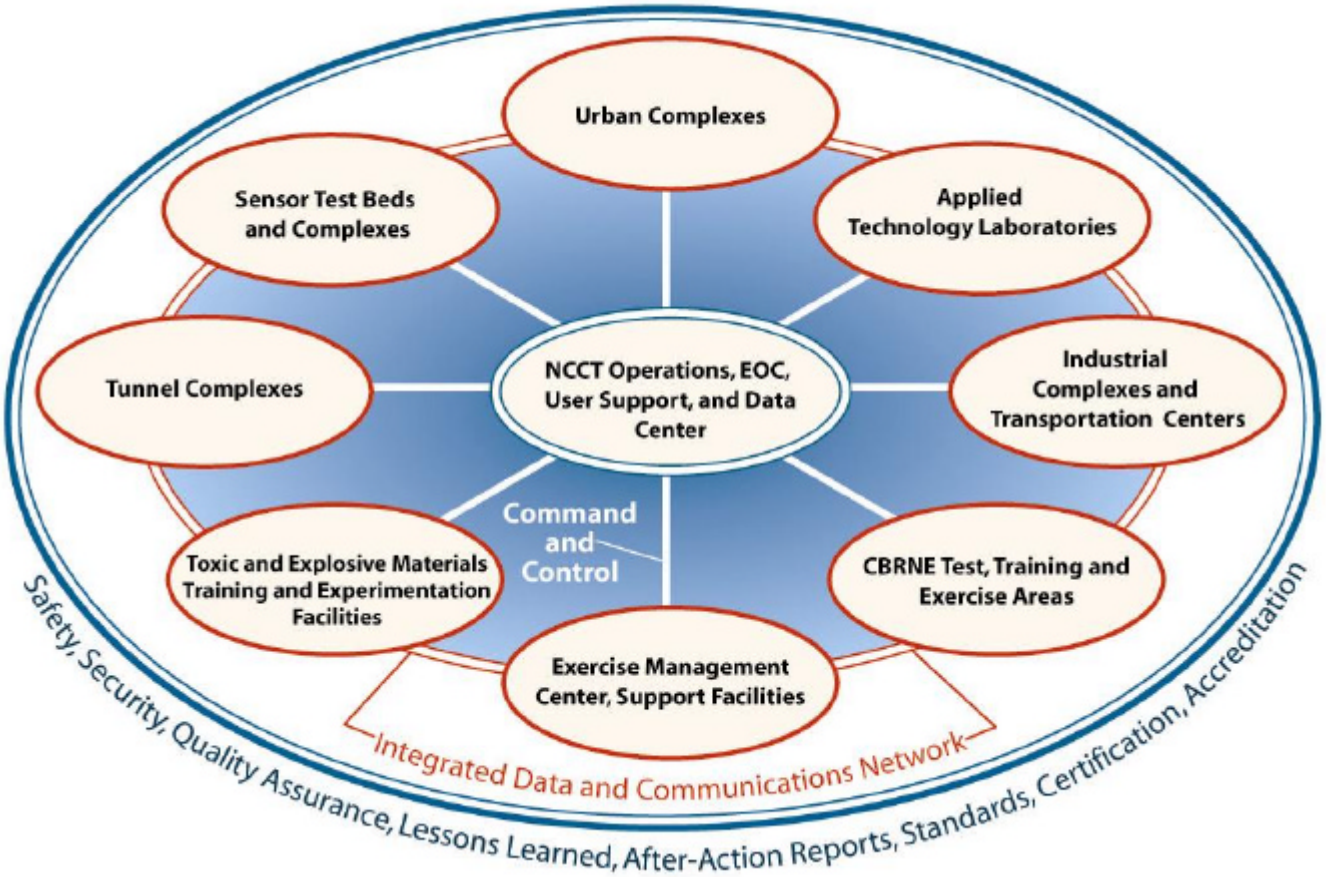
The NCCT conducts realistic CT training and testing using NTS venues (facilities, curricula/scenarios, and instructors/test directors) and develops counterterrorism technologies using applied technology laboratories.

It supports national CT requirements by integrating the unique capabilities of the NTS to provide comprehensive services through:

- Realistic scenarios and facilities for training and exercises.
- Curricula/scenarios that challenge students to apply knowledge and judgment.
- Experienced instructors and test directors.
- Realistic test beds for technology research, development, test and evaluation.
- Field-ready technology and products.
- Synergistic federal, state, and local user programs.

The Center will integrate and enhance its existing venues and build new venues as required to meet user needs. It will provide command and control; data collection, analysis, and distribution; communications; and after-action reporting. It will also build and operate support facilities and infrastructure for training, testing, and technology development.

The many capabilities of the NCCT permit users to accomplish multiple training events and/or testing in one trip.



Goals and Objectives

The NCCT has defined a set of goals and objectives to guide the development of the center. As used in this plan, goals are defined as a desired end state, and objectives are actions taken to achieve the end state. These goals and objectives will be further developed in the *NCCT Program Plan*.

Goal 1: Configure a center that meets user/customer requirements.

- **Objective 1:** Identify, through NCCT-led user interaction, required capabilities, and the new and existing facilities and equipment that must be expanded/changed to support training, testing and technology.
- **Objective 2:** Develop a building/cyber infrastructure to collect, analyze, and distribute data (e.g. audio, video, radio transmissions, telemetry, sensor data) to conduct after action reviews, document results of training and testing, analyze test data, produce lessons learned, and support evaluations.
- **Objective 3:** Build the command and control facilities and structures necessary to support individual and team training and large-scale exercises and testing in a safe operating environment.

Goal 2: Operate the NCCT.

- **Objective 1:** Operate the facilities and venues of an enhanced NCCT.
- **Objective 2:** Maintain the facilities and venues of an enhanced NCCT.

Goal 3: Sustain the NCCT according to evolving requirements.

- **Objective 1:** Develop and implement the process to track evolving and potential user and customer requirements with feedback to make process and facility improvements.
- **Objective 2:** Expand course offerings with new curricula. Expand training and testing venues with improved infrastructure.
- **Objective 3:** Recruit, develop, and retain the finest instructors, scientists, technicians, and operations people.
- **Objective 4:** Expand the capabilities of the applied technology laboratories to meet technology advances.

Goal 4: Provide venues to conduct world-class CBRNE training and exercises for emergency responders, other Department of Homeland Security-sponsored responders, Northern Command, Special Forces, National Guard, and Other Government Agencies.

- **Objective 1:** Provide venues at NTS to train 10,000 responders in CT CBRNE by FY 2005 and 20,000 responders yearly by FY 2008.

- **Objective 2:** Provide venues for training 5,000 Northern Command, Special Forces, Department of Defense, National Guard, and other government agencies in CBRNE yearly by FY 2006.

- **Objective 3:** Provide venues to conduct four mid-scale (300-600 people) CBRNE exercises yearly by FY 2006 and one large-scale (700-2,000 people) CBRNE exercise by FY 2007.

- **Objective 4**: Provide the capability to integrate state and local training and drills with those of federal responders to establish, test, and revise response interface plans and communications.

Goal 5: Provide venues to conduct CBRNE testing and evaluation.

- **Objective 1:** Double the number of venues for the development, test, and evaluation of integrated CBRNE sensor systems by FY 2006.

- **Objective 2:** Provide the capability to test and evaluate a minimum of 20 commercial and developmental prototype technologies per year in CBRNE environments starting in FY 2005.

- **Objective 3:** Provide the capability to conduct 400 CBRNE testing and evaluation days at NTS yearly (not including setup and teardown) using NCCT venues by FY 2007.

- **Objective 4:** Provide the infrastructure to conduct one sensor/detector rodeo yearly by FY 2006.

- **Objective 5:** Provide the capability to conduct five technology demonstrations at the secure Special Technologies Laboratory Testing and Evaluation facility in FY 2005.

Goal 6: Provide equipment and infrastructure to the applied technology laboratories developing advanced technology solutions in support of the homeland security mission.

- **Objective 1:** Provide the equipment and infrastructure to develop state-of-the-art sensors and systems for CBRNE detection and characterization, evaluate commercial sensor technologies and prototype technologies provided by other developers, and increase the amount of delivered counterterrorism equipment 100 percent by FY 2007.

- **Objective 2:** Provide the equipment and infrastructure to compare test results developed in the applied technology laboratories to test results at NTS with the Mobile Instrumentation Platform in FY 2006.

- **Objective 3:** Provide the equipment and infrastructure to validate measurements at NTS against other testing venues in FY 2007.

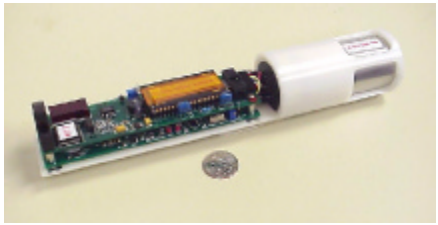
Goal 7: Integrate training and exercises, test and evaluation, research and development, and operations development to provide a national problem-solving infrastructure for CT in the radiological and nuclear areas.

- **Objective 1:** Identify standard needs for training, certification, and equipment.

- **Objective 2:** Develop technical concepts of operations, protocols, and procedures for homeland security that are validated through test and evaluation and integrated into training.

- **Objective 3:** Find/develop a mechanism for third-party test and evaluation with standard facilities to fairly evaluate commercial products and equipment.

- **Objective 4:** Develop opportunities to place new technology in the hands of personnel undergoing training and testing at the NCCT to evaluate the in-field performance of humans and technology.



Evolution of the Center

Training, testing, and technology development for CT is currently being done at the NTS and its applied technology laboratories. The NCCT was established to increase the capability for realistic training, testing, and technology development that is currently in progress at the NTS. The center will integrate the various existing venues and build new ones as required. It will provide command and control, data analysis and distribution, communications, after action reporting, and operation of the center resources as required. It will build support facilities and infrastructure for training, testing, and applied technology laboratories counterterrorism technology development.

Realistic training will occur in mock industrial complexes, mock transportation incident sites, urban sites, mock laboratories, tunnels, and live-fire exercise areas. Realistic testing will occur at toxic-capable release complexes, mock industrial complexes, tunnels, and urban sites.

The initial efforts of the center are directed towards increasing technology venue capacity and support facilities, increasing testing infrastructure, and increasing infrastructure at the applied technology laboratories.

The initial baseline for the center was created with user and customer input. Enhancements and changes to the baseline will reflect the continuing and changing needs of the user community. The processes to accomplish change are shown on the following pages.

The 'build roadmap' shows the overall actions to be taken to build the NCCT to its proposed capability. This plan assumes that nominal funding is available and timely. The FY 2002 projects and accomplishments are given, along with the FY 2003 projects that are currently in progress.

Process to Enhance Training and Testing Capabilities

The four steps on these two pages depict the process to identify User/Customer requirements. The center responds to these needs by providing training and test conditions at selected facilities supported by curricula, scenarios, instructors, and staff.

Step One: Interview/Support User/Customer

- **Individuals**
  - Emergency Services/Emergency Responders
  - Operations Level
  - Command and Control Level
  - Emergency Management
  - Scientific Community
- **Teams**
  - CST
  - SWAT
  - CBIRF
  - Urban Search and Rescue
  - DMAT
  - Others
- **Organizations**
  - Town
  - City
  - County
  - State
  - Federal
- **Multi-Organizations**

Step Two: Identify User/Customer Required Capability

Apply capabilities and limitations of instruments
Apply entry and egress requirements
Apply hazard assessment strategies
Apply principles of ionizing radiation detection
Apply protective measures
Apply response tactics based on risk/hazard assessment
Apply techniques and procedures to control, confine, and contain
Assess hazards/risk assessment
Assess organizational capability to receive, process, assess and report information
Breach obstacles
Communicate among diverse groups
Conduct after-action reviews
Conduct a survey
Conduct CBRNE exercise
Conduct dosimetry
Control vehicle skid
Conduct Urban Search and Rescue enhancements
Coordinate response with fire, law, and federal agencies
Counter snipers
Decontaminate
Determine presence of radionuclides
Defeat barricades
Detect and identify CBRNE agents and materials
Detect chemical weapons
Determine risk-based response
Develop CBRNE safety and reaction plans
Direct on-scene tactics
Discriminate between legitimate and illegitimate use of dual-use materials
Establish Emergency Command Center
Evacuate contaminated personnel
Evacuate non-contaminated personnel
Evaluate CBRNE exercise
Evaluate risk mitigation
Execute a tactical rescue or recovery mission
Identify suspicious baggage/cargo
Identify transportation issues
Integrate and manage local, state and federal response assets
Intercept delivery vehicles
Manage a crime scene
Manage hotline operations
Manage large-scale CBRNE incidents
Mitigate a radiological incident
Operate in a hazardous material environment
Operate portable spectrometer
Perform confined-space rescue
Plan CBRNE exercise
Protect critical infrastructure
Protect personnel
Provide epidemiological control
React to CBRNE casualties
React to hazardous materials
Recognize and respond to CBRNE threats
Recognize effects (health/medical) of CBRNE material
Recognize signs and symptoms of hazardous material exposure
Render safe a CBRNE weapon
Select decon appropriate for hazard
Select/use Personal Protective Equipment
Select protective measures
Test equipment and procedures
Travel and live in sensitive areas
Use detection, monitoring, and survey equipment
Use the decision making process
Use the Integrated Command Structure
Use complicated instruments
Validate technology improvement
Work with highly contagious agents

Step Four: Indicate Need to Improve/Expand

- Facilities
- Conditions
- Curricula/Scenarios
- Instructors/Controllers/Test Directors
- Integration and networking to support after-action documentation, large-scale exercises, or test and evaluation

Step Three: Define Variable Conditions for Training and Testing

CBRNE	Visibility	Event	Terrain	Population	Threat
Chemical Biological Radiological Nuclear Explosive Combination	Day Obscured Night	Accident Natural Disaster Deliberate	Open Area Industrial Site Urban Transportation network Combination	Unpopulated Friendly Unfriendly Mixed	Permissive Nonpermissive

Location	Atmospheric Hazard	Physical Hazard	Media	Live Fire	Explosives
Domestic Foreign (language)	Flammable Explosive Inert gas Low oxygen Solvent Toxic gas	Electrocution Drowning Falls Engulfment	Present Absent	No Range Urban Terrain Close Quarters Combination	Yes No

Description of the Current Baseline

The baseline was established in November 2001, with modifications in 2003. The photos on the facing page show numerous facilities providing capabilities to emergency responders, the military, Department of Homeland Security, the National Laboratories, and other CT-related organizations. Most facilities already exist, but require enhancements to become world-class training and testing venues.

The NCCT has established seven live fire training and exercise areas, with targets ranging from structures to stationary and pop-up targets. Fixed targets exist, such as tanks and mock moving armor targets, along with demolition areas that contain a multiple breaching door rack. Existing tunnel complexes will be improved to replicate terrorist incidents and targets, including subway cars and a platform. A remote urban complex can billet 358 students and represents a forward operating base with a fully operational kitchen, an administration building, and logistics and motor pool facilities.

Numerous industrial complexes exist, primarily for training and exercises, but also to provide a capability for complex testing and evaluation. All facilities provide capabilities for radiation environments, and some will be improved for chemical/biological venues. Urban Search and Rescue capabilities will be added to some of the complexes. One will be improved to include mock border crossings, a cargo portal test track, and a container port shipping yard with gantry crane, all for radiological detector testing.

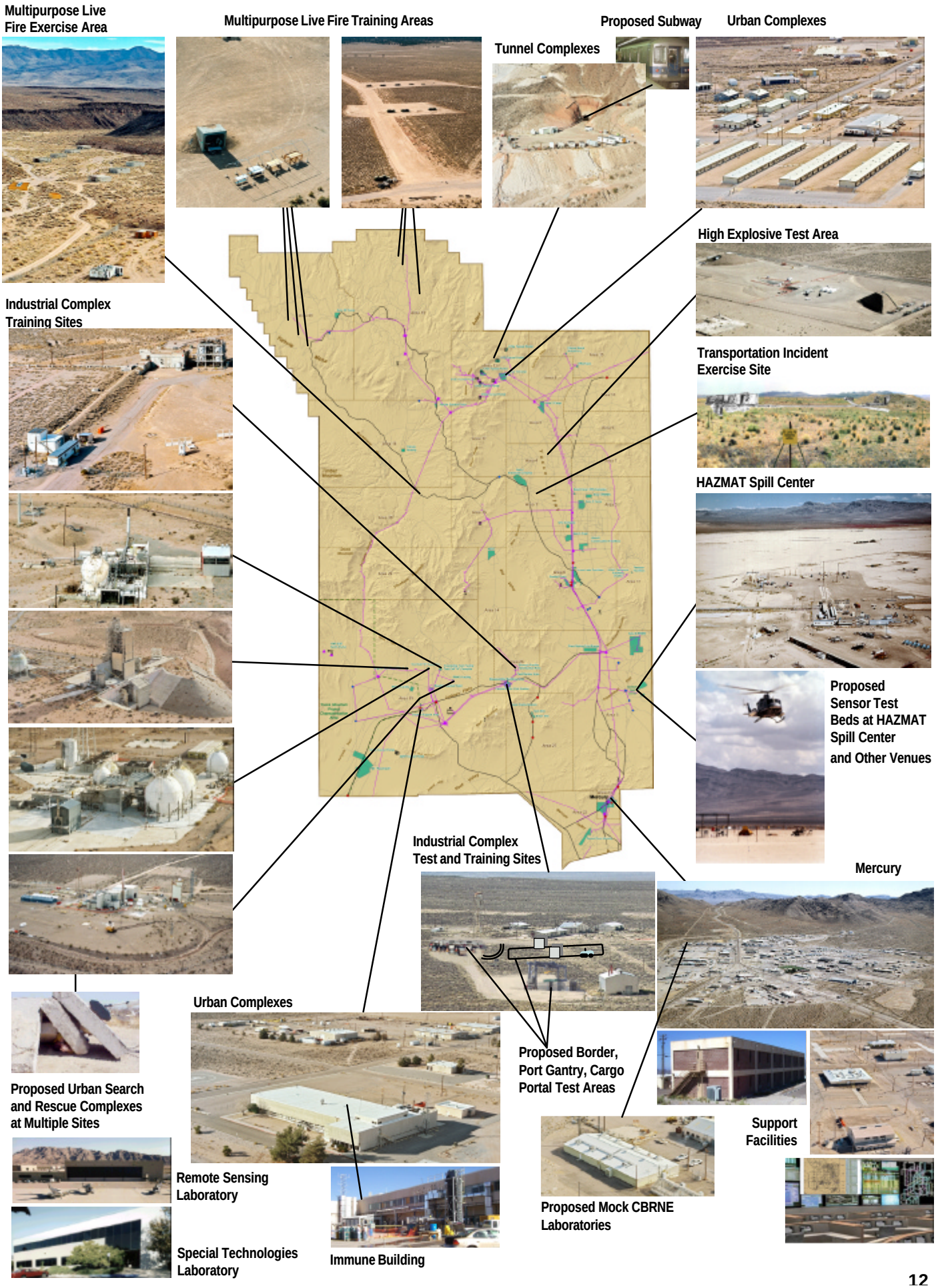
A high explosive test area exists that can perform tests requiring up to 70,000 pounds of net equivalent weight of TNT explosives. A Transportation Incident Exercise Site replicates multiple terrorist radiological incidents with train, plane, automobile, truck, and helicopter props. The HAZMAT Spill Center is the Clean Air Act-approved site for the release of toxic chemicals for testing and training, and includes an explosives facility to test demolition/defeat of large WMD components. The HAZMAT Spill Center area also provides the infrastructure to house sensor test beds for evaluation of various detector systems.

The southwest area of the NTS includes an urban complex containing an “Immune Building” capable of controlled responses to terrorist releases of chemical/biological agents. The building has numerous sensor and positive/negative pressure capabilities to test isolation and defeat mechanisms. The urban complex itself is a testing and training venue with multiple buildings, streets, curbs, and fire hydrants that will replicate multiple terrorist incidents.

The town of Mercury contains a mock CBRNE laboratory, the Exercise Management Center, and other support facilities. Mercury also contains active dormitories to house up to 341 students now and up to 470 with new or refurbished dormitories, cafeteria service, and a dinner restaurant, and will house improved exercise/fitness facilities in the future.

Two applied technology laboratories exist: the Remote Sensing Laboratory at Nellis Air Force Base in Las Vegas, Nevada, and the Special Technologies Laboratory in Santa Barbara, California. These laboratories support training, test and evaluation, and counterterrorism technology development. Infrastructure improvements and new equipment will increase their technology development capabilities.

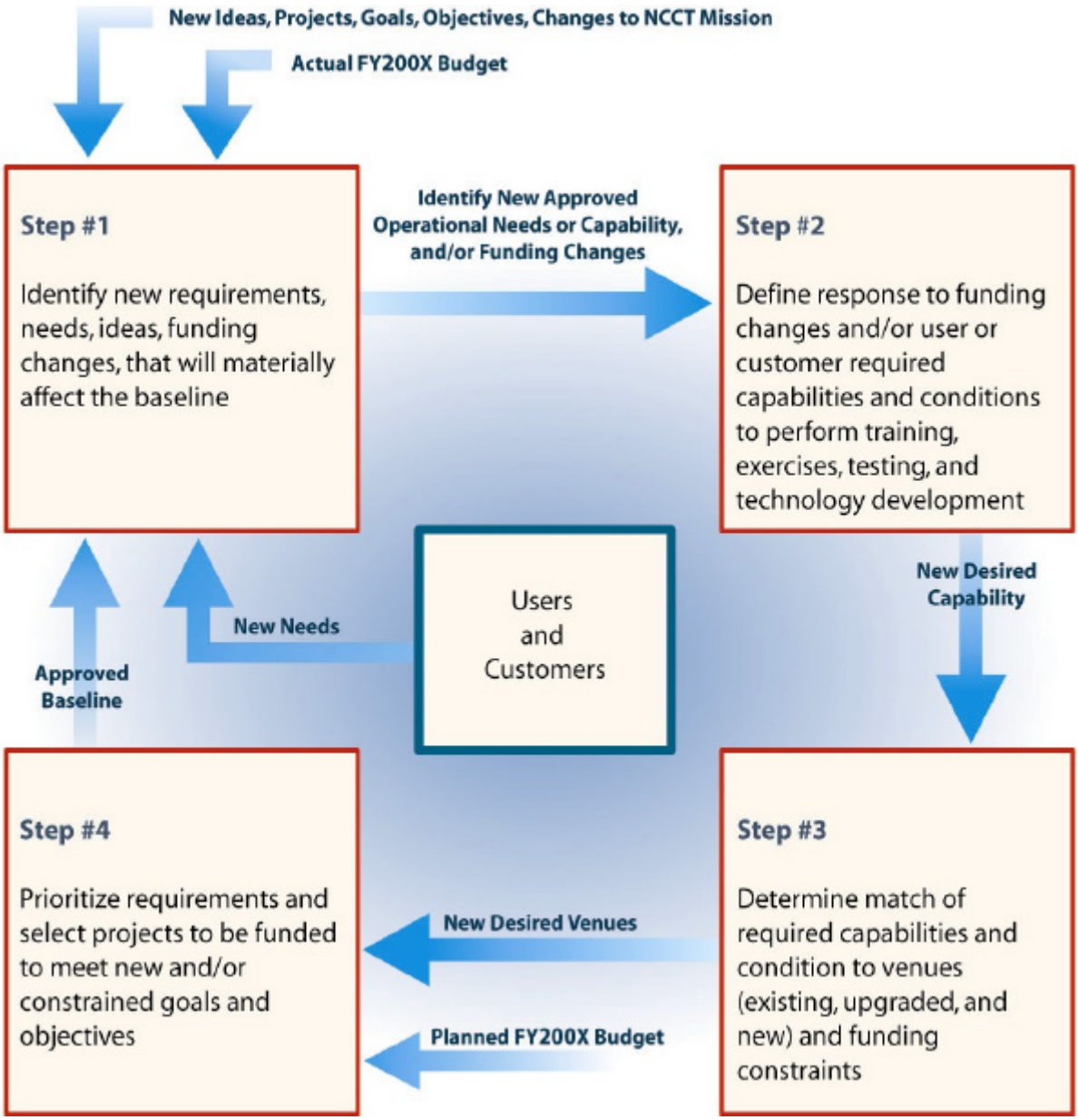
Current Baseline



Process to Modify the Baseline

The four-step process to modify the Baseline using the NCCT Integrated Project Team is shown in the figure below.

- The team consists of representatives from the National Nuclear Security Administration Nevada Site Office and Bechtel Nevada, and Users, Customers and subject matter experts who will participate as required.
- The team identifies, validates, and controls the process to add or subtract projects or capabilities to/from the Baseline.
- An annual meeting of the User Group may prompt new/desired requirements.
- Changes in funding may prompt new priorities and/or project scope changes.



Project Selection Prioritization

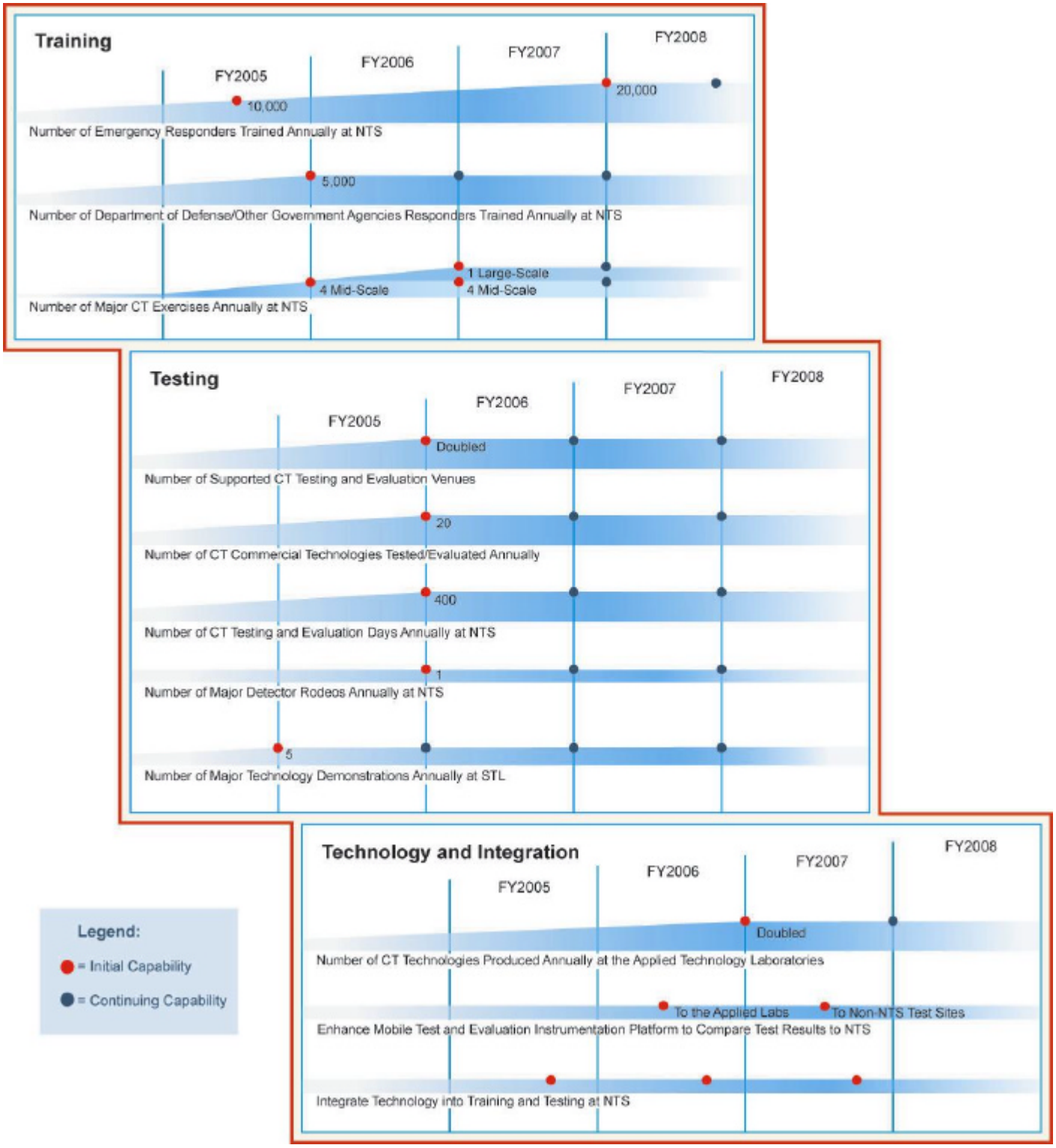
The two-step process used by the NCCT Integrated Project Team to rank projects for consideration in the Baseline and/or current year funding is shown below.

Step 1. The team uses the criteria below to provide the initial prioritization of each project:

- Facilities, infrastructure that meet the goals and objectives.
- Facility enhancements that provide a unique training, testing capability.
- Improvements that maximize the number of users, students each year.
- Improvements that promote technology development and/or test and evaluation.
- Cost of the project.
- Capacity of the facility, infrastructure to meet the NCCT concept of operations.
- Improvement to the NTS Infrastructure.
- Projected increased operating cost each year.

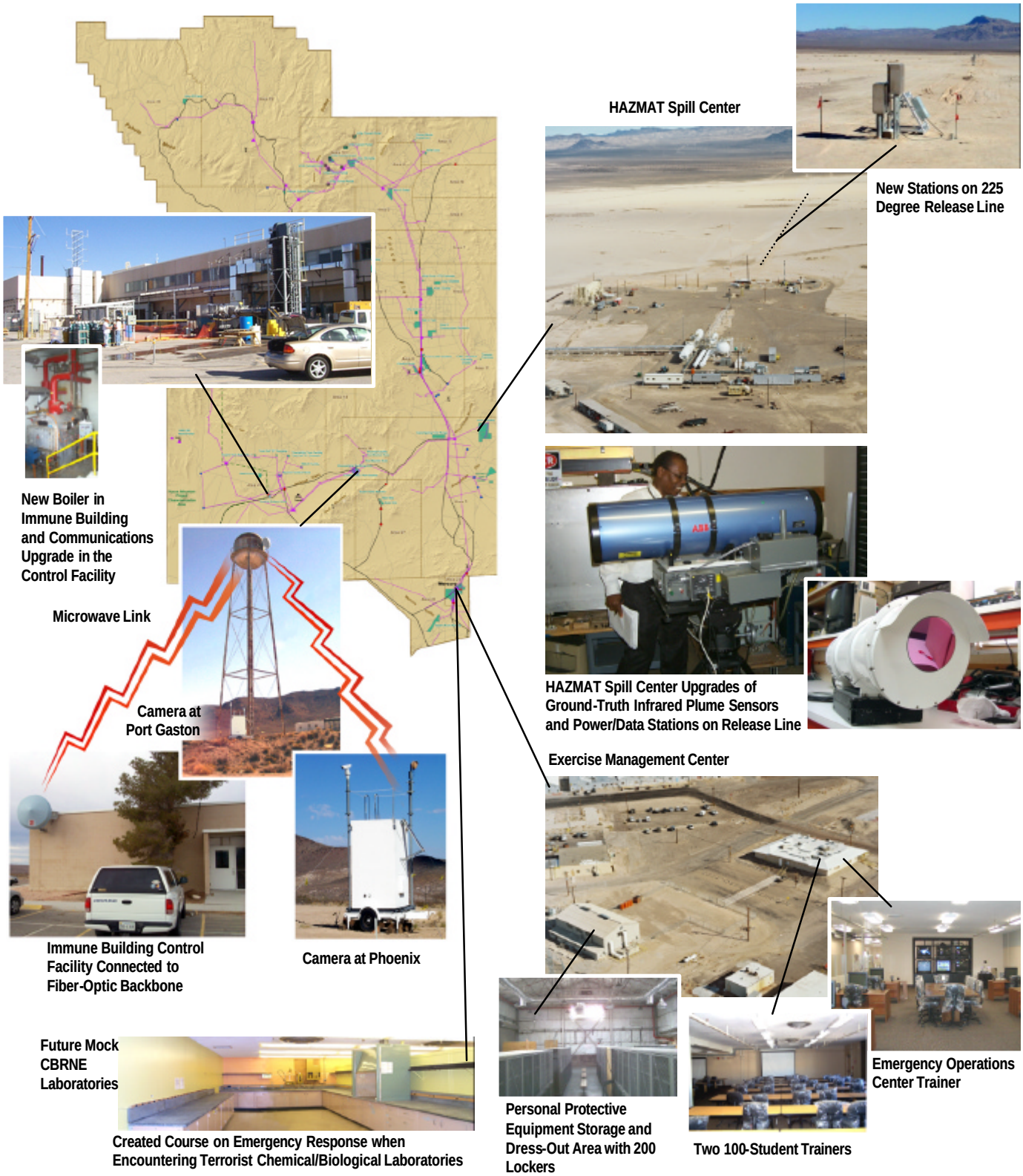
Step 2. The team considers other factors that may be dictated by funding constraints, along with grouping of projects, to attain the next level of capability.

Facilities/Capabilities Roadmap



FY 2002 $10M Major Accomplishments

Improvements were made to the HAZMAT Spill Center test area: new fiber-optic communication line; new ground-truth sensors; power and communications down the release line. Improvements to the Immune Building included a new boiler and data transmission system. In Mercury, the Exercise Management Center's 40-student training area was expanded to 200 students; an Emergency Operations Center Trainer and a personal protective equipment storage and dress-out area with 200 lockers were constructed. A course on emergency response when encountering terrorist chemical and biological laboratories was created. Cameras were installed at two Industrial Complex Training Sites (Phoenix and Port Gaston) and connected by microwave and fiber-optic communications to the Emergency Operations Center Trainer.



FY 2003 $32.5M Major Projects in Process

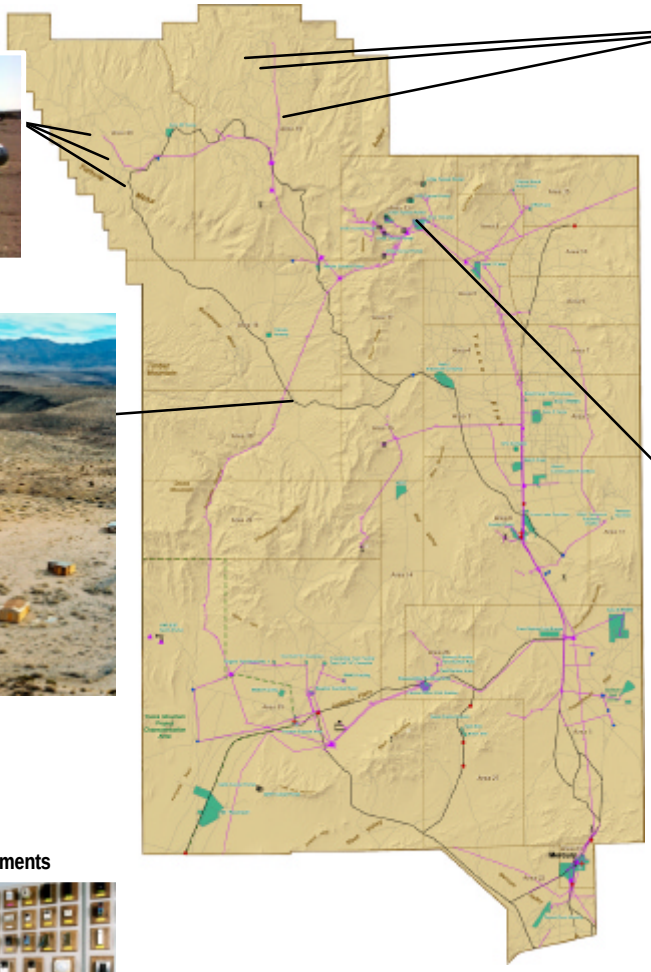
Training and exercise projects include Remote Training Compound improvements at the Area 12 Camp, with upgrades to the cafeteria (making the kitchen fully operational), four dorms, and the administration and logistics buildings. Upgrades to the Multipurpose Live Fire Training Area in Area 19 include making three small-heavy arms firing areas operational with three sets of moving targets, shade structures and bleachers. A control station trailer with telephone for firing safety has been added, along with area safety markers, signs, and barriers. Upgrades to the Multipurpose Live Fire Training Area in Area 20 include making three demolition areas operational with one breaching door rack, telephone communications, and area safety markers, signs, and barriers. Upgrades to the Multipurpose Live Fire Exercise Area in Area 30 include pop-up silhouette targets and a telephone and radio communications system for firing safety, along with area safety markers, signs, and barriers.

Applied Engineering Technology Enhancements at the Remote Sensing Laboratory include increasing space in the counterterrorism technologies assembly area, upgrading the 'Sensor Lab' for improved data collection, and constructing an outdoor laboratory to evaluate outdoor sensors. In addition, the foam in the anechoic chamber will be replaced to extend capability, an advanced computer lab will be created, and the sensor library will be upgraded. A siting study will be performed to conceptually design a new approximately 36,000 square foot building to house sensor labs and support functions.

A Research, Development, Test and Evaluation Center at the Special Technologies Laboratory will replace old prefab structures at the annex facility and set up new facilities to provide CBRN laboratories for sensor and instrument development, secure testing, evaluation, and personnel training. The Mobile Instrumentation Platform is being designed at the Special Technologies Laboratory to provide a chemicals/explosives NTS-wide-deployable diagnostic laboratory capability.

Multipurpose Live Fire Training Area

Multipurpose Live Fire Exercise Area



Multipurpose Live Fire Training Area

Remote Training Compound

Remote Sensing Laboratory Enhancements

Anechoic Chamber and Sensor Laboratory

Special Technologies Laboratory Enhancements

Annex Location to be Renovated

FY 2003 $32.5M Major Projects in Process (continued)

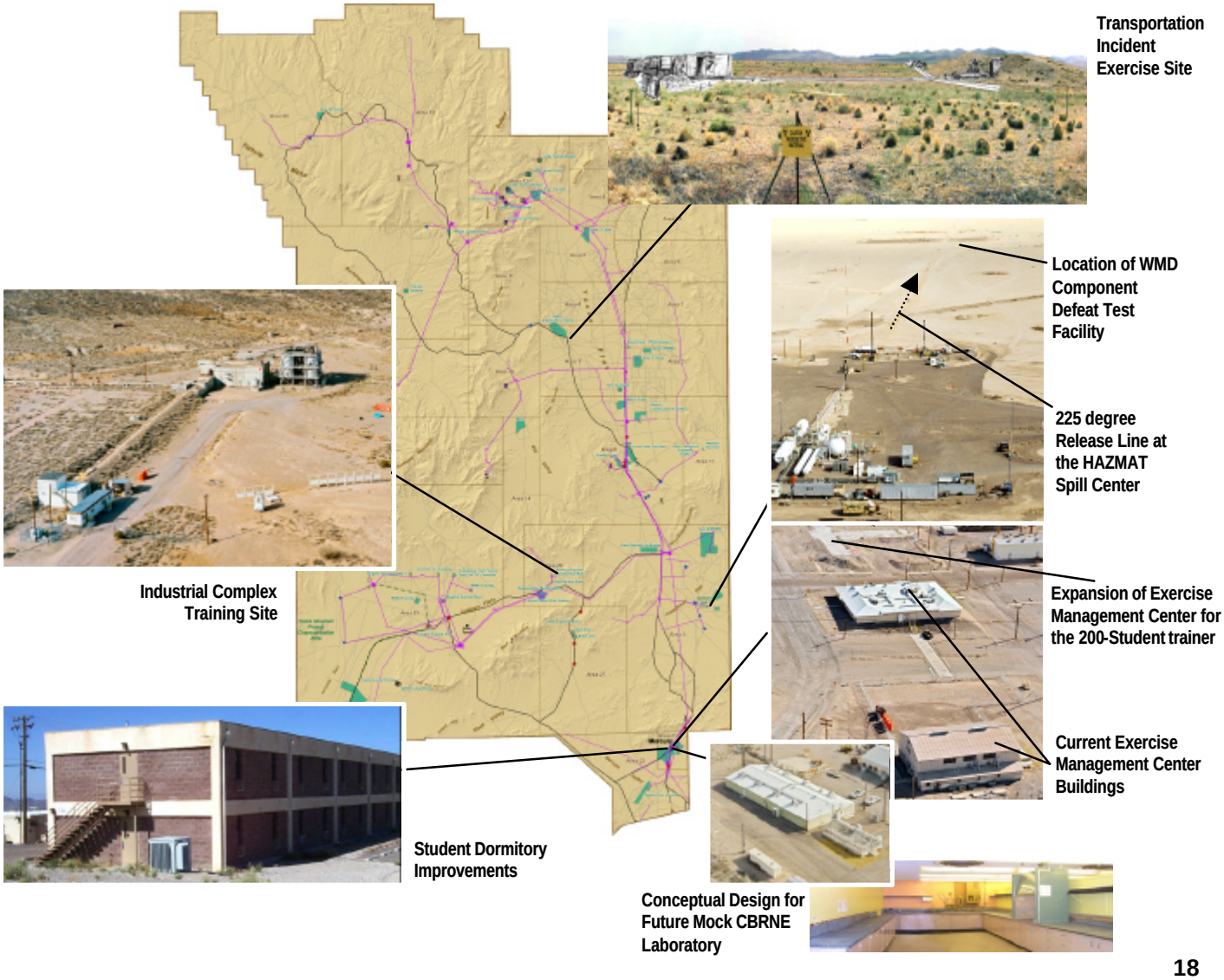
FY 2003 projects also include a project to enhance the Transportation Incident Exercise Site at T1 in Area 1. The current 'bare' area will be enhanced by constructing lanes of transportation-related CT venues with auto, truck, aircraft, and rail props for training in a real radiation-contaminated area. A shade structure, storage container, and trailer will be located at the entrance to the training area. Capabilities Improvements at the HAZMAT Spill Center in Area 5 include additional mobile weather stations; a new Experimental Assembly Building at the test area; a WMD Component Defeat Test Facility down the 225 degree release line; and a reconfiguration of the Lawrence Livermore National Laboratory High-Resolution Imaging Sensor as a diagnostic ground sensor.

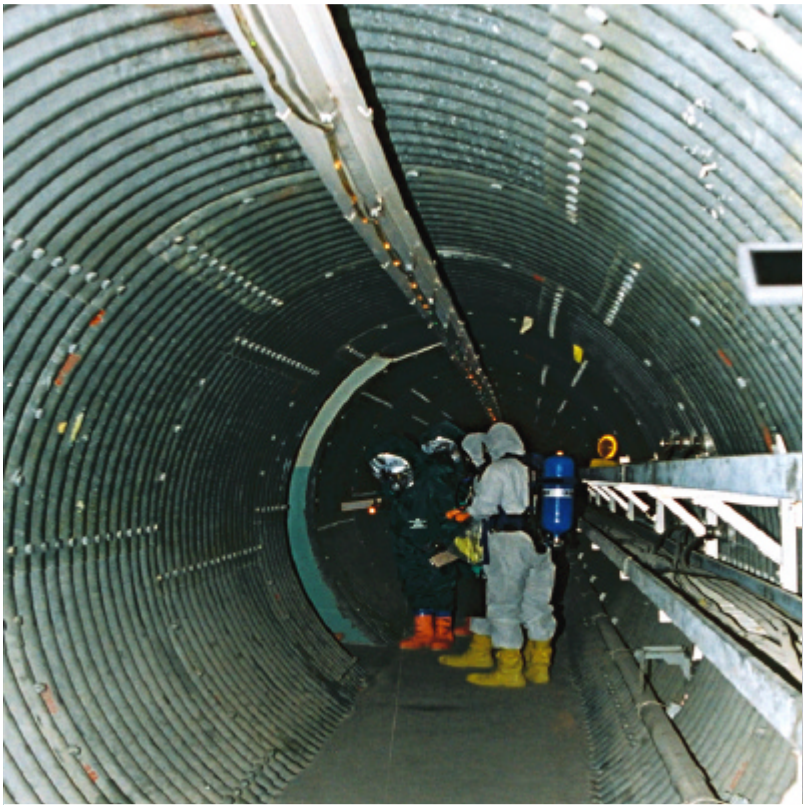
In Mercury, the Exercise Management Center will be expanded with a new facility containing two approximately 100-student (equal to approximately 4 x 50 each) training rooms. In addition, the greater than 10,000 square foot facility will contain a conference room with instructor and student support functions.

Also, the Mock CBRNE Laboratory will undergo a conceptual design for mock overt and covert industrial terrorist-type laboratory venues. Student Dormitory Improvements of 'unused' buildings will add 43 units of new housing.

In Area 26, the Industrial Complex Training Site (known as Phoenix) will be upgraded to include additional props, room and wall upgrades, a public address system, outdoor lighting, and safety improvements. In addition, a covert second-story lab and a 'hidden' covert lab will be constructed, along with an outdoor shade structure with bleachers and benches for personal protective equipment dress-out and student instruction.

Definition of Test and Evaluation Facilities at the NTS will be performed to provide a pre-conceptual design and siting for a test and evaluation center to test radiation sensors at mock gate/border crossings, highways, and port and containerized shipping/screening venues. The purpose is to detect radiological and Special Nuclear Materials being shipped.





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