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Interoperability Business Case: An Introduction to Ongoing Local Funding

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Cybersecurity and Infrastructure Security Agency
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INTRODUCTION

When flood risks rise, a bridge collapses, or a fire rages, a coordinated response saves lives and property. Effective emergency response to incidents large and small is increasingly complex and often requires multiple agencies, jurisdictions, and disciplines to communicate with one another through diverse operable and interoperable solutions. These solutions can be expensive and often require both significant capital investments and maintenance costs. For communities to receive this essential funding, they need a strong interoperability business case.

A successful business case must demonstrate the value of the effort, provide a clear picture of the future of interoperability in the community, and speak to the interests and concerns of community leaders. This document helps emergency response officials and project coordinators develop a compelling business case by presenting steps and considerations for securing interoperability funds.

Interoperable Communications

Interoperable communications are built on operable communications and enable emergency response agencies to communicate across disciplines and jurisdictions, sharing voice and data on-demand, in real-time, and as authorized. These exchanges are the backbone of every incident response. Without interoperable communications among police, fire, emergency medical services (EMS), emergency communications centers, transportation, and other emergency responders, the lives of citizens and practitioners are at risk.

The events of September 11, 2001, demonstrated how interoperable communications are critical to an effective response and spurred a national effort to ensure technologies, disciplines, and agencies could communicate in times of need. Over the following decades, the emergency communications field continued to evolve, as did its path to interoperability. Public safety agencies now rely on a combination of communications capabilities to satisfy mission needs, presenting officials with the challenge of simultaneously supporting existing systems while investing in emerging technologies. Additionally, as cyberattacks grow more sophisticated, officials must plan for increased cyber risks to current and advanced communications systems.

Now is the time for all communities to develop and sustain comprehensive interoperability infrastructure. As identified in the [SAFECOM Interoperability Continuum Brochure](#), the success of interoperable communications relies on five key elements: governance; standard operating procedures/standard operating guidelines and field operations guides; technology; training and exercises; and usage. Officials must invest in each aspect of this ecosystem to achieve full interoperability.

With an immediate and ongoing commitment to developing interoperable systems, agencies will benefit by:

- Saving and protecting citizens' and emergency responders' lives
- Increasing emergency responder efficiency, effectiveness, and coordination
- Improving response times, especially in multi-jurisdiction responses
- Reducing property loss

The Cybersecurity and Infrastructure Security Agency (CISA), SAFECOM, and the National Council of Statewide Interoperability Coordinators (NCSWIC) encourage officials and project coordinators to use this document's steps to advocate for interoperability funding in both short- and long-term emergency communications projects.



What will your community do to secure interoperability funding? How will you:

- Sustain your governance structure?
- Maintain equipment?
- Develop plans and procedures/guidelines?
- Provide ongoing training?
- Invest in security measures?

TIP: Ongoing investments can do more than complement existing grant funds and serve as a mechanism for sustaining existing interoperability projects; funding can also be set aside to invest in future interoperability efforts.

GRANTS EVOLUTION

As seen in **Figure 1**, dedicated federal emergency communications grant funding has significantly fluctuated over the past 15 years. While certain public safety grants, such as the **Homeland Security Grant Program**, have acknowledged emergency communications as one of many allowable costs, dedicated program funding has been infrequent. This rarity has resulted in an uncertain fiscal atmosphere where agencies cannot solely rely on grants to fund emergency communications projects. To create a compelling business case, agencies must first understand existing grant opportunities and how they intersect with leadership priorities at the federal, state, local, tribal, and territorial (FSLTT) levels. While emergency communications may not always be a top leadership objective, project coordinators can take steps during pre-planning for grant applications or budget discussions to align opportunities with the needs identified in their *Statewide Communication Interoperability Plans* (SCIPs).

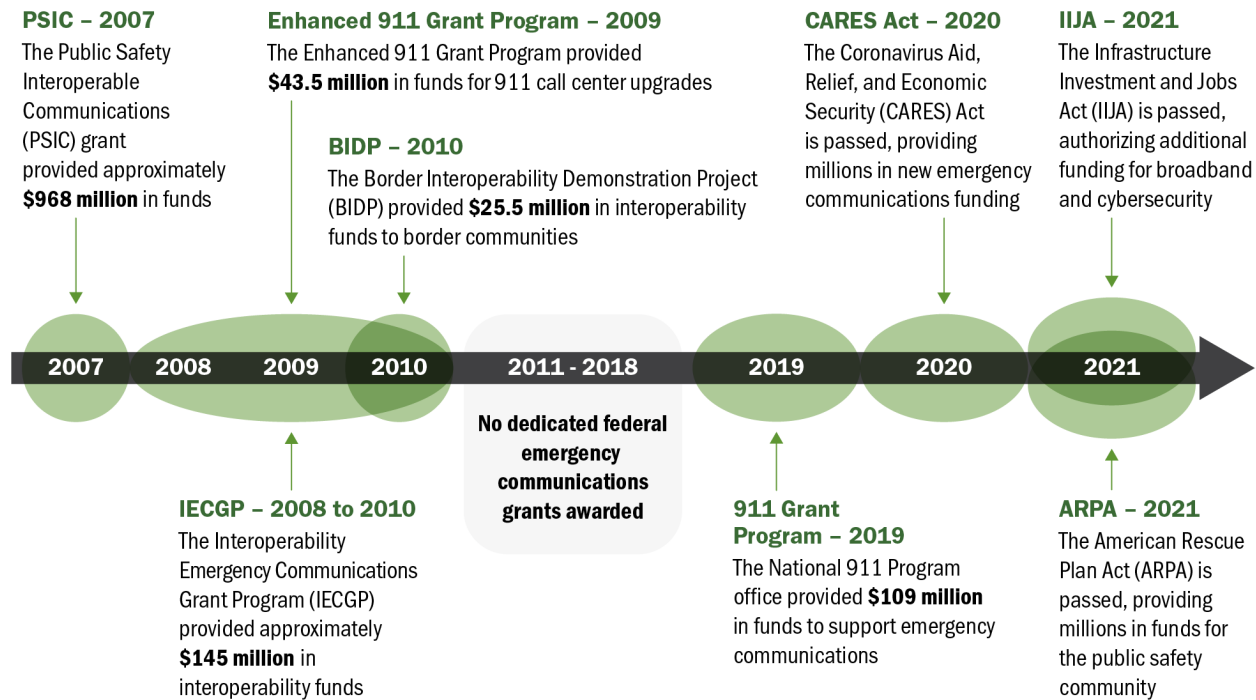


Figure 1: History of Dedicated Emergency Communications Grant Funding

Making the Most of Funding

Similar to the fluctuation in available grant funding, public safety priorities shift from year to year. To ensure continued investment in emergency communications, project coordinators must align FSLTT priorities to the needs identified in their SCIP. **Figure 2** provides several examples of how to translate recent national priorities into emergency communication projects. For more information, including resources on pre-planning and available grant opportunities, visit cisa.gov/safecom/funding.

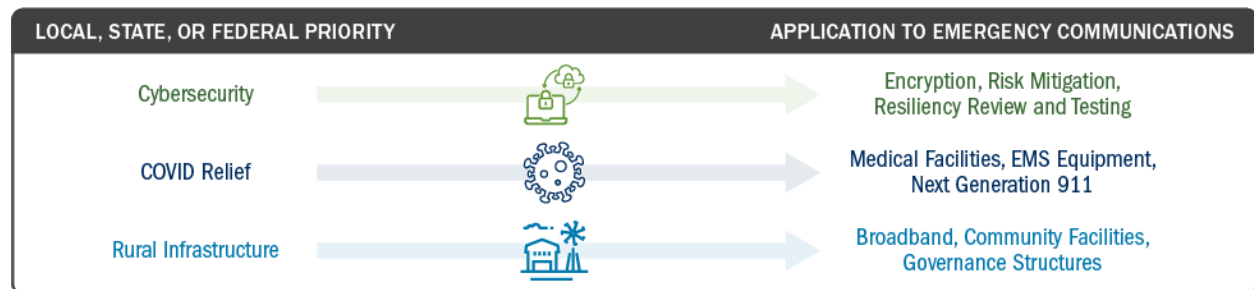


Figure 2: How to Translate Funding Priorities

DEVELOPING A COMPELLING BUSINESS CASE FOR ONGOING LOCAL FUNDING

Ongoing local funding is vital to the success of any interoperable emergency communications project. In addition to the unpredictable nature of federal funding, many grant performance periods may not be long enough to fully fund projects, especially those involving large capital investments or construction. As a result, project coordinators must then rely on local funding to see the project through to completion.

Business case development is one of several activities that officials and project coordinators use to advocate for interoperability funding. While some agencies have formal processes and documents outlining their business case, others may incorporate business case elements into plans and other materials. Regardless of whether project coordinators develop a standalone business case, they should reference best practices and key considerations during development.



What is a Business Case?

A business case is a set of information meant to demonstrate how a proposed project will meet outstanding needs or accomplish a defined goal. Business cases are utilized in both the public and private sectors as a tool to support potential investments.



CISA, SAFECOM, and NCSWIC Recommendations related to Interoperability Business Cases

The *Emergency Communications System Lifecycle Planning Guide Compendium* assists agencies in their efforts to fund, plan, procure, implement, support, and maintain public safety communications systems, and eventually to replace and dispose of system components. It includes best practices, considerations, and recommended checklists to assist public safety agencies embarking on system lifecycle planning. With regards to securing funding, the guide recommends:

- Establish the core planning team with the right mix of experts
- **Identify the problem, needs, and requirements**, such as diminishing performance of systems, lack of availability of replacement equipment, or cost of maintenance outweighs replacement
- **Research system and funding options**; reference the *Funding Mechanisms Guide for Public Safety Communications*
- **Determine the optimal approach** with basic requirements and alternative solutions
- **Plan for frequency needs and channel programming**; reference the *Programming Guide and Template for Interoperability Channels*
- Develop a business case, presentation materials, and strategic plan
- Identify legislative- or executive-level project champions
- **Present proposal to decision-makers and secure funding** to support the initial investment and sustain the system throughout the entire lifecycle

A successful business case should demonstrate that the necessary research and analysis steps are complete and justify the proposed solution to secure ongoing local funding. The following key considerations and steps, as summarized in **Figure 3**, can assist officials and project coordinators when developing a winning business case for interoperability funding.



Figure 3: Key Local Interoperability Business Case Considerations

Conduct Stakeholder Analysis

Support for the interoperability project depends largely on involving stakeholders interested in or affected by the proposed project. Project coordinators can build a coalition of support for the proposed project by identifying a diverse group of stakeholders. For projects as complex as interoperability, it is essential to have support from as many agencies, disciplines, and jurisdictions as possible. Consider representatives from the following stakeholder groups:

- Elected officials
- Emergency response officials
- Citizens
- FSLTT agencies
- Disciplines
- Organizations or committees
- Vendors

By identifying and involving stakeholders in the early stages of the business case development process, the business case will provide a clearer picture of interoperability gaps, opportunities, impacts, and risks associated with the project. Through canvassing the stakeholders, the project coordinator will also be able to determine at what stage in the process each group of stakeholders should become involved, as well as in what capacity.

Conduct Needs Analysis

An analysis of interoperability needs forms the basis of the business case. Alignment with current interoperability requirements will help justify any proposed interoperability effort. The needs analysis will help emergency response officials identify current business and user interoperability requirements, opportunities, and solutions for resolving interoperable communications gaps. Further, it will ensure that any proposed solution meets the identified needs.

In conducting the needs analysis, consider the following:

- Operating environment—What are the locality’s current communication services and how are they delivered?
- Operational needs—What are the gaps/issues of the communication systems and procedures this project will address? Consider restrictions for existing grant funds and responsibilities of the

community, linkages between existing work and remaining work, maintenance and repair of existing interoperability equipment or infrastructure, and past communications failures or gaps.

- Operating opportunities—What existing technologies, infrastructure, or resources can the project leverage?
- Statutory requirements—What local, state, or federal requirements mandate this project (such as policy changes at the national level)?

A compelling need can make the difference in securing funding for your project.



Conduct Alternatives Analysis

Project coordinators should conduct an alternatives analysis to determine the best solution for addressing interoperability needs. The alternatives analysis should consider all viable options for meeting the needs identified in the needs analysis.

In conducting the alternatives analysis, consider the following:

- What viable alternative interoperability solutions exist to address identified interoperability needs?
- How do the alternative solutions address current interoperability needs or gaps?
- What is the impact of doing nothing?
- Why were the alternatives not chosen?

A thorough alternatives analysis will not only help you select the best solution to resolve interoperability gaps but will also demonstrate due diligence for all possible options.



Define Project Context

When developing a business case, project coordinators should consider how the interoperability effort they seek to fund fits into the community or region's larger interoperability vision and efforts. Setting the context for new interoperability projects within the landscape of current interoperability efforts creates a convincing case for the importance and benefits of the new project. Additionally, projects aligned with existing interoperability efforts can be valuable additions to the work already underway. The success of an interoperability project often depends on how much a community understands current interoperability efforts and how it can leverage those efforts for its success.

To define the project context, consider the following questions:

- What are the region's interoperability challenges?
- What are the local, regional, statewide, and tribal interoperability efforts currently underway?
- How are the current interoperability efforts working together to solve interoperability gaps?
- What is the interoperability effort you are looking to fund?
- How will your project capitalize on existing interoperability efforts, and how will it go beyond existing efforts?
- How does your interoperability project or plan fit into the high-level strategic plan and vision for your locale, region, state, or tribe?

Having a clear understanding of the environment you are entering helps you answer questions that may arise and enables you to associate the project with work that has already won support.



Identify Project Objectives

To justify an interoperability project, project coordinators must explicitly state the project's objectives in measurable and achievable terms. Project objectives should address what the community can expect to gain by investing in this project, and how the funds invested in interoperability will benefit the agency, jurisdiction, and citizens.

Consider the following when developing project objectives:

- What are the objectives of the proposed interoperability effort?
- What interoperability problems or gaps will the proposed interoperability effort resolve?
- What are the expected tangible and intangible benefits?
- What will be different after project implementation?
- How will the proposed project improve communications interoperability across multiple localities and emergency responder disciplines?
- How does the proposed project respond to regulatory requirements?
- What does the project not address?

Clearly stated objectives will provide a baseline by which project performance can be measured and will help demonstrate the value of the proposed project.



Estimate Full Lifecycle Project Costs and Funding Requirements

A detailed cost plan facilitates an understanding of the funding requirements for the proposed interoperability project. To develop the cost plan, project coordinators should estimate the cost of executing the proposed interoperability solution as well as any external or residual costs that may result from the solution.

Consider the following when estimating project costs:

- What is the estimated cost of the proposed solution?
- What costs are associated with the proposed solution? Which expenses are one-time, short-term, long-term, or recurring? What is the lifecycle cost?
- What funding sources have already been secured and what are the remaining gaps?
- If local interoperability funding exists, what funding sources can cover funding gaps?
- What will and will not be part of the project if the total funding amount requested is not approved?
- What is the general spending plan? How will it be adjusted or modified if approved funds do not match or exceed the funds requested?

By providing a comprehensive picture of the total lifecycle cost, a cost plan can help community leaders feel more confident that additional funding for something previously overlooked will not be necessary later down the road. A cost plan will also determine budget needs and allocations for the project and delineate one-time and ongoing costs.



Develop a Work Plan

Successful implementation of any interoperability project depends on diligent project planning. Project coordinators should develop high-level work plans for the proposed interoperability solution, including timelines and deliverables, and consider identified risks and staffing requirements.

When developing a work plan for the proposed solution, consider the following:

- What are the major milestones and decision points in the project implementation?
- Who will make the decisions?
- What tasks make up each phase of the work plan, and who will do the work?
- What are the task dependencies?
- What stakeholders are required to participate in each phase of the work plan?
- Who will need to approve their participation, particularly as it relates to overtime?
- What is the timeline for each phase of the project?
- What are the project's risks, and how will they be mitigated?

Going through the process of developing a work plan can help determine resource requirements for the proposed interoperability project. Work plans can also help establish the project in the context of other competing project priorities and timelines.



Determine Implementation Impacts

To support an interoperability project, community leaders must understand the project's impact on day-to-day work. To assess the implementation outcome, analyze and identify all elements of the [SAFECOM Interoperability Continuum Brochure](#) that may be affected by deploying a new system, technology, or service.

Consider the following as potential implementation impacts of a new interoperability project:

- Will governance structures need to be expanded or put in place?
- How will the interoperability solution affect existing stakeholder business processes? For example, will stakeholder procedures need to be created or updated based on solution implementation?
- How will day-to-day work be affected while the project is in progress?
- What are the training and exercise needs?
- What is the useful life of the proposed technology? When will it need to be replaced?
- What type of maintenance will the technology need?
- Will the project require additional resources (i.e., staff or equipment)?
- What risks may affect the successful implementation of the interoperability effort? What is the probability of these risks, and how can they be mitigated?

BUILDING A BUSINESS CASE: IN PRACTICE

The City of West Memphis, AR, found itself in a dangerous communications silo: the city's police, fire, and public works agencies all used separate radio systems that could not communicate with each other or surrounding jurisdictions that utilize the Arkansas Wireless Information Network (AWIN). However, when the city received \$6 million in American Rescue Plan Act (ARPA) funds, West Memphis' director of the Office of Emergency Management saw an opportunity to advocate for a potentially life-saving communications interoperability project.

Upon learning about the available ARPA funding, the director spoke with West Memphis' mayor about the importance of having an interoperable radio system to connect the city's departments and facilitate communication with surrounding states and counties. In this conversation, the director conveyed that interoperability is vital to protect emergency responders' lives. He highlighted that the ongoing construction of

West Memphis' high-rise hotel presented a new operational challenge to city firefighters who are comfortable responding in buildings no taller than six stories. The director emphasized that a communications system that is both operable and interoperable between community partners would be essential to ensure firefighter safety while conducting operations in a more challenging environment. Due to the director's advocacy, the mayor agreed to support the proposed interoperability project and provide the Office of Emergency Management with \$2 million of the available ARPA funding to kickstart the city's transition to AWIN.



TIP: Develop and maintain relationships with decision-makers before funding needs arise.

However, the Office of Emergency Management's director knew the ARPA funding would not cover the project in its entirety. To obtain funds for the rest of the transition, he and the mayor met with West Memphis' finance director to create a financing plan for a five-year lease-to-own program for necessary equipment. With leadership approval and financial plans in hand, the director met individually with the city council's 10 members to explain why the project was essential and detailed the benefits to the community. He came prepared with run volume data to show the city's increasing service calls and the corresponding need for an updated communications system to support public safety response.



TIP: Incorporate subject matter experts into case preparation.

These one-on-one meetings allowed for open conversation, questions, and answers that a larger meeting might have stifled. The director found that the most persuasive messages came from explaining how interoperability was needed to protect first responders' lives, citing an example of a West Memphis police officer who was under fire during a car chase into a neighboring jurisdiction without interoperable communications. He emphasized that the city could be liable for any known issues with its communication systems in the case of responder harm.



TIP: Promote projects you believe in.

The Office of Emergency Management then held two workshops with the West Memphis City Council and communications subject matter experts, including vendor representatives, to review plans and estimated costs for operations and maintenance to be incorporated into the city's annual budget. Finally, the West Memphis City Council signed off on the project, thanks to the Office of Emergency Management's relationships with local decision-makers, extensive stakeholder coordination, and strong advocacy.

Interoperability Business Case Steps in Practice

- The director drew upon his decades of experience in West Memphis' fire service, as well as current run volume data, to **conduct and present a needs analysis**.
- The director met with communications experts and local decision-makers, including elected officials, to **conduct a stakeholder analysis** and gain support for the system upgrade.
- The West Memphis Office of Emergency Management **conducted an alternatives analysis** and discussed substitutes, such as upgrading their current system or building an entirely new system. However, the best option was to transition the city to AWIN
- The director **defined the interoperability project context** and explained its costs and benefits to decision-makers in various settings, including one-on-one meetings and workshops.
- The Office of Emergency Management and communications experts collaborated to **identify project objectives** for the AWIN transition.
- The director worked with the West Memphis finance department to **examine funding requirements and estimate future costs**. Together, they examined current sources of revenue and remaining gaps that would require alternate funding.
- The Office of Emergency Management is working with its communications partners to **develop a work plan**. This process involves recurring alternatives analyses as strategies may not work as intended.
- West Memphis **determined the implementation impacts** of the communications system switchover, including a merge with a public safety answering point to be built approximately two years after this project's completion.

CONCLUSION

Interoperable and operable communications are the backbone of effective emergency response, but financing interoperability projects can be challenging. Emergency communications grant funding fluctuates, and when available, often can't cover the full extent of necessary capital investments and maintenance costs. However, possessing the skills to develop a compelling business case can ensure that emergency response officials are able to procure ongoing local funding for short- and long-term interoperability projects. CISA, SAFECOM, and NCSWIC encourage public safety officials and project coordinators to use the steps within this document to construct and deliver a successful interoperability business case to local decision-makers.

About SAFECOM/NCSWIC

SAFECOM is comprised of more than 70 members representing emergency responders and national public safety associations, who aim to improve multi-jurisdictional and intergovernmental communications through collaboration with policymakers across FSLTT and international partners. NCSWIC is comprised of Statewide Interoperability Coordinators and their staff from the 56 states and territories. Together, the Joint SAFECOM and NCSWIC Funding and Sustainment Committee developed the *Interoperability Business Case: An Introduction to Ongoing Local Funding* with support from CISA. This document reflects the expertise and knowledge of SAFECOM and NCSWIC members in funding public safety communications systems. Questions on this document can be sent to: SAFECOMGovernance@cisa.dhs.gov and NCSWICGovernance@cisa.dhs.gov.