

Public Safety Interoperable Communications Grant Program

Improving Interoperable Communications Nationwide: Overview of Initial State and Territory Investments

November 2008



**NATIONAL TELECOMMUNICATIONS AND
INFORMATION ADMINISTRATION**

U.S. DEPARTMENT OF COMMERCE



**FEDERAL EMERGENCY MANAGEMENT AGENCY
GRANT PROGRAMS DIRECTORATE**

U.S. DEPARTMENT OF HOMELAND SECURITY



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Foreword

The Federal Government has recognized that communications interoperability among public safety agencies is a critical element in emergency response. In recognition of the need to improve the interoperability of public safety communications nationwide, the Department of Commerce (DOC), in consultation with the Department of Homeland Security (DHS), has established and implemented a \$1 billion grant program to assist public safety agencies in enhancing communications interoperability nationwide.

Through cooperative development, the DOC National Telecommunications and Information Administration (NTIA) and the DHS Federal Emergency Management Agency (FEMA) Grant Programs Directorate (GPD) have designed the Public Safety Interoperable Communications (PSIC) Grant Program. PSIC is a grant program that is solely focused on interoperable and emergency communications and represents the largest single infusion of Federal funding for State, Territory, and local communications interoperability.

Since the initial release of PSIC funds in April 2008, the PSIC Program Office has accumulated and analyzed PSIC data on approved projects to identify project trends and assess the successes of the program's first year. The PSIC Grant Program report, *Improving Interoperable Communications Nationwide: Overview of Initial State and Territory Investments*, describes trends in State, Territory, and local communications initiatives and the program's anticipated impact on interoperable communications across the Nation. This initial analysis represents lessons learned that will guide the management of the PSIC Grant Program moving forward and can inform future interoperable communications initiatives. The report's findings are based on the analysis of 281 individual PSIC Investments submitted by States and Territories. The PSIC Grant Program will continue to provide stewardship by monitoring project performance and providing assistance to grantees as these projects are implemented.

The ultimate goal of the PSIC Grant Program is to have a substantial, nationwide influence on public safety communications interoperability. This report illustrates the Investments State and local public safety agencies are making to achieve greater interoperability and to advance the Nation's goal of improved preparedness and response.

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Findings and Analysis

INTRODUCTION

The Public Safety Interoperable Communications (PSIC) Grant Program was created by the *Deficit Reduction Act of 2005* (the Act) (Public Law 109-171), as amended by the *Implementing Recommendations of the 9/11 Commission Act of 2007* (the 9/11 Act) (Public Law 110-53). The legislation directed the National Telecommunications and Information Administration (NTIA) of the Department of Commerce (DOC), in consultation with the Department of Homeland Security (DHS), to establish and administer a grant program to assist public safety agencies in the advancement of interoperable communications.

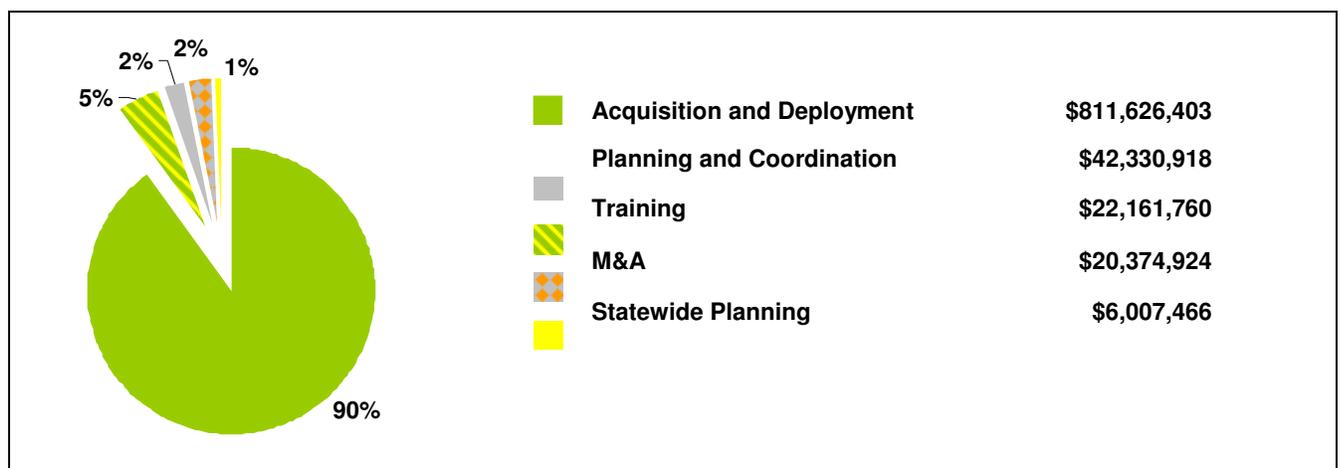
State and local agencies have long recognized the critical need to improve their public safety interoperable communications capabilities. The recommendations, requirements, and plans dating back to the Public Safety Wireless Advisory Committee report released in 1996 and culminating most recently with the 2008 release of the *National Emergency Communications Plan (NECP)*, have only been reinforced by the lessons learned from responses to terrorist attacks and natural disasters alike.

On September 30, 2007, the Departments of Commerce and Homeland Security announced the successful award of nearly \$1 billion in grant funding to all 56 States and Territories to enhance interoperability nationwide. These awards represent the largest single infusion of Federal funding ever provided for State, Territory, and local agencies to implement communications solutions. The graphic below illustrates the use of funds by the 51 States and Territories reviewed for this report.¹

The Assistant Secretary, in consultation with the Secretary of the Department of Homeland Security--
(1) may take such administrative action as is necessary to establish and implement a grant program to assist public safety agencies in the acquisition of, deployment of, or training for the use of interoperable communications systems...
(2) shall make payments of not to exceed \$1,000,000,000 in the aggregate, through fiscal year 2010...

– Section 3006
 Deficit Reduction Act of 2005

Figure A: Distribution of PSIC Grant Funds Along Allowable Cost Areas



¹ As of September 30, 2008, five States are still working to meet the programmatic requirements. This analysis of PSIC Investments does not reflect data on these five States.

This overview report and the accompanying State and Territory Investment summaries provide information and trends on the PSIC Program funding and the expected impact these Investments will have on emergency communications capabilities across the Nation.

METHODOLOGY

This analysis is based on the data from the 51 States and Territories that were approved for the release of funds, which represents a total of 281 individual projects. In developing the data analysis, the program staff reviewed the Investments and identified significant trends in specific Investment activities: Acquisition and Deployment, Training and Exercises, Planning and Coordination, Strategic Technology Reserve, and certain aspects of Grant Administration (Match/Pass-Through)²:

The results from the analysis of the four Investment activities were compiled to provide a nationwide summary. In addition, a narrative synopsis was developed to provide high-level information on each State and Territory's approved projects (Appendix B).

KEY FINDINGS

Initial findings from a review of PSIC Grant Program Investments are presented below.

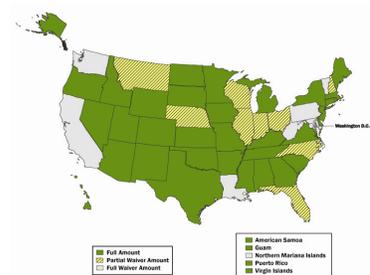
Finding 1: Advanced Technology Adoption—More than 90 percent (\$811 million) of PSIC funds were designated by State and local agencies for the acquisition and deployment of equipment that will increase emergency communications interoperability. Jurisdictions invested in all frequency bands (i.e., VHF, UHF, 700 MHz and 800 MHz) and relied heavily on advanced and standards-based (e.g., Project 25 (P25)) technology, including Internet Protocol (IP), satellite, and video for public safety purposes. Although more than half of the Investments are based on the upgrade or use of existing infrastructure, these solutions will significantly enhance legacy communications infrastructure by expanding coverage, linking disparate systems, increasing connectivity, and ensuring compatibility in an effort to migrate existing systems toward increased interoperability.

Examples of Proposed Solutions:

- Satellite Technology
- Voice over IP (VoIP)
- Radio over IP (RoIP)
- Gateway / Bridging Technology
- Microwave Infrastructure
- P25 Radios / Caches
- Data Systems
- Video Systems
- Interoperability Channels
- Site/Cells-on-Wheels (SOW/COW)
- Mobile & Fixed Towers

Finding 2: Nationwide Strategic Technology Reserve—Responding to the lessons learned from Hurricanes Katrina and Rita, the PSIC Grant Program required States and Territories to be better prepared in the event of communications infrastructure failure. To address this need, a total of \$75 million in PSIC funds was set aside for Strategic Technology Reserve (STR) solutions—equipment reserves that are pre-positioned, deployable, and able to re-establish communications. Forty-seven States and Territories are using PSIC funds to establish or enhance an STR. Together with pre-existing STR assets, PSIC will provide a nationwide capability to address

Figure B: Use of STR Funds

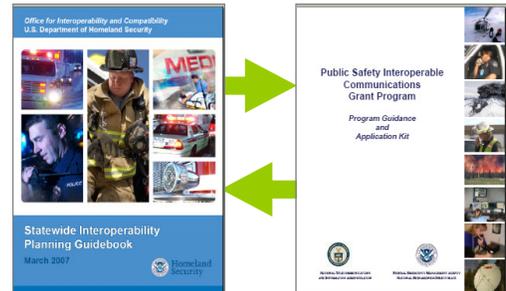


² For the purposes of this analysis, Management and Administration (M&A) and Statewide Planning are not included in the summary analysis because specific activities within these areas were not identified in IJs.

infrastructure failures as required in the NECP.³

Finding 3: Enhanced Coordination—Collaborative planning among all disciplines and levels of government is critical for ensuring effective and fully coordinated preparedness and response.⁴ To address this need for coordination, PSIC was the first grant program to require States and Territories to align their investments to a DHS-approved Statewide Communication Interoperability Plan (SCIP).⁵ As a result, many States targeted funding on activities associated with the development of statewide and/or regional Memoranda of Understanding (MOU) and Standard Operating Procedures (SOP); regional and/or statewide training and exercise initiatives; and coordinated inter-governmental and cross-jurisdictional system and equipment initiatives. Going forward, it is envisioned that this strategic alignment will ensure that Investments are not only coordinated across multiple jurisdictions and disciplines, but also across multiple Federal and State funding sources.

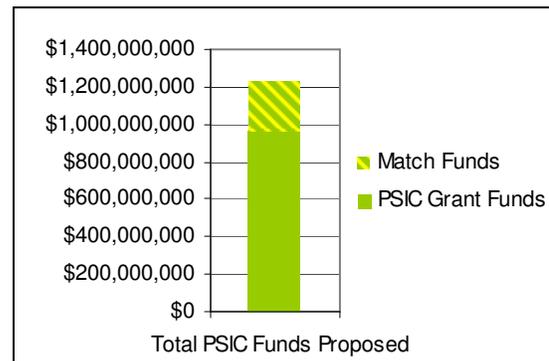
Figure C: State and Territory Planning and PSIC Grant Program Relationship



Finding 4: Significant State and Local Match—

The PSIC Grant Program requires grantees to provide non-Federal matching funds on certain types of Investments (i.e., Acquisition, Deployment, and M&A). This matching concept is a new requirement for many DHS grantees. Jurisdictions will provide more than \$256 million in matching funds (such as cash and in-kind salaries, services, equipment, and property), which contributes to more than \$1.2 billion in interoperable communications improvements when combined with Federal PSIC grant funds.

Figure D: Total PSIC Funds



MOVING FORWARD

This report serves as a foundational document against which PSIC grantees' progress will be examined. It is intended that the findings will be periodically updated, as additional States are approved for the release of funds and as States modify their projects to respond to changing needs. Ongoing monitoring and assistance will be provided to grantees to support project implementation.

Following the PSIC period of performance that is ending on September 30, 2010, a final analysis will be conducted to document the lessons learned, best practices, and information that will help guide future use of Federal grant funds for communications improvement.

³ National Emergency Communications Plan, 2008, p. 34.

⁴ National Emergency Communications Plan, 2008, p. 11.

⁵ The development of a SCIP was a requirement of the Fiscal Year (FY) 2006 Homeland Security Grant Program (HSGP).

OVERVIEW OF PSIC AWARDS

State/Territory	PSIC Funding	State/Territory	PSIC Funding
Alabama	\$13,585,399	Montana	\$6,549,685
Alaska	\$7,250,345	Nebraska	\$8,582,108
American Samoa	\$691,948	Nevada	\$12,042,417
Arizona	\$17,713,050	New Hampshire	\$5,966,760
Arkansas	\$11,169,402	New Jersey	\$30,806,646
California	\$94,034,510	New Mexico	\$8,288,725
Colorado	\$14,336,638	New York	\$60,734,783
Connecticut	\$12,999,879	North Carolina	\$22,130,199
Delaware	\$8,196,842	North Dakota	\$7,052,490
District of Columbia	\$11,857,972	Northern Mariana Islands	\$719,236
Florida	\$42,888,266	Ohio	\$29,377,337
Georgia	\$25,311,354	Oklahoma	\$11,684,183
Guam	\$2,600,678	Oregon	\$12,182,532
Hawaii	\$8,069,879	Pennsylvania	\$34,190,555
Idaho	\$7,289,795	Puerto Rico	\$9,590,025
Illinois	\$36,414,263	Rhode Island	\$7,365,694
Indiana	\$18,291,735	South Carolina	\$13,499,308
Iowa	\$10,935,974	South Dakota	\$6,549,691
Kansas	\$10,667,169	Tennessee	\$17,540,752
Kentucky	\$15,405,625	Texas	\$65,069,247
Louisiana	\$19,672,287	U.S. Virgin Islands	\$856,907
Maine	\$7,567,579	Utah	\$10,353,261
Maryland	\$22,934,593	Vermont	\$4,476,761
Massachusetts	\$21,191,988	Virginia	\$25,012,521
Michigan	\$25,039,781	Washington	\$19,180,347
Minnesota	\$14,262,071	West Virginia	\$8,429,484
Mississippi	\$10,989,345	Wisconsin	\$15,367,216
Missouri	\$17,465,576	Wyoming	\$5,952,187
Total		Total	\$968,385,000

I. PSIC Background

This section of the report summarizes the PSIC Grant Program, including its history, an overview of PSIC programmatic grant goals and priorities, and program requirements. The creation of PSIC provides insight into how key programmatic goals and requirements developed and are later reflected in the Investments from States and Territories.

Creation of PSIC

The PSIC Grant Program was created through the *Deficit Reduction Act of 2005* (Public Law 109-171), which President Bush signed into law on February 8, 2006. The Act established a firm deadline to complete the transition of broadcasters from analog to digital transmissions. This digital television transition will reallocate 24 megahertz (MHz) of spectrum for public safety use. The remaining portion of the returned spectrum was auctioned for commercial use. With the anticipated auction proceeds, NTIA was given authority to establish and implement a \$1 billion grant program to improve interoperable communications for public safety agencies. On December 22, 2006, the *Call Home Act of 2006* (Public Law 109-459) mandated that all PSIC funds be awarded by September 30, 2007.

When disaster strikes, first responders must have the tools to communicate. Under this streamlined program, States will be given grants to use technology that will make our cities and States safer.

–U.S. Department of Commerce
Secretary Carlos Gutierrez

In February 2007, NTIA and DHS signed a memorandum of understanding (MOU) to implement the PSIC Program. Under the conditions of the MOU, the DHS Office of Grants and Training (now the Federal Emergency Management Agency (FEMA) Grant Programs Directorate (GPD)) would assist NTIA in the development of policies, procedures, and regulations governing the PSIC Program and provide grants management services. NTIA would retain the approval authority over the grant program and would approve the final grant awards.

The original grant guidance for the PSIC Program was released on July 17, 2007. On August 3, 2007, the *Implementing Recommendations of the 9/11 Commission Act (9/11 Act)* (Public Law 110-53) was signed into law. The 9/11 Act amended key features of the PSIC Program, including expanding the allowable activities under the program and removing restrictions on the use of funds for equipment outside of the 700 MHz frequency band. The 9/11 Act also set aside \$75 million for Strategic Technology Reserves (STR) –communications equipment that is deployable, pre-positioned, and able to re-establish communications in the event of total infrastructure failure. As a result of the amendments from the 9/11 Act, amended grant guidance was released on August 17, 2007.

These grants will help States and cities purchase equipment, conduct training and exercises, and develop effective interoperable communications plans to get this important job done.

–U.S. Department of Homeland
Security Secretary Michael Chertoff

Program Funding Goals

To understand the expected impact of PSIC Investments on communications interoperability, it is important to understand the goal and subsequent objectives of the PSIC Grant Program. The goal of this program is to offer public safety agencies the opportunity to achieve meaningful and measurable improvements to the state of public safety communications interoperability and to fill interoperability gaps identified in Statewide Communication Interoperability Plans (SCIP) through the full and efficient use of all communications resources.⁶ To achieve this goal, NTIA and DHS identified the following technology and all hazards mitigation priorities for grantees to consider when developing their Investments—

Interoperability is the ability of emergency response officials to share information via voice and data signals on demand, in real time, when needed, and as authorized.

– SAFECOM Program

- **Technology:** Applicants were encouraged to consider and incorporate into their Investments solutions that include advanced technology, improve spectrum efficiency, and use cost effective measures.
- **All Hazards Mitigation:** Applicants were urged to propose Investments that help public safety agencies to “respond quickly to emergency situations regardless of their source or cause, particularly areas vulnerable to catastrophic natural disasters and areas at high risk for threats of terrorism.”⁷ States and Territories were encouraged to develop Investments that improve communications in areas at risk for natural disasters, continue to improve interoperability efforts in urban and metropolitan areas, and pre-position or secure interoperable communications in advance for immediate deployment in an emergency or major disaster.

All of the approved State and Territory Investments addressed one or both of these objectives.

Key Program Features

The PSIC Grant Program leveraged existing features found in other DHS grant programs, while introducing new elements. The defining features of the PSIC Grant Program, which incorporate the statutory requirements and programmatic goals of the PSIC Grant Program, are as follows—

- **Eligible Applicants:** The State Administrative Agencies (SAA) of all 56 States and Territories are the eligible applicants under the PSIC Grant Program.
- **Sub-recipients:** Eligible sub-recipients include public safety agencies that are a State, local, or tribal government entity or an authorized non-governmental organization whose sole or principal purpose is to protect the lives, health, or property of individuals within their jurisdictions.
- **Period of Performance:** The period of performance for the PSIC Grant Program is 36 months; PSIC grant funds were awarded in September 2007 and must be expended by September 30, 2010.
- **Statewide Planning:** Up to five (5) percent of the total funds allocated to a State or Territory were made available at the time of award to support Statewide Planning efforts

⁶ PSIC Program Guidance and Application Kit, August 17, 2007, p. 2.

⁷ Ibid, p. 3.

(through December 3, 2007) to facilitate the incorporation of PSIC requirements into SCIPs.

- **Technical Review:** Funds are contingent upon successful submission and technical review of Investments, including approval of the SCIP and Investment Justifications (IJ).
- **Allowable Activities:** Funding can be used for planning and coordination activities, acquisition of equipment and acquisition-related costs (e.g., system design, asset inventory, feasibility studies), deployment of equipment or systems (e.g., construction and renovation), training and exercises, and M&A costs.
- **Match:** PSIC includes a statutory requirement for grantees to provide, from non-Federal sources, not less than 20 percent of the costs of acquiring and deploying the interoperable communications systems and solutions and M&A activities funded under this program.
- **Pass-Through:** The PSIC Program requires all States to pass-through no less than 80 percent of their funds to local, tribal, or authorized non-governmental public safety entities.
- **Strategic Technology Reserve (STR):** The 9/11 Act set aside \$75 million from the PSIC Grant Program for STR solutions. A proportionate share of the funds awarded to the States and Territories was to be used to establish an STR, which consists of pre-positioned and deployable equipment that is capable of re-establishing communications in the event that critical communications infrastructure is damaged or destroyed. The 9/11 Act allowed a waiver of the requirement if a State and Territory demonstrated that it already implemented an STR or that other projects represent a higher priority need for public safety communications.
- **Management and Administration:** Up to three (3) percent of the funds are available at the State-level for M&A costs.

For consistency purposes, the PSIC Grant Program leveraged DHS grant administration. For example, the State Administrative Agency is the eligible applicant for PSIC funds and is responsible for managing and administering any funds awarded through the PSIC Grant Program. Although many of the above program features are also included in other DHS grant programs, there are many unique PSIC requirements. For example, the State is required to use PSIC Investments to address identified interoperability gaps in its SCIP and to expend all grant funds within the statutory period of performance, which ends September 30, 2010, with no extensions. Given the limited timeframe for expending PSIC funds and the other unique grant requirements for grantees, the PSIC Grant Program will provide Grantee Assistance to ensure successful implementation of grant funds.

II. Distribution of PSIC Funds

This section describes how the PSIC grant fund was distributed among the 56 States and Territories and illustrates how States and Territories plan to further distribute their PSIC allocations to localities within their jurisdictions. An explanation of PSIC's unique programmatic requirement of non-Federal match is also provided in this section, along with a depiction of how grantees plan to meet that requirement. A summary of the section is provided below.

Distribution of PSIC Funds Summary

- The PSIC Grant Program fund allocation process included the program goal of establishing a baseline of interoperability and a risk-based formula.
- Nearly half of the States and Territories used their Statewide Planning funds to develop their applications for PSIC funds, specifically for strategic planning and alignment of Investments with strategic plans.
- To date, all 56 States and Territories have approved SCIPs; 51 State and Territory IJs meet the statutory and programmatic requirements, advance the objectives of their SCIP, and increase emergency communications and interoperability capabilities.
- Through close State and local coordination, half of the States will pass through 80 percent of their PSIC funding, a quarter will retain funds on behalf of local entities through MOUs, and the rest will either use a combination of both methods or do not have a pass-through requirement.
- More than half of the Investments list local entities as subgrantees, indicating involvement of local agencies through coordination with the State/Territory in the PSIC grant process.
- Combining the PSIC grant funds with the proposed non-Federal match, more than \$1.2 billion will help State, Territory, local, and tribal public safety agencies improve communications interoperability. More than half of the non-Federal match will be provided in cash by State, Territory, and local entities.

Formula-Based Program

The PSIC Grant Program awarded \$968,385,000 in grant funds to assist public safety agencies improve emergency communications interoperability nationwide. Though neither the authorizing statute nor its legislative history specified how funds would be distributed, NTIA, in consultation with FEMA, determined that the program should, to the extent possible, establish a baseline of interoperability in each State or Territory across the Nation. To that end, each State, the District of Columbia, and Puerto Rico received a minimum of \$3 million to improve interoperability. Each Territory received a minimum of \$500,000 to make meaningful improvements to its interoperable communications capabilities. The remaining PSIC funds, more than 80 percent of the total available program funds, were allocated to States and Territories using a risk-based formula similar to that used in the Homeland Security Grant Program (HSGP). This risk-based methodology measures the relative risks of a given State or urban area by assessing threats, vulnerabilities, and consequences of natural and man-made disasters, and directs grant funding to areas facing the greatest risk.

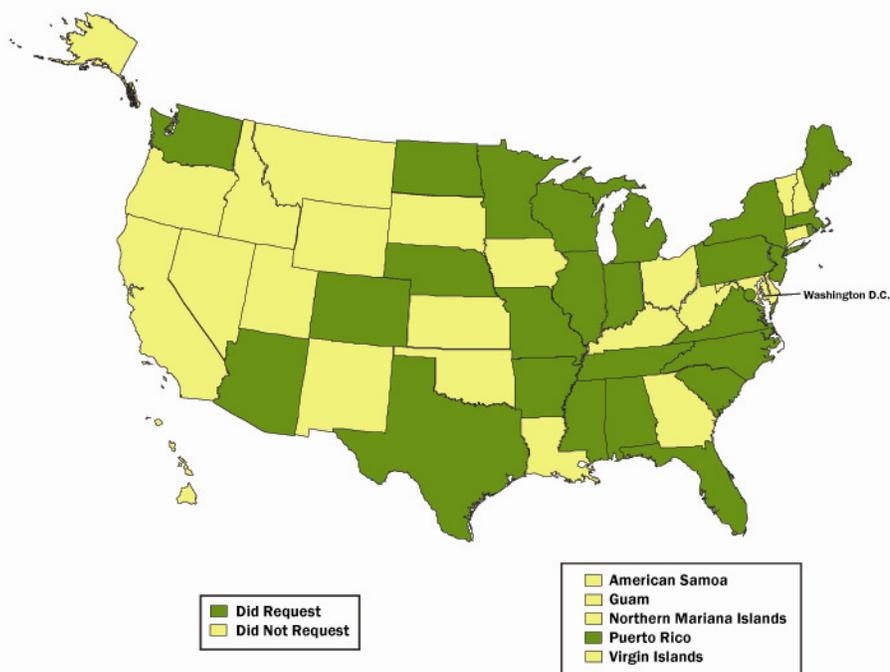
The PSIC program guidance includes funding allocations for each State and Territory, a set-aside for STR solutions in each State and Territory, and minimum funding levels for seven Tier One Urban Area Security Initiative (UASI) areas.

Application and Award Process

States and Territories were required to submit their standard applications (Standard Form 424 and portfolio narrative) by August 22, 2007. All 56 States and Territories submitted applications for funding and received an award letter by September 30, 2007. Applicants were required to submit their SCIPs and PSIC IJs describing up to 10 interoperability projects by December 3, 2007.

To further support the application and strategic planning process, States and Territories were allowed to immediately spend up to five (5) percent of their total allocations for Statewide Planning efforts. Collaborative planning among all levels of government and among public safety agencies is critical for ensuring effective and fully coordinated preparedness and response.⁸ As shown in Figure 1, a total of 27 States and Territories requested funds for Statewide Planning to ensure that their Investments were coordinated at the State and local levels, met programmatic requirements, and reflected PSIC grant goals and priorities.

Figure 1: Use of Statewide Planning Funds



The remaining funds were released after a technical review and approval of the SCIP and the Investment Justification. In February 2008, NTIA, FEMA, and the DHS Office of Emergency Communications facilitated a joint peer review of the SCIPs and IJs to ensure alignment of

⁸ National Emergency Communications Plan, 2008, p. 11.

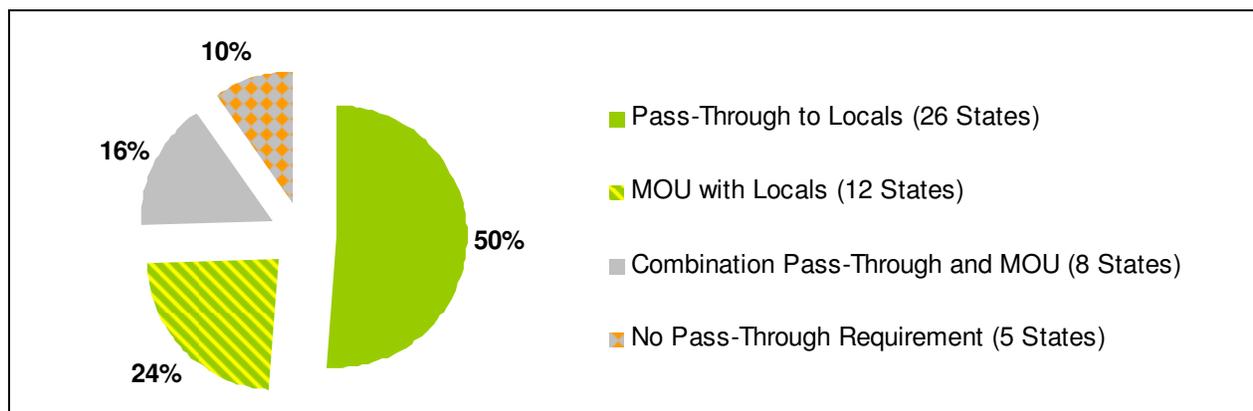
statewide strategies and funding requests. More than 100 public sector employees, including Federal, State, local, and tribal representatives with expertise and experience in emergency operations, interoperable communications, public safety operations, or grants management participated in the SCIP and PSIC Investment review process. Reviewers ensured programmatic compliance, effectiveness of approach, alignment of projects to statewide needs defined in the SCIP, and local stakeholder involvement. The IJ input provided by the reviewers was used to approve Investments and release the appropriate funding. As of September 1, 2008, a total of \$902,501,471 had been approved for 51 States and Territories.⁹

Local Pass-Through Requirement

Each State or Territory receiving grant funds is required to pass-through not less than 80 percent of the total award amount to eligible sub-recipients, retaining 20 percent of funding for statewide activities.¹⁰ For Puerto Rico, the pass-through requirement is 50 percent of the total award amount. Because of the unique nature of the Territorial governments in Guam, American Samoa, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands, no pass-through requirements were applied. However, the Territories are expected to take into account the needs of local communities before making funding decisions. Likewise, the District of Columbia has no pass-through requirement.

PSIC allows SAAs to act on behalf of localities in managing and expending PSIC funds if there are MOUs in place. The MOUs define roles and responsibilities for managing the PSIC project and authorize the SAA to manage the funds on behalf of the locality. Figure 2 depicts the approaches that States adopted to address the pass-through requirement. More than half of the States have elected to pass-through 80 percent of their PSIC grant funds to locals, while a quarter are retaining funds on the behalf of locals. A smaller percentage will use a combination of pass-throughs and MOUs for their grant funds.

Figure 2: Pass-through Status of States and Territories



Analysis of the PSIC Investments found that, regardless of which entity submitted the Investment, or how the funding is to be managed (at the State or local level), all Investments are

⁹ Five States are still working to meet the IJ programmatic requirements and have not been included in this analysis of PSIC Investments.

¹⁰ Sub-recipients for local pass through can be local and/or tribal public safety agencies and authorized non-governmental organizations.

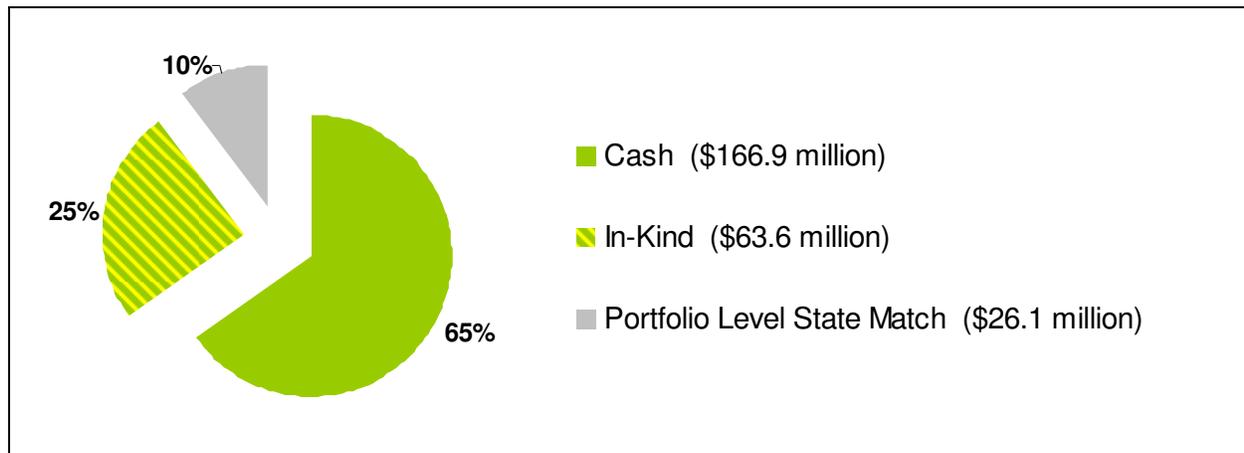
locally driven, multi-disciplinary, multi-jurisdictional, and are aligned with the broader SCIP. This is further demonstrated through the Individual Investments. More than half of the Investments named local entities as the grant recipient, while the remainder named the SAA or other State agencies as the grant recipient. However, through MOUs, many local entities elected to have the SAA administer the grant funds on their behalf, supporting both statewide and local Investments.

State and Local Matching Funds

The PSIC Grant program includes the requirement that the grantee provide, from non-Federal sources, a 20 percent match for the costs associated with acquisition, deployment, and M&A. Match is not required for Planning and Coordination or Training activities. Match can be provided at the State-level or at the Investment-level.

In total, grantees will provide more than \$256 million in non-Federal matching funds. Figure 3 demonstrates the type of match and amounts to be provided by grantees.

Figure 3: Non-Federal Match Type



More than two-thirds of all matching funds planned by State and local entities are in the form of cash.¹¹ More than \$166.9 million in cash contributions are planned as PSIC matches. Donated salaries, equipment, property, and volunteer services valued at \$63.6 million are planned as in-kind matches to support PSIC Investments. Nearly 75 percent of in-kind matches are to be provided through in-kind property and salaries. In addition and/or in place of Investment-specific matches, some States are providing match at the overall State-level to meet the requirement. States will provide an additional \$26.1 million in match at the State level for Acquisition and Deployment, as well as M&A expenses related to their PSIC Investments.

Through the PSIC matching requirement, more than \$256 million in cash, goods, and services from State and local agencies will be generated to support interoperable communications improvements. Through both Federal and non-Federal match sources, more than \$1.2 billion will be committed to interoperability improvements through the PSIC Program.

¹¹ The requirement for local matching funds under \$200,000 is waived for the Territorial governments in Guam, American Samoa, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands (See 48 U.S.C. § 1469a.) Some of the Territories proposed to provide some level of non-Federal match even though it was not required.

III. Use of PSIC Funds

This section provides a preliminary summary analysis of how grantees are proposing to spend their PSIC grant funds at an aggregate, national level. The distribution of PSIC grant funds along the five allowable cost areas is demonstrated. A summary of common and key characteristics found in the reviewed Investments is provided for four allowable cost areas: Acquisition and Deployment, Training, Planning and Coordination, and for STR solutions.¹² Appendix B provides additional details on the approved IJs submitted by States and Territories.

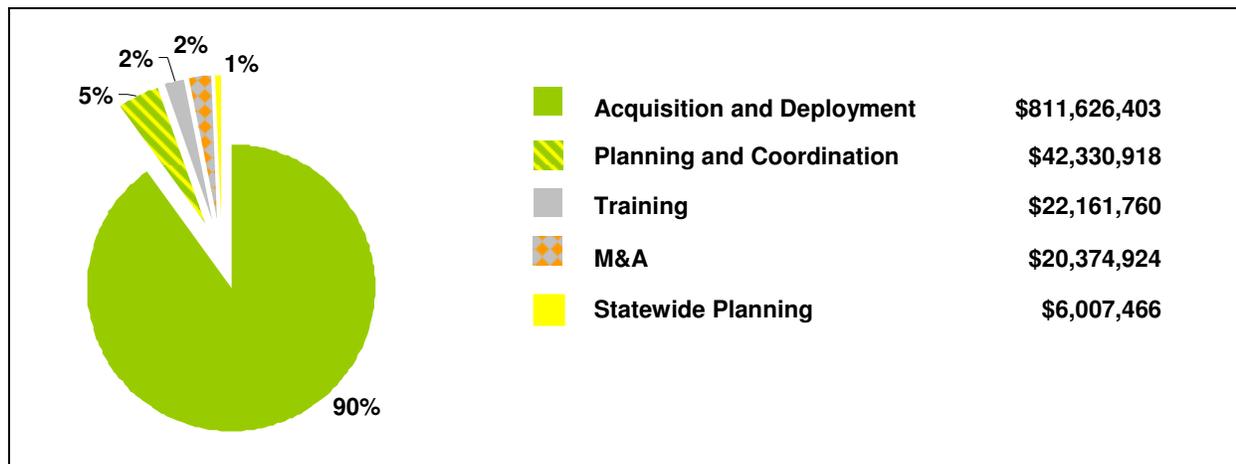
Allowable Cost Area Funding Proposal Summary

- Approximately 90 percent of grant funds are proposed for Acquisition and Deployment activities, indicating the larger need to fund technology-based solutions and infrastructure.
- Planning and Coordination was the next largest funded Investment area, at approximately five (5) percent, and Training constituted over two (2) percent of proposed Investment funds.
- More than half of proposed Investments are for new initiatives not previously funded by grant and/or State, Territory, or local funds.

Funding Proposals by Allowable Cost Areas

In a preliminary review of 281 PSIC Investments (representing \$902,501,471) submitted under the PSIC Grant Program, grant funding is allocated as shown in Figure 4.

Figure 4: Distribution of PSIC Grant Funds Along Allowable Cost Areas



¹² The Acquisition and Deployment allowable cost areas were combined for the purposes of this analysis. It was clear from the details in the Investments that the distinction of these two categories was not applied consistently across the 51 States and Territories. Since both categories require a match and both pertain to equipment and technology solutions, it provided for a more consistent analysis by combining the categories.

Acquisition and Deployment: All 51 States and Territories will use PSIC funds for Acquisition and Deployment (procurement and deployment of technology). Ninety percent of all available PSIC funding (\$811.6 million) is allocated for Acquisition and Deployment.

Planning and Coordination: Thirty-five States and Territories requested funding for Planning and Coordination activities. Collectively, they will allocate nearly five (5) percent of PSIC funds (\$42.3 million) for Planning and Coordination.

Training: Thirty-four States and Territories requested funding for Training, which included requests to conduct exercises. Grantees could request up to 20 percent of their total awards for Training; however, only a little over two (2) percent of PSIC funds (\$22.2 million) is planned for Training.

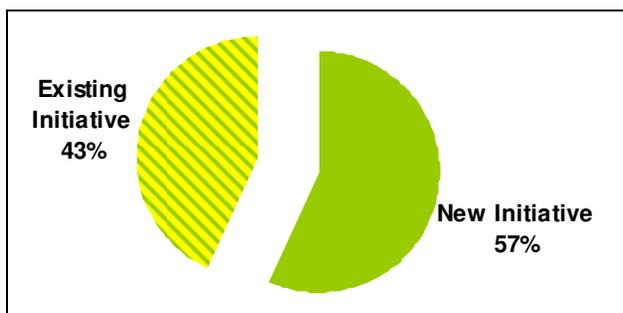
Management and Administration: Up to three (3) percent of a State or Territory's total allocation can be used toward M&A expenses. In total, a little more than two (2) percent of PSIC funding (\$20.4 million) is planned for M&A by 38 States and Territories.

Statewide Planning: Up to five (5) percent of a State or Territory's allocation could be used (by December 3, 2007), to complete the SCIP to ensure that it aligned with the PSIC Investments. States and Territories allocated approximately \$6 million of their PSIC funding for Statewide Planning, which represents less than one (1) percent of total funding.

PSIC grantees are allowed to use PSIC funds for new activities associated with existing initiatives or for new projects. As Figure 5 indicates, more than half of the Investments, or fifty-seven percent of the Investments, are new projects, which indicates the extent to which PSIC grant funds are allowing States and Territories to invest in new initiatives to improve their interoperability capabilities. The other forty-three percent of the Investments are phases of larger, existing communications efforts. If grantees proposed to use PSIC funds to further existing projects, they were required to document in the IJ any historical funding of the project from other sources, including grant programs, in order to ensure that the grantee does not supplant or co-mingle Federal funds. Those Investments that are existing initiatives were often previously funded through other DHS grant programs, including the Homeland Security Grant Program, Law Enforcement Terrorism Prevention Program, and the Urban Area Security Initiative Grant Program, among others.

The next section provides further analysis of the primary allowable cost areas (Acquisition and Deployment, Planning and Coordination, and Training) for the PSIC Investments and for the STR related Investments. Additional information on the summary analysis approach and methodology can be found in Appendix A.

Figure 5: Type of Investment/Project



Acquisition and Deployment Trends

Acquisition refers to the procurement of equipment or technology-based solutions needed to improve interoperability. Deployment refers to the build-out and installation costs of interoperable communications equipment and systems. Nearly 90 percent of PSIC funding (\$811.6 million) is allocated to Acquisition and Deployment activities, indicating a critical need for infrastructure improvements to achieve communications interoperability. A summary of this section is provided below.

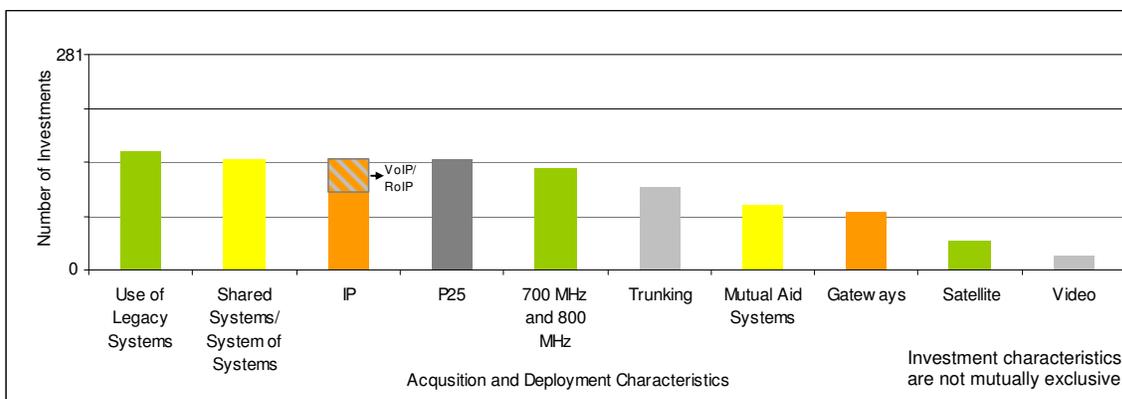
Acquisition and Deployment Summary

- PSIC grantees are forward-thinking in their procurement of technology. As a result, States and localities proposed Investments in Internet Protocol (IP), satellite, and standards-based (e.g., Project 25 (P25)) technology, as well as video for public safety purposes.
- Half of all Investments included advanced technology elements to connect disparate systems to achieve interoperability, creating “systems of systems” and/or enhancing or developing shared regional or statewide systems for all public safety agencies to use.
- States and Territories also advanced spectrum-efficiency goals through proposed Investments that develop or enhance the use of digital equipment solutions, trunked systems, and mutual aid systems.
- Many Investments reflect the development of 700 MHz and/or 800 MHz systems or methods for interoperating with 700 MHz and/or 800 MHz systems.
- Most Investments included cost-effective measures, particularly by enhancing or expanding legacy systems.

Investments that contain Acquisition and Deployment activities not only addressed critical interoperability needs but also advanced the PSIC Grant Program’s programmatic objectives, including the adoption of advanced technological solutions, improved spectrum efficiency, and consideration for cost-effective measures. Key Investment trends include expanding system coverage and capacity, linking systems together to achieve interoperability, the building out a “shared system” for public safety agencies across a region or State/Territory, and moving toward interoperability by adopting compatible or standards-based technology. These infrastructure investments embody the interoperability goals and the key emergency communications needs of the States and Territories. As the PSIC Grant Program monitors and assists these grantees in achieving their goals, DHS and NTIA will share lessons learned and best practices demonstrating how States and Territories are using PSIC funds to improve their interoperability communications capabilities.

Figure 6 shows some of the types of Acquisition and Deployment projects put forth by grantees. The Investment characteristics are not mutually exclusive. For example, a single Investment can include the elements of P25, 700 MHz, and “use of legacy systems.” As noted in the graph, the most common types of communications projects include leveraging legacy systems, building out shared systems and/or “system of systems,” applying P25 standards to new equipment, and expanding systems that use 700 MHz and 800 MHz spectrum.

Figure 6: Acquisition and Deployment Investment Characteristics



Use of Legacy Systems (154 Investments): More than half of the Investments will upgrade or use existing infrastructure or equipment to expand coverage or interoperability capabilities. Using existing systems to increase interoperability is a common cost-effective strategy. Many upgrades to existing systems include enhancing or extending system coverage and capacity by developing new towers and backbone solutions (e.g. microwave and IP). Other legacy based system Investments will increase the capabilities of the system (e.g. adding wireless data capabilities, redundancy, and Voice over Internet Protocol (VoIP) and/or Radio over Internet Protocol (RoIP) solutions).

Shared Systems and “System of Systems” (145 Investments): Half of the Investments will develop or enhance shared systems or a system of systems, a cost effective strategy to promote interoperability. Further, public safety agencies that use shared systems are more advanced in interoperability development.¹³ The development and enhancement of shared systems should help advance the State/Territory and local agencies’ communications and interoperability capabilities. Investments in shared systems help link public safety agencies across jurisdictions, disciplines, and all levels of government, to communicate in day-to-day operations or major incidents. Shared systems centralize the operations and management of a

Advanced Technology Adoption: Virginia

The Commonwealth of Virginia is using PSIC funds to develop advanced technology solutions to connect disparate legacy systems statewide. Virginia will incorporate IP, VoIP, and satellite capabilities in the statewide “system of systems” (COMLINC) to bridge the communications gap among the Commonwealth’s disparate systems. The Investment links a series of broadband voice and data applications with satellite communications systems and replaces traditional, expensive T-1 lines with IP solutions, expanding existing VoIP solutions into new localities.

¹³ SAFECOM 2006 National Interoperability Baseline Survey, p. 13.

single system, which creates operational efficiencies and helps to reduce long-term costs. “Systems of systems” can be developed or enhanced through the use of gateways, IP systems, and similar technology to create virtual systems—a single system of connected, disparate networks.

Internet Protocol (IP) (102 Investments): More than one-third of all Investments will use IP-based solutions to help bridge disparate systems, increase redundancy, and develop wireless data capabilities. IP-based solutions promote a “network of networks” approach, which allows for the connection of disparate systems to create wide-area systems, expanding both coverage and capacity for States and Territories. The IP-based solutions are not only an adoption of advanced technology but also a cost-effective solution that enables the integration of existing, legacy systems to minimize the costs associated with complete system replacement.

Voice over IP (VoIP) and Radio over IP (RoIP) (42 Investments): A subgroup of the IP-based Investments, VoIP and/or RoIP technologies will improve or augment voice communications. These solutions allow for the digital transmission of voice over IP or other packet-switched networks. VoIP and RoIP solutions can interoperate with standard communications equipment, from P25 radios to legacy systems, across multiple frequencies and are generally less expensive and more flexible than legacy radio systems.

P25 (144 Investments): Slightly more than one-half of the Investments will procure P25 equipment. P25 is a standards-based technology that promotes interoperability between different systems by using standardized equipment. The standards-based equipment approach not only improves interoperability but is also cost-effective because it often does not require completely replacing existing equipment or systems. In many cases, States and Territories are using PSIC funding to upgrade existing equipment to achieve P25 compliance. P25 equipment is also spectrum efficient as it is based on, and only operable with, digital systems. Digital systems use spectrum more efficiently than analog systems.

700 MHz and 800 MHz (132 Investments):

Many States and Territories indicated that they had in place, or will migrate toward, a 700 MHz or 800 MHz system and/or will develop solutions to interoperate with 700 MHz or 800 MHz systems. Nearly half of Investments will develop or enhance a 700 MHz or 800 MHz system or to purchase equipment that interoperates with 700 MHz or 800 MHz systems. Many States and Territories plan to use both 700 MHz and 800 MHz spectrum for public safety radio communications. These spectrum bands promote interoperability and spectrum efficiency because higher frequency systems transmit voice and data more efficiently.

Cost and Spectrum Efficiency: Delaware

Delaware is using legacy infrastructure and adopting new technologies and spectrum to develop a new statewide P25 700 MHz system. The proposed system will connect to and use legacy components of the State’s 800 MHz system. It will also connect to 700 MHz/800 MHz systems in surrounding jurisdictions. This investment advances interoperability not only within the State but also across State borders. It is cost-effective because it moves some users from the currently crowded 800 MHz system to the 700 MHz system, which will use the same infrastructure.

Trunking (107 Investments): Nearly half of all Investments will build or expand trunked radio systems. Trunked systems are spectrum efficient because they accommodate a greater number of users on a given set of radio channels.

Mutual Aid Systems (85 Investments): Mutual aid systems (also referred to as shared channels) are interoperability channels that can be shared across levels of government, disciplines, and jurisdictions. They are channels within the same band of operation that can be pre-programmed into subscriber units to achieve interoperability during emergencies. Nearly

one-third of the Investments will develop or enhance mutual aid systems, which not only facilitate greater interoperability but also promote spectrum sharing.

Gateways (76 Investments): A gateway is an advanced technology solution that is used to connect systems that operate on disparate frequencies or system architectures. Nearly one-third of the Investments include the use of gateways, and many of the gateway solutions are also IP-based.

Satellite (39 Investments): Satellite technology is included in a little over one-tenth of Investments. Satellite based Investments will use satellite-based connectivity or satellite phones. Satellite technology as a connectivity solution will be used in remote areas or for redundancy when terrestrial based systems (including those linked to wireless towers) are damaged or destroyed, thus satellite phones and satellite connectivity are also prevalent in STR solutions.

Video (18 Investments): Although video solutions are a small share of the Investments, this use of this advanced technology will be incorporated into communications and interoperability solutions. Although details on video solutions are not provided in some instances, many video-related Investments discussed the development of video capabilities for public safety agencies. Video solutions planned include enhanced common operating picture capabilities, in-vehicle video linking to dispatch, and/or a capability provided into the STR solution.

Planning and Coordination Trends

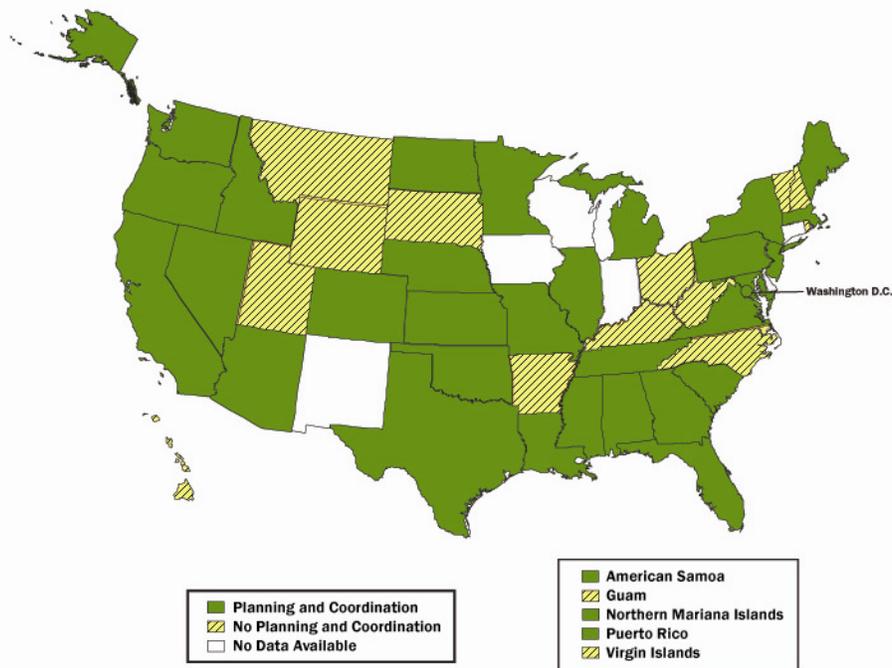
The Planning and Coordination allowable costs pertain to financial and technical planning as well as coordination among public safety agencies.¹⁴ These allowable costs closely align with the Governance and Standard Operating Procedure (SOP) elements of the Interoperability Continuum, which stress the need for greater strategic and tactical planning and increased coordination among public safety agencies. The table below summarizes observations in the analysis of Investments that include Planning and Coordination.

Planning and Coordination Summary

- More than half of the States and Territories will conduct Planning and Coordination activities.
- The PSIC requirement for multi-disciplinary and multi-jurisdictional Investments often require the grantees to develop SOPs, particularly for solution and system related Investments.
- Many States and Territories are developing MOUs to coordinate interoperability at a strategic level.

Figure 7 depicts the 35 States and Territories that have allocated funds for Planning and Coordination.

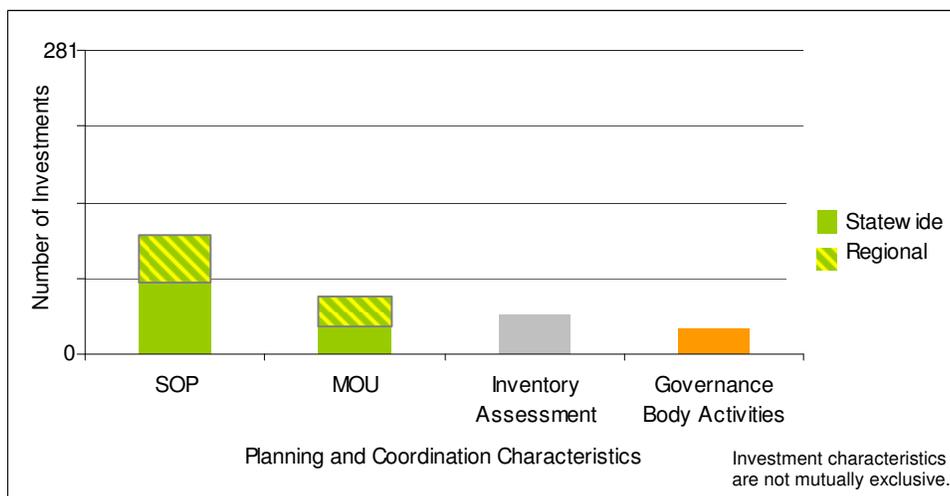
Figure 7: Use of Planning and Coordination Allowable Cost Area



¹⁴ The Planning and Coordination section data does not include the Statewide Planning effort which is analyzed separately and highlighted on page 9 of the report.

States and Territories will use a total of \$42.3 million in PSIC grant funds for Planning and Coordination activities. The primary Planning and Coordination activities include statewide interoperability governance activities, MOUs, and SOPs. These activities represent an important step in long-term sustainment and growth of interoperable communications capabilities within States, Territories, and regions. Figure 8 demonstrates the extent to which Planning and Coordination activities are included in the 281 reviewed Investments. As with Acquisition and Deployment, the characteristics outlined in the chart are not mutually exclusive; a single Investment can include multiple activities. As shown below, SOP development is the most common Planning and Coordination activity, indicating public safety agencies are moving toward developing formal and more standardized tactical planning agreements to more effectively respond to day-to-day and emergency events.

Figure 8: Planning and Coordination Investment Characteristics



Standard Operating Procedures (SOP) (110 Investments): Many States and Territories will develop statewide and regional SOPs to establish protocols and procedures. SOPs help to codify and standardize the processes by which different agencies will communicate and interoperate with one another. The PSIC requirement for multi-jurisdictional and multi-disciplinary Investments often necessitates the development and use of SOPs.

Memorandum of Understanding (MOU) (53 Investments): Approximately one-tenth of all Investments will develop MOUs to define roles and responsibilities among agencies for interoperable communications and emergency response.

Inventory Assessments (36 Investments): States and Territories will conduct communications equipment inventory assessments. Many States and Territories plan to use the Federal Communication Assets and Survey Mapping (CASM) tool. This tool helps

Continued Strategic Planning: Georgia

Georgia is proposing over five (5) percent of its PSIC funds toward Planning and Coordination activities. The \$1.3 million proposed for the Planning and Coordination Investment will be implemented through workshops with each all-hazards region in the State. Activities include developing a statewide SOP template and completing SOPs, establishing a framework for integrating training into local and State training efforts, and creating a planning roadmap for developing regional and statewide exercises.

States and Territories to develop a database and map of communications equipment available across the State, Territory, or region, which is critical in disaster response and for coordinating deployable communications assets and mutual aid information.

Governance Body Activities (24 Investments): States will use PSIC Planning and Coordination funds to strengthen statewide interoperability governance committees—statewide committees that provide strategic planning and guide communications interoperability strategy and investments. Establishing or enhancing governance groups have a long-term benefit to interoperability and emergency communications. These groups help to create a formal, organized structure through which agencies can work toward a cohesive statewide or regional communications strategy. Such groups centralize the authority and capability to coordinate public safety communications strategy, planning, and investments, thereby maximizing all local, State, and Federal funding in the future.

Training and Exercises Trends

Training ensures that public safety agencies understand how to effectively use communications equipment and procedures to interoperate with other public safety agencies. Exercises are conducted to ensure familiarity with the communications system and validate the effectiveness of the communications solutions and SOPs. The Training allowable costs align closely with the Training and Exercise elements of the Interoperability Continuum. Allowable Training costs under the PSIC Grant Program include, but are not limited to, comprehensive user training; multi-jurisdictional interoperable communications-specific exercises and drills; development of user guides and instruction manuals; and the hiring of personnel or contractors/consultants to conduct training and exercise related activities. A summary of observations in Training related Investments is below.

Training Summary

- Training is included in two-thirds of State and Territory IJs.
- Training-related Investments include region and statewide training and exercises, helping to ensure greater coordination and interoperability capabilities.
- States and Territories are using PSIC funds to develop National Incident Management System (NIMS) capabilities, particularly through statewide Communications Unit Leader (COML) and Incident Communications Technician (COMT) training and certification programs.

Under PSIC, States and Territories are permitted to allocate up to 20 percent of their total Federal awards toward Training. Figure 9 represents the 34 States and Territories that elected to use PSIC funds for Training activities. A total of \$22.2 million will be used for Training.

Figure 9: Use of Training Allowable Cost Area

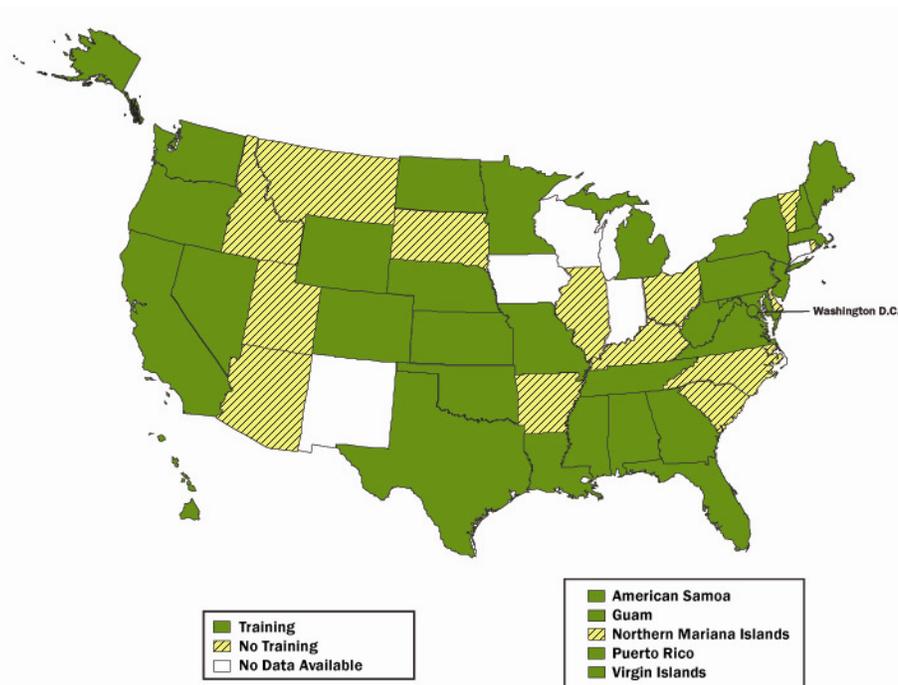
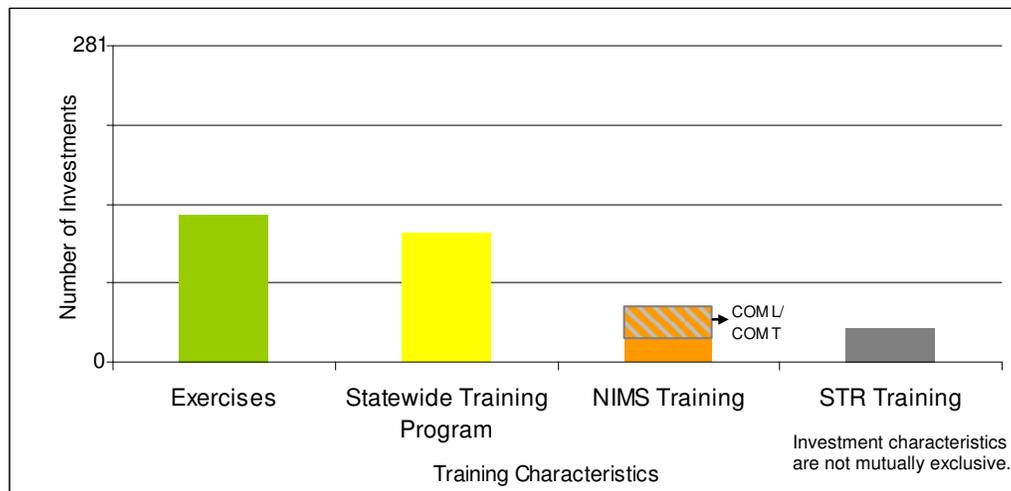


Figure 10 depicts the key Training characteristics found in the 281 analyzed Investments. As with the Acquisition and Deployment, the characteristics outlined in the chart are not mutually exclusive; a single Investment can include multiple activities. As reflected in the graph, the most common types of Training projects include exercises and statewide training. Many grantees noted that new training programs and exercises would be needed to ensure that their first responders are familiar with the new technology solutions and capabilities being developed with PSIC grant funds.

Figure 10: Training Investment Characteristics



Exercises (131 Investments): Exercises are the most prevalent Training activities in the PSIC Investments and one represented in almost half of the Investments. Exercises are based on emergency and response scenarios developed to establish proficiency in identifying communications resources needed and available, implementing processes and procedures, and leveraging solutions to effectively establish and maintain communications. Exercises give public safety agencies the opportunity to simulate response activities and complement training programs by testing agencies' capabilities to respond to, and communicate during, incidents.

Statewide Training Program (115 Investments): Statewide training programs and related activities are represented in approximately one-third of Investments. Many Investments cite the need for centralized, coordinated, and standardized training programs for all public safety officials to more effectively communicate and respond to emergencies.

National Incident Management System (NIMS) Training (21 Investments): Several States will invest in training that incorporate NIMS standards. NIMS is an emergency preparedness and response framework that offers a nationwide training template to enable all government, private sector, and non-governmental organizations to work together during domestic incidents.

Communications Unit Leader (COML) and Incident Communications Technician (COMT) Training Programs (28 Investments): Several States indicate that they will use PSIC funding to provide personnel with COML and/or COMT training. The COML and COMT are NIMS competencies. The COML supervises the Incident Communications Center and is responsible for developing plans to use incident communications equipment and facilities effectively. The COMT assists the COML and is responsible for installing, testing, distributing, repairing, and maintaining communications equipment. In 2005–2006, DHS required the Nation's 75 urban/metropolitan areas to develop Tactical Interoperable Communications Plans (TICP) to

support voice communications during the first hours of an incident response. A critical component of these plans is the inclusion of the COML position to ensure that trained personnel can coordinate-scene emergency communications during a multi-jurisdictional response. However, in 2006, a NIMS-certified all-hazards COML course had yet to be created. In 2008, DHS completed the curriculum and the COML course was certified as NIMS-compliant.

STR Training (30 Investments): Some Training Investments include training for first responders on newly acquired STR solutions. This is critical because many States and Territories are beginning to establish new STR solutions and responders must be trained on the use and deployment of STR solutions for effective response.

COML Training Program: Wyoming

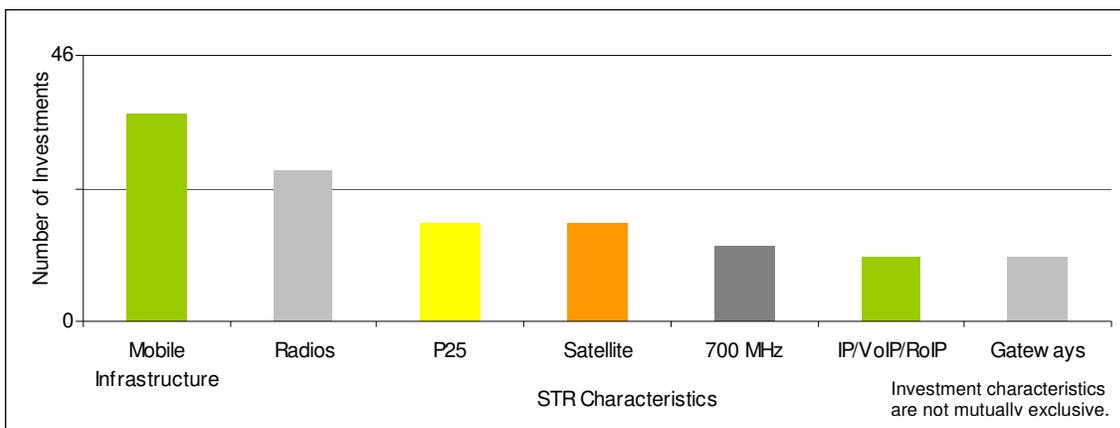
Wyoming is allocating nearly 20 percent of its PSIC funds to launch statewide training in for the newly developed COML training program for all-hazards response. Training will be provided to first responders and communication leaders in each of the State's seven regional response areas and in the Wyoming Office of Homeland Security. Users will receive training in radio systems, radio operation, radio fleet map, Wyolink operating policies and procedures, and interoperability procedures among Federal, State, local, and tribal agencies for all-hazards events.

A total of 17 States demonstrated that they had some level of STR solution in place. One Territory demonstrated that a greater need and higher priority existed for that region, and the STR requirement was waived. Eight States demonstrated that fully functioning STR solutions were in place; these States were granted full waivers and will reallocate STR funds to other priority Investments within the State. Another nine States demonstrated that STR solutions were in place, and the program granted a waiver to use only a portion of the STR funding to enhance their current STR solutions, allowing the State to reallocate the remainder to other priority Investments within the State.

The use of STR funds depicted in Figure 11 indicates that while a portion of States and Territories were granted waivers, nearly two-thirds of the States plan to use their STR allocation, demonstrating the need for State and Territories to develop or enhance their STR capabilities. Approximately \$51 million in STR Investments have been approved under PSIC, and \$12 million in matching funds will be leveraged for STR Investments, bringing the total Investment in STR solutions to more than \$63 million.

Figure 12 illustrates the key technology and equipment characteristics found in the 46 STR Investments. The technology elements are not mutually exclusive, a single Investment can include multiple characteristics. Most STRs include both mobile deployable elements, including radio caches and mobile deployable infrastructure, but also advanced technology characteristics, incorporating P25, IP, and satellite technology into those deployable elements to expand functionality.

Figure 12: STR Investment Characteristics



Mobile Infrastructure (36 Investments): Three-fourths of the STR Investments will deploy mobile infrastructure assets. Examples include site-on-wheels (SOW), cells-on-wheels (COW), portable repeaters, portable towers, portable antenna systems, mobile command vehicles, and trailers used to re-establish communications when systems are damaged or destroyed. Most mobile infrastructure Investments also include advanced technology characteristics, such as P25, 700 MHz, satellite and IP, as discussed below.

Radios (26 Investments): Many States and Territories cite the need for additional radios to extend to outside providers during emergencies that require mutual aid. As a result, more than half of STR solutions will include pre-positioned radio caches.

P25 (17 Investments): One-third of STR solutions, particularly those involving radio caches, include the P25 standard. Including P25 technology in STR solutions is especially critical as catastrophic events often require interoperability with multi-disciplinary and multi-jurisdiction first responders.

Satellite (17 Investments): More than one-third of STR Investments include satellite technology. Satellite technology characteristics observed include deployable infrastructure with satellite connectivity capabilities and satellite phones.

700 MHz (13 Investments): Nearly a third of the STR solutions include the ability to interoperate with the 700 MHz band. Solutions include radio caches and mobile infrastructure able to operate or interoperate with the newly available 700 MHz band.

IP/RoIP/VoIP (11 Investments): Other advanced technologies, including IP, VoIP, and/or RoIP are often incorporated into STR solutions. IP functionality, including wireless data, VoIP, and RoIP, are becoming available in mobile deployable solutions, particularly mobile command vehicles and trailers.

Gateways (11 Investments): Mobile gateway solutions and capabilities are reflected in a fourth of the STR investments. Mobile gateways enable on-scene interoperability by connecting disparate communications systems.

IV. Moving Forward

The Nation relies on local, State, and Territory public safety agencies to protect life, health, and property in cities and towns across the Nation. Wireless communications interoperability is essential to their ability to communicate between and among agencies and across jurisdictions so they can respond quickly and effectively to day-to-day incidents as well as major disasters and other emergencies.

The PSIC Grant Program provides critical funding to State, Territory, and local public safety agencies to improve interoperability among first responders. The PSIC Grant Program is helping to enhance the development of strategic plans and the coordination of interoperability projects. The program will also help strengthen governance structures and SOPs, enable strategic investments in advanced technology to meet interoperability needs, and fund training and exercises to test the effectiveness of communications solutions. The PSIC Program will have a significant effect on communications interoperability among first responders. This analysis yielded four key findings that illustrate the PSIC Grant Program's initial impact—

- States and Territories are migrating from single communications networks that are operated independently to a system of systems approach. State, Territory, and local public safety agencies will use advanced and standards based technology to leverage existing infrastructure and are coordinating technology approaches to improve interoperability.
- The PSIC Grant Program will ensure that States and Territories can establish or sustain emergency communications capabilities through the STR requirement. This is the first time that States and Territories were required to consider the total loss of communications infrastructure into their planning and operations.
- The PSIC Grant Program process enhanced coordination among State and Territory and local stakeholders in a number of ways, but most particularly by requiring that Investments align with Statewide Communication Interoperability Plans. States and Territories must continue to work on ensuring that all participating agencies remain engaged and involved in the PSIC projects.
- State and local entities will contribute more than \$256 million in matching funds to support interoperable communications improvements. As the non-Federal match is a unique grant requirement, the program will monitor the grantees to ensure that requirements are met.

This report on the approved Investments serves as a foundational document against which the PSIC grantees' progress will be analyzed. Ongoing program stewardship, which will take the form of monitoring the performance of grantees and providing them with assistance, will continue to yield lessons learned, best practices, and information that will guide future use of Federal grant funds for improving communications interoperability.

Acronyms

Acronym		Definition
A		
B		
C	CASM	Communications Asset Survey and Mapping
	COML	Communications Unit Leader
	COMT	Incident Communications Technician
	COW	Cell on Wheels
D	DHS	Department of Homeland Security
E		
F	FEMA	Federal Emergency Management Agency
G	GPD	Grant Programs Directorate
H	HSGP	Homeland Security Grant Program
I	IP	Internet Protocol
J		
K		
L		
M	M&A	Management and Administration
	MHz	Megahertz
	MOU	Memorandum of Understanding
N	NECP	National Emergency Communications Plan
	NGO	Non-Governmental Organization
	NIMS	National Incident Management System
	NTIA	National Telecommunications and Information Administration
O		
P	P25	Project 25
	PSIC	Public Safety Interoperable Communications
Q		
R	RoIP	Radio Over Internet Protocol
S	SAA	State Administrative Agency
	SCIP	Statewide Communication Interoperability Plan
	SOP	Standard Operating Procedure
	SOW	Site on Wheels
	STR	Strategic Technology Reserve
T	TICP	Tactical Interoperable Communication Plan

Acronym		Definition	
U		UASI	Urban Area Security Initiative
		UHF	Ultra High Frequency
V		VHF	Very High Frequency
		VoIP	Voice Over Internet Protocol
W			
X			
Y			
Z			

Appendix A: Report Approach and Methodology

The PSIC Grant Program report, *Improving Interoperability Nationwide: Overview of Initial State and Territory Investments*, provides a summary analysis of how States and Territories intend to spend PSIC grant funds, and is based on a trend analysis of Investment characteristics observed in a review of approved State and Territory PSIC Investment Justifications (IJ).

Data Source

State and Territory IJs served as the primary data source for the Investment analysis. At the time of this analysis, IJs had been approved for 51 States and Territories; five States were pending programmatic approval of IJ (as of September 30, 2008). Thus, only the 51 approved IJs, representing 281 Investments, were reviewed.

Methodology

An initial review of approved Investments and examination of programmatic goals and priorities provided the key Investment trends and characteristics that were analyzed and cataloged for each Investment. A data capture tool was developed to document these Investment trends and characteristics along the primary allowable cost areas (Acquisition and Deployment, Planning and Coordination, and Training) and STR related Investments. Each approved Investment was examined, and the Investments' trends and characteristics were tracked in the data capture tool. The depiction of Investment characteristics was at a binary (yes or no) level. As most Investments include more than one allowable cost area and are multi-faceted in terms of activities and characteristics, multiple characteristics or trends were cataloged in the capture tool. This technique ensured that the characteristics and trends for each Investment were not mutually exclusive. Multiple characteristics and trends could be associated with a single Investment. For example, a single Investment could include the development of a P25, statewide system on the 700 MHz band and the training and SOP development for the new system. This approach allowed each characteristic to be captured in the analysis, which in this example would include P25, shared system, 700 MHz, statewide SOP development, and statewide training program. The table below reflects a high-level depiction of what was reviewed and the total number of key trends and characteristics observed in each of the allowable cost areas, including STR solutions.

	States and Territories	Investments	Acquisition and Deployment	Planning and Coordination	Training	STR
Number	Characteristics Observed in Investments					
	51	281	1004	223	325	N/A
	42	46	N/A	N/A	N/A	131

The data capture tool also reflected State and Territory Investment budgets by allowable cost area and by non-Federal match amounts and sources. The PSIC grantees were not required to provide detailed project Investments for their respective IJ applications.

The data provided an aggregate view of how PSIC grantees plan to use their grant funding, which is summarized in the charts and graphs in this report. This approach provides a high-level summary of how States and Territories intend to spend their PSIC grant funds to achieve meaningful improvements in public safety interoperability. This analysis also provides insight into the priorities of the States and Territories, and it reveals several secondary findings that reflect the full impact of the PSIC Grant Program (e.g., greater State and local collaboration), which are also summarized in this report.

Appendix B: State and Territory Investment Summaries

This Appendix contains State and Territory Investment Summaries that summarize how each State and Territory intend to use their PSIC grant funds. All Investment Summary data is also valid as of September 30, 2008.