PUBLIC SAFETY

PSWN

PROGRAM

WIRELESS NETWORK

Saving Lives and Property Through Increased Interoperability

Wireless Business Case Strategy— State of Wyoming

June 2002

TABLE OF CONTENTS

EXECUTIVE SUMMARY

THIS WIRELESS BUSINESS CASE STRATEGY IS PROVIDED AS PART OF THE PUBLIC SAFETY WIRELESS NETWORK (PSWN) PROGRAM'S ASSISTANCE TO THE STATE OF WYOMING

- PSWN Program assistance to the State of Wyoming is designed to foster the development of shared, statewide public safety wireless networks that enable interoperable communications across all levels of government (i.e., local, state, and federal). This assistance is intended to promote the program's vision of—*"Seamless, coordinated, and integrated public safety communications for the safe, effective, and efficient protection of life and property"*

- The PSWN Program has assisted the State of Wyoming in two main areas—
  - Funding: Assessed the roadblocks to funding a large systems development project and provided recommendations for attaining the necessary funding resources
  - Systems Planning: Assisted in the development of an effective request for proposals and provided guidance on how to manage a large project of this type

- This strategy will primarily assist the State of Wyoming in addressing the funding problem by providing—
  - A clear purpose and need for developing a comprehensive business case for a new statewide system
  - A detailed process for gathering and analyzing input from stakeholders that influence the funding process
  - A methodology for developing each core component of a business case
  - Guidance and recommendations on how to market the business case to influential audiences
  - Relevant examples on how to perform each part of the strategy, developed from data gathered in Wyoming

- This strategy will also assist the State of Wyoming in executing the overall systems planning process by identifying the systems planning tasks that must be documented and explained to critical stakeholders

THE PSWN PROGRAM FOUND THAT STATEWIDE PUBLIC SAFETY WIRELESS SYSTEMS DEVELOPMENT IN WYOMING FACES MANY SIGNIFICANT CHALLENGES
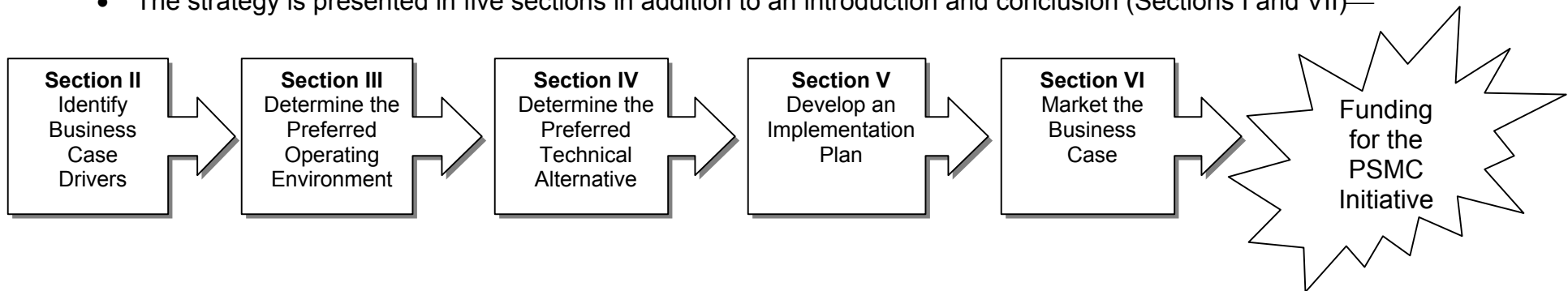
- Led by the Telecommunications Program Office of the Wyoming Department of Transportation (WYDOT), the Public Safety Mobile Communications (PSMC) Initiative is intended to implement a shared, statewide public safety wireless communications system for the entire Wyoming public safety community. As a single state agency, WYDOT faces unique difficulties leading the PSMC Initiative—
  - Some stakeholders mistakenly think the PSMC Initiative is a WYDOT project and is for WYDOT users only
  - WYDOT has limited staffing and must rely on significant new funding to manage the PSMC Initiative
  - Local public safety agencies can move more quickly than WYDOT and have purchased or are in the process of purchasing new stovepipe systems
  - WYDOT must overcome negative perceptions based on past failed efforts to build a new statewide system

- The PSMC Initiative is a very difficult project to manage under any circumstances in a state like Wyoming—
  - Financial resources are very limited at all levels of Wyoming government
  - There is stiff competition within the state for funding resources at all levels of government
  - The management of the PSMC Initiative has been criticized and sometimes misrepresented
  - The interests of the public safety community are not consistent across the state
  - Local entities have a strong desire to maintain their independence and are skeptical of state authority

- These difficulties require the PSMC Project Team to achieve several challenging goals—
  - Perform systems planning in an open and inclusive environment
  - Understand the concerns of the various stakeholders and ensure they are addressed
  - Develop partnerships early in the process
  - Document and explain the decisions made by the PSMC Project Team
  - Educate those who can influence the funding process

THE PSWN PROGRAM RECOMMENDS THAT THE PSMC PROJECT TEAM DEVELOP A COMPREHENSIVE BUSINESS CASE THAT WILL HELP OVERCOME MANY OF ITS CHALLENGES

- A business case responds to stakeholder concerns, provides analysis of several viable alternatives, and builds a case for a recommendation to solve current shortfalls and meet required needs
    - Incorporates direct input from key stakeholders
    - Demonstrates how the recommendation will improve current circumstances
    - Provides a preliminary implementation plan for the recommendation

- A business case is designed to gain approval, or buy-in, from decision makers and stakeholders
    - Directly or indirectly results in funding for implementing the proposal
    - Displays a need for the proposal by exposing the limitations of the current operating environment
    - Evaluates alternative solutions that are of interest to the stakeholders
    - Provides a recommendation to best address the needs based on costs, benefits, and risks analyses of the alternatives

- A comprehensive business case should address most of the challenges currently facing the PSMC Initiative
    - Directly address the issues of concern to all stakeholders
    - Demonstrate how the PSMC Initiative is a good use of scarce public funds
    - Document the thorough planning process followed by the PSMC Project Team
    - Demonstrate how the PSMC Initiative will benefit the public safety operations of both state and local organizations
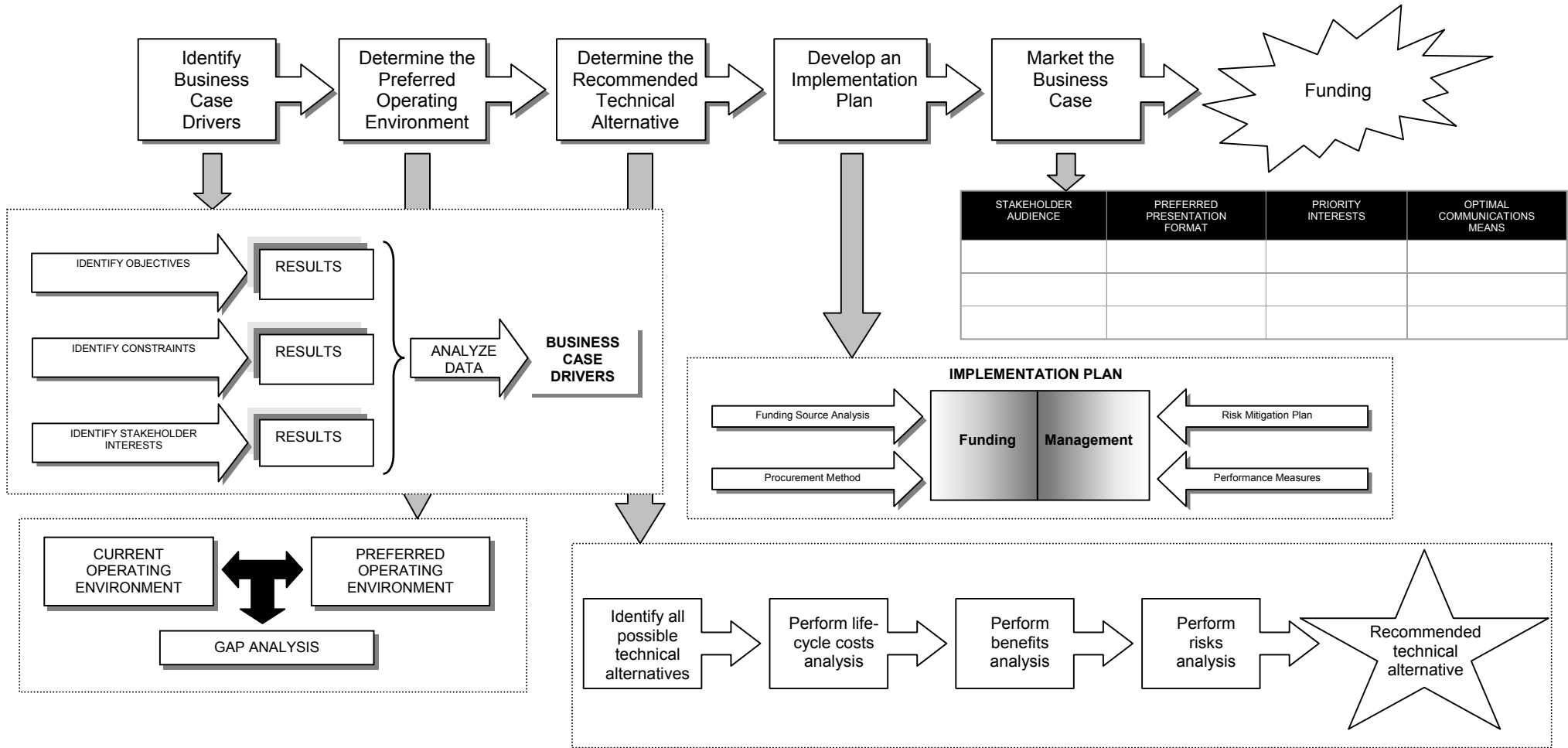
Executive Summary…Wireless Business Case Strategy…

TO HELP THE PSMC PROJECT TEAM DEVELOP A COMPREHENSIVE BUSINESS CASE, THE PSWN PROGRAM IS PROVIDING A WELL-DEFINED STRATEGY

- To develop a business case that responds to stakeholder issues, the strategy provides a process to—
  - Gather input from the three stakeholder groups (i.e., state and local government officials, public safety officials, and constituents)
  - Evaluate their input to identify key issues that will drive the business case
  - Perform analysis and documentation that directly addresses the stakeholder issues
  - Present the information to the various stakeholders in the most appropriate manner

- The strategy is presented in five sections in addition to an introduction and conclusion (Sections I and VII)—

| **Section II** Identify Business Case Drivers | **Section III** Determine the Preferred Operating Environment | **Section IV** Determine the Preferred Technical Alternative | **Section V** Develop an Implementation Plan | **Section VI** Market the Business Case | Funding for the PSMC Initiative |

- In many cases, the discussion of each business case component is complemented with relevant data gathered from preliminary research and interviews conducted by PSWN Program representatives
  - This data is intended to provide an example of the type of data that should be incorporated into the business case
  - This data is preliminary and is only intended to guide subsequent data collection efforts performed by the PSMC Project Team
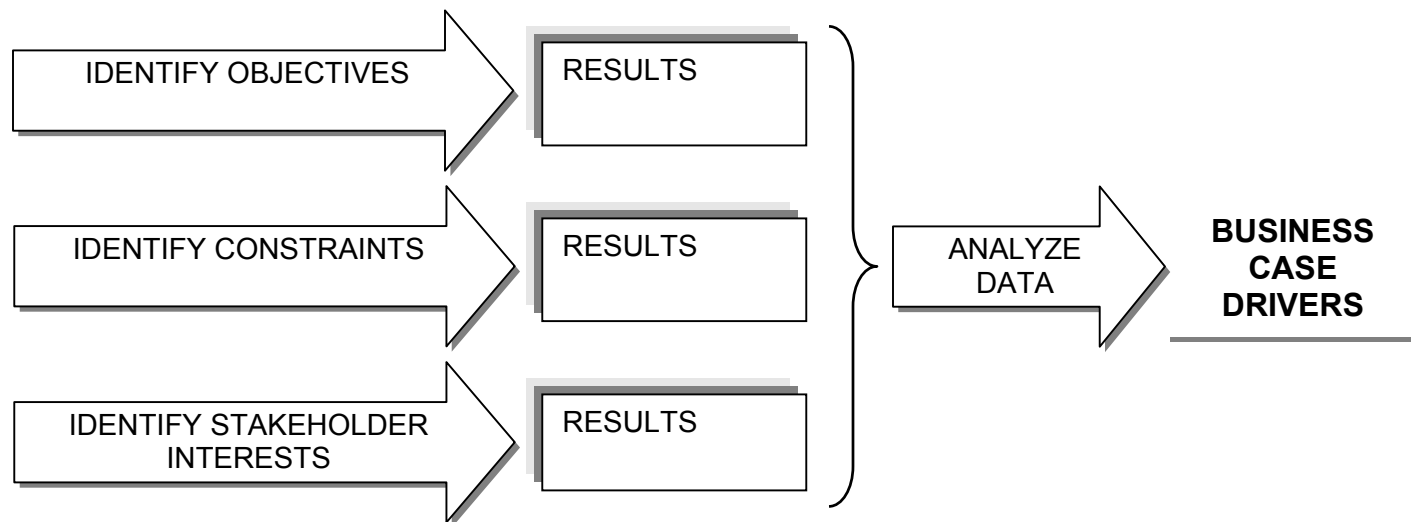
THE BUSINESS CASE STRATEGY SERVES AS A FLEXIBLE MODEL FOR GAINING FUNDING

| Identify Business Case Drivers | → | Determine the Preferred Operating Environment | → | Determine the Recommended Technical Alternative | → | Develop an Implementation Plan | → | Market the Business Case | → | Funding |

IDENTIFY OBJECTIVES →	RESULTS
IDENTIFY CONSTRAINTS →	RESULTS
IDENTIFY STAKEHOLDER INTERESTS →	RESULTS

ANALYZE DATA → **BUSINESS CASE DRIVERS**

STAKEHOLDER AUDIENCE	PREFERRED PRESENTATION FORMAT	PRIORITY INTERESTS	OPTIMAL COMMUNICATIONS MEANS

IMPLEMENTATION PLAN

| Funding Source Analysis → | **Funding** | **Management** | ← Risk Mitigation Plan |
| Procurement Method → | | | ← Performance Measures |

| CURRENT OPERATING ENVIRONMENT | ⬍ | PREFERRED OPERATING ENVIRONMENT |

GAP ANALYSIS

| Identify all possible technical alternatives | → | Perform life-cycle costs analysis | → | Perform benefits analysis | → | Perform risks analysis | → | Recommended technical alternative |

ES–5

BUSINESS CASE DRIVERS ARE IDENTIFIED THROUGH A DATA COLLECTION AND ANALYSIS PROCESS THAT WILL HELP FOCUS THE ENTIRE BUSINESS CASE DEVELOPMENT PROCESS

- Business case drivers are based on three sources of information: project objectives, constraints, and stakeholders

- The PSMC Project Team should attempt to follow a defined process for identifying business case drivers—

IDENTIFY OBJECTIVES	→	RESULTS	
IDENTIFY CONSTRAINTS	→	RESULTS	ANALYZE DATA → **BUSINESS CASE DRIVERS**
IDENTIFY STAKEHOLDER INTERESTS	→	RESULTS	

- The PSWN Program has identified several drivers that can be used by the PSMC Project Team. The business case should—
  - Demonstrate how the PSMC Initiative will improve interoperability across all levels of government (i.e., local, state, and federal)
  - Integrate local participation and input in the planning, development, and rollout of the PSMC Initiative
  - Focus the initial funding mechanism on monies from the state's general fund
  - Prove the recommended PSMC Initiative alternative is the optimum technical solution, among many considered, for meeting Wyoming's public safety communications needs
  - Where appropriate, use anecdotal evidence to justify the need for the PSMC Initiative
  - Demonstrate the PSMC Initiative as a sound, enduring enterprise investment for Wyoming

THE DESCRIPTION OF THE PREFERRED OPERATING ENVIRONMENT SHOULD DEMONSTRATE THE NEED FOR, AND BENEFITS OF, THE PSMC INITIATIVE

- A gap analysis evaluating the current operating environment using high-level preferred operational requirements serves as the foundation of the description of the preferred operating environment included in the business case

- The process for determining and justifying the preferred operating environment has three parts—
  - Describe the current operating environment
  - Describe the preferred operating environment
  - Perform a gap analysis

```
┌──────────────┐              ┌──────────────┐
│   CURRENT    │              │  PREFERRED   │
│  OPERATING   │  ◄──────►    │  OPERATING   │
│ ENVIRONMENT  │              │ ENVIRONMENT  │
└──────────────┘      │       └──────────────┘
                      ▼
              ┌───────────────┐
              │ GAP ANALYSIS  │
              └───────────────┘
```
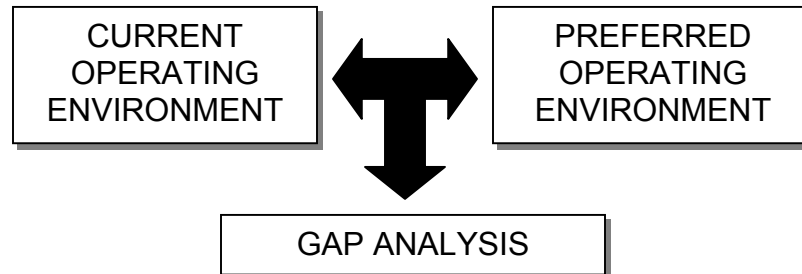
- The PSWN Program has identified several key characteristics of the current operating environment that can be used to determine the preferred operating environment—
  - Insufficient interoperable communications capacity among local, state, and federal public safety agencies responding to emergencies
  - Insufficient system coverage as a result of the indigenous mountainous terrain
  - Insufficient system coverage in many regions of the state for state public safety personnel
  - Insufficient channel capacity for public safety personnel
  - No support for encrypted voice communications

THE JUSTIFICATION FOR THE RECOMMENDED TECHNICAL ALTERNATIVE SHOULD BE CLEAR, ACCURATE, AND EASILY UNDERSTOOD BY THE KEY STAKEHOLDERS

- In the business case, a recommendation for a technical solution is derived using analyses of the life-cycle costs, benefits, and risks of several technical alternatives

- This process comprises four sequential steps—
  - Identify all possible technical alternatives
  - Perform a life-cycle costs analysis of the alternatives
  - Perform a benefits analysis of the alternatives
  - Perform a risks analysis of the alternatives

Identify all possible technical alternatives → Perform life-cycle costs analysis → Perform benefits analysis → Perform risks analysis → **Recommended technical alternative**
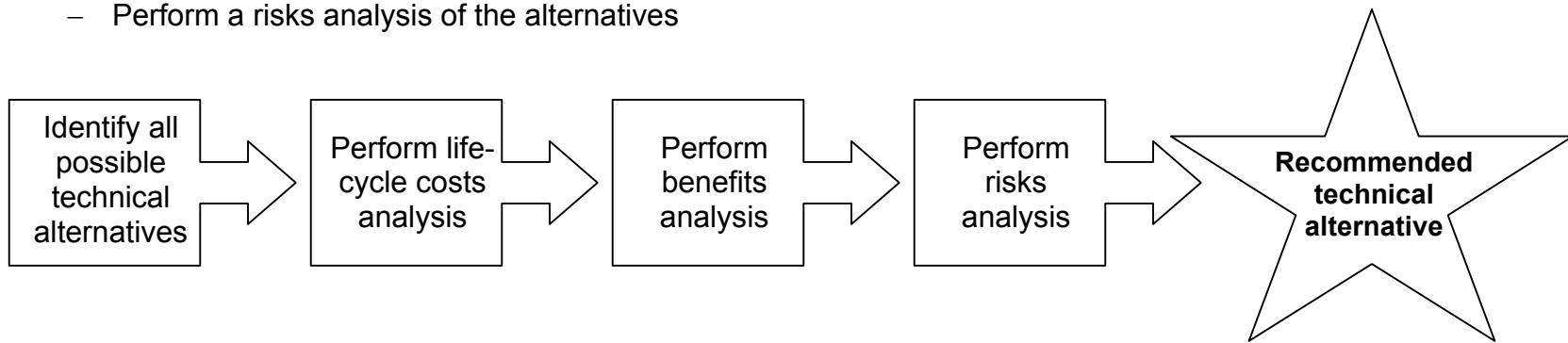
- The PSWN Program has not identified applicable examples to use in this process because the PSMC Initiative has not reached this stage of systems planning. However, when the PSMC Project Team performs this process, it is critical that—
  - All technical alternatives of interest to important stakeholders are evaluated
  - Life-cycle costs are accurately calculated and easily understood
  - The risks and benefits of each technical alternative are objectively evaluated, measured, and explained

THE IMPLEMENTATION PLAN SHOULD DEMONSTRATE THAT THE DIFFICULTY OF IMPLEMENTING THE RECOMMENDED TECHNICAL ALTERNATIVE HAS BEEN PROPERLY EVALUATED

- The implementation plan included in the business case focuses solely on the recommended technical alternative identified at the conclusion of the costs, benefits, and risk analysis

- The implementation plan comprises two subject areas—
  - Funding—
    - ➢ Discusses the selection of the primary funding sources for the initiative
    - ➢ Discusses the selection of the procurement methods (e.g., owning, leasing, and hybrid) for the initiative
  - Management—
    - ➢ Describes the purpose, role, and process for developing a risk mitigation plan in the business case
    - ➢ Describes the purpose, role, and process for setting performance measures in the business case

IMPLEMENTATION PLAN
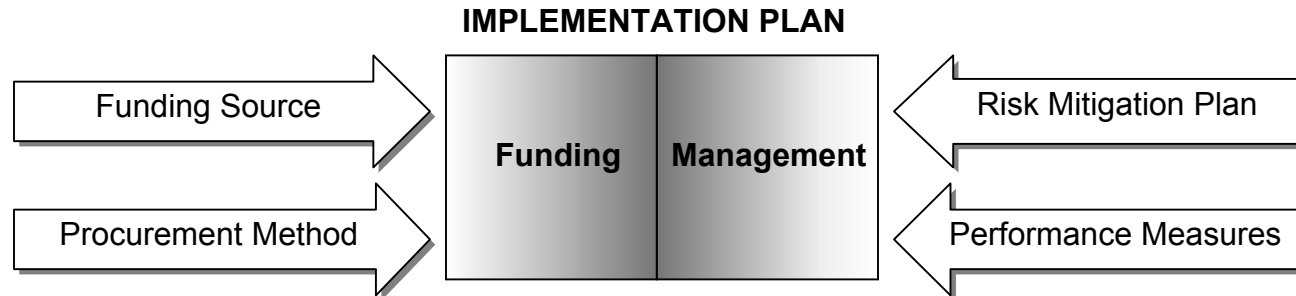
- The implementation plan should be used to address several key issues by demonstrating that—
  - The recommended funding sources can fully fund the project and are appropriate for the PSMC Initiative
  - The procurement method is in the best interest of the state and other methods of interest have been considered
  - The risks related to funding, managing, procuring, and coordinating the PSMC Initiative have been fully evaluated
  - Measures related to technical, financial, and managerial performance have been established

THE PSMC PROJECT TEAM SHOULD MARKET THE BUSINESS CASE TO THE RELEVANT AUDIENCES TO ENSURE SUPPORT FROM KEY STAKEHOLDERS

- There are four key factors that will shape the marketing effort—
  - Stakeholder audiences
  - Preferred presentation formats
  - Stakeholder audience primary interests
  - Optimal communications means (e.g., formal presentations and meeting discussions)

- Capturing and instilling in the marketing team the fundamental marketing factors associated with each stakeholder audience helps ensure a uniform delivery
  - A table succinctly capturing the four marketing factors serves as a useful base for the marketing team
  - The elements captured in this table subsequently serve as a checklist for the project team in its development of marketing tools and strategies

STAKEHOLDER AUDIENCE	PREFERRED PRESENTATION FORMAT	PRIORITY INTERESTS	OPTIMAL COMMUNICATIONS MEANS

- The PSWN Program identified several key factors that will be important during the marketing of the business case—
  - Critical to the marketing effort is putting the marketing team "on the same page"
  - The primary audiences include high-level decision makers, the public safety land mobile radio (LMR) user community, and Wyoming constituents
  - Some high-level stakeholders prefer very brief business cases that focus on anecdotal evidence
  - The priority interests of each audience can vary widely and can be linked back to the business case drivers
  - The optimal communications means for constituents include civic organizations

CONSISTENT WITH THIS STRATEGY, THE PSWN PROGRAM RECOMMENDS SEVERAL HIGH-LEVEL NEXT STEPS FOR ENSURING THE CONTINUED PROGRESS OF THE PSMC INITIATIVE

- Create and formalize a steering committee (i.e. State Interoperability Executive Committee [SIEC]) to oversee the PSMC Initiative that includes local, state, and federal representatives. The steering committee could help—
  - Establish and promote the PSMC Initiative as a project for the entire public safety community in Wyoming
  - Facilitate coordination and partnerships among the various potential user groups for the new system
  - Ensure interoperability and all other operational issues are addressed in the systems planning process
  - Gather quantitative data and anecdotal evidence that justifies the need for the PSMC Initiative
  - Create a recognized and accepted authority for procuring, implementing, and operating the new system

- Building on the initial list provided in the PSWN Program's strategy, identify all possible business case drivers for the PSMC Initiative. This task can be performed in conjunction with the systems planning stakeholder analysis

- Continue with the system planning process and incorporate the results into the PSMC Initiative business case. Some of these results include—
  - Assessment of existing infrastructure and public safety operations
  - Operational requirements analysis
  - Analysis of alternative systems designs

- Acquire support from a radio systems planning consultant to perform detailed technical planning

THE PSWN PROGRAM HAS A LONG-TERM COMMITMENT TO THE PSMC INITIATIVE AND THE PUBLIC SAFETY COMMUNITY IN WYOMING

- As the PSMC Initiative moves forward, the PSWN Program looks forward to receiving feedback on the effectiveness of this strategy and lessons learned by the PSMC Project Team

- The PSWN Program has a wealth of other information and resources that may be useful to the PSMC Initiative
    - The program continually provides information to the public safety community via regular newsletters and its Web site (i.e. www.pswn.gov)
    - The information clearinghouse can be contacted directly (i.e., 1-800-565-PSWN) to request information about coordination and partnerships, spectrum, funding, standards and technology, and security
    - The program holds symposiums and conferences that provide a forum for presentations about a variety of systems planning and interoperability activities
    - The program analyzes special events and provides recommendations based on the lessons learned (i.e., *Answering the Call: Communications Lessons Learned From the Pentagon Attack*)

- For further information about this strategy or about the PSWN Program, please contact the PSWN Program Managers—

    - Bob Lee
      PSWN Program Manager
      Department of Justice
      (703) 279-2007

    - Rick Murphy
      PSWN Program Manager
      Department of the Treasury
      (703) 279-2037

I. INTRODUCTION

THE PURPOSE OF THIS STRATEGY IS TO GUIDE THE DEVELOPMENT OF AN EFFECTIVE BUSINESS CASE FOR THE PUBLIC SAFETY MOBILE COMMUNICATIONS (PSMC) INITIATIVE IN WYOMING

- Led by the Telecommunications Program Office of the Wyoming Department of Transportation (WYDOT), the PSMC Initiative plans to implement a new statewide land mobile radio (LMR) communications system to better support the communications needs of the Wyoming public safety community

- The next major step for the PSMC Initiative involves gaining the funding necessary to implement the PSMC Initiative

- This document provides a strategy for developing a business case and, where appropriate, supports each discussion with factual data relating to the PSMC Initiative

PUBLIC SAFETY COMMUNICATIONS STANDS AS A PROMINENT ISSUE ADDRESSED AT THE STATE LEVEL IN WYOMING

- The State Agency Law Enforcement Communications System (SALECS) Commission provides a uniform front for addressing public safety communications at the state level
  - Members of the SALECS Commission include local, state, and federal agencies with public safety missions, such as—
    - Bureau of Land Management (U.S. Department of the Interior)
    - Wyoming Department of Transportation and the Wyoming State Highway Patrol
    - Wyoming Department of Health
    - Wyoming Emergency Management Agency
    - Laramie County Emergency Management Agency
    - Cheyenne Fire Department
    - Casper Police Department

- Several studies investigating the opportunity to develop a new statewide, public safety LMR system have been completed in Wyoming
  - The most recent and relevant study was completed by Motorola
  - Despite being submitted to the governor's office for review, the Motorola study and its results did not instigate an effort to improve public safety communications in Wyoming

- The Wyoming Counter Terrorism Commission recently recognized improving public safety communications as a priority issue in the Counter Terrorism Commission Public Report issued to Governor Jim Geringer on November 21, 2001
  - Specifically, the report states:

> *"Wyoming needs a statewide public safety communications system that insures that all local first responders and state officials can communicate in a timely and secure manner in times of emergency."*

Introduction…Need for a Business Case…

THE PSMC INITIATIVE IS NOW AT A CRITICAL JUNCTURE WHERE FUNDING REMAINS A DECISIVE NEXT STEP

- The WYDOT Telecommunications Program Office will soon issue a Request for Proposal (RFP) for systems planning tasks for implementing a new statewide public safety LMR system

- In support of the work associated with the RFP, the awarded contractor will complete the following tasks—
    - Assess the existing public safety LMR infrastructure
    - Identify the operational requirements of the user community
    - Evaluate several technical alternatives
    - Provide a final plan for implementing the best technical solution

- In conjunction with the work completed for the RFP, the PSMC Project Team will complete Phases 1, 2, and 3 of the systems life cycle outlined in the Public Safety Wireless Network (PSWN) Program's How2 Guide for Managing the Radio System Life Cycle—
    - Phase 1: System Planning
    - Phase 2: Requirements Analysis
    - Phase 3: Design and Engineering
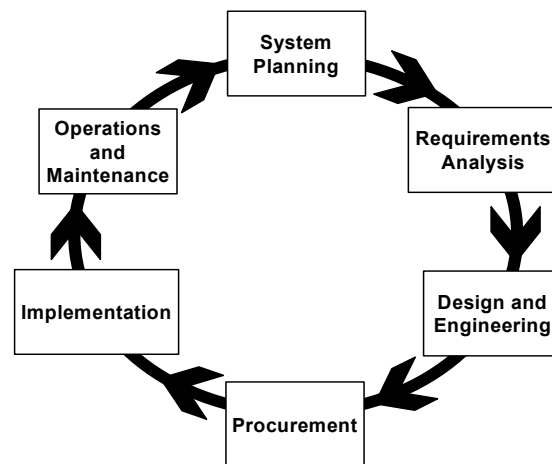
FUNDING IS A SIGNIFICANT CHALLENGE FOR THE PSMC INITIATIVE

- The costs for implementing statewide public safety LMR systems are high—
  - The State of Michigan paid $235 million for a statewide, digital, trunked, 800 Megahertz (MHz) system
  - Cost estimates for a new statewide, digital, trunked, 800 MHz system for Colorado stand at $120 million
  - The State of Ohio has estimated total costs for a new statewide, trunked, 800 MHz system at $272 million

- Wyoming is a geographically large state with a sparsely distributed, small population
  - Wyoming contains the lowest population density among the lower 48 states
  - Public funds and commercial communications interests are limited

- The geographic magnitude and diverse terrain of Wyoming will also present unique technical and operational requirements for a new public safety LMR system that will likely increase system costs

Introduction…Purpose of the Business Case Strategy…

TO ASSIST IN OVERCOMING THE FUNDING CHALLENGE, THE PSWN PROGRAM IS PROVIDING A STRATEGY FOR BUILDING AN EFFECTIVE BUSINESS CASE FOR THE PSMC INITIATIVE

- The business case serves as a key strategy for gaining stakeholder buy-in and, hence, the funding necessary to implement the PSMC Initiative
  - Provides a detailed explanation and preliminary management plan for the PSMC Initiative
  - Proposes the initiative in a manner designed to gain stakeholder buy-in

- The strategy for developing a business case follows five sequential steps, each described in the ensuing five sections
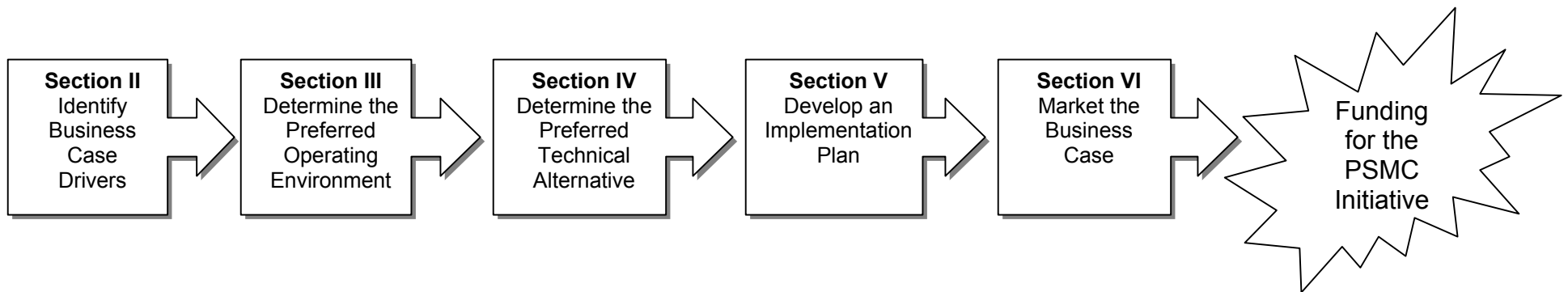
| **Section II** Identify Business Case Drivers | **Section III** Determine the Preferred Operating Environment | **Section IV** Determine the Preferred Technical Alternative | **Section V** Develop an Implementation Plan | **Section VI** Market the Business Case | Funding for the PSMC Initiative |

TO ASSIST IN OVERCOMING THE FUNDING CHALLENGE, THE PSWN PROGRAM IS PROVIDING A STRATEGY FOR BUILDING AN EFFECTIVE BUSINESS CASE FOR THE PSMC INITIATIVE (CONTINUED)

- The ensuing five sections directly support the comprehensive development of a business case document
  - *Section II, Identify Business Case Drivers*: Provides guidance for identifying the business case drivers—the key issues addressed in the business case to ensure success
  - The subsequent three sections guide the construction of the core components of the business case document

Core Components of the Business Case Document	Correlative Section in the Business Case Strategy
Introduction and brief overview of the initiative	*Section III, Determine the Preferred Operating Environment*
Description of the current operating environment and background • Evaluates the current operating environment using preferred operational requirements • Exhibits the high-level limitations of the current operating environment	
Costs, benefits, and risks analysis of several technical alternatives	*Section IV, Determine the Recommended Technical Alternative*
Recommended technical alternative	
Risk mitigation plan and performance measures	*Section V, Develop an Implementation Plan*

  - *Section VI, Market the Business Case*: Explains the essential steps for effectively marketing the business case

- All factual information relating to the PSMC Initiative and the Wyoming public safety wireless communications environment is based on preliminary research and interviews conducted by the PSWN Program; as such, the information will serve as a preliminary foundation supporting the PSMC Project Team's development of a business case

II. IDENTIFY BUSINESS CASE DRIVERS
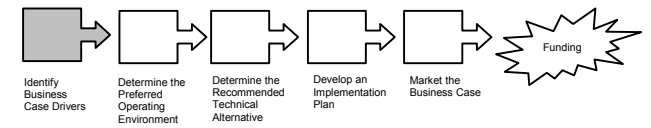
Identify Business Case Drivers…Introduction…

THIS SECTION DESCRIBES THE PROCESS FOR IDENTIFYING BUSINESS CASE DRIVERS AND PROVIDES RELEVANT EXAMPLES RELATING TO THE PSMC INITIATIVE

- The section contains three components—
  - Define business case drivers and provide an overview of the process for identifying drivers
  - Describe the three efforts that make up the process for identifying drivers
  - Identify six business case drivers for the PSMC Initiative

- All factual information related to the PSMC Initiative contained in this section was gathered through research and interviews conducted by the PSWN Program
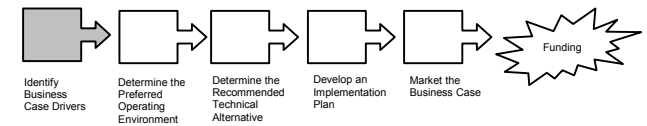
A BUSINESS CASE DRIVER IS DEFINED AS A KEY ISSUE OR THEME ADDRESSED IN THE BUSINESS CASE TO ENSURE SUCCESS

- Business case drivers include a wide range of issues drawn from multiple subject areas, for example—
  - Project team objectives (e.g., relieve channel congestion on statewide public safety communications system)
  - Political constraints (e.g., Wyoming is a politically conservative state with strong local autonomy)
  - Stakeholder interests (e.g., citizen privacy concerns related to public safety agencies sharing data)

- The identification of business case drivers serves as the critical first step in developing a business case
  - Provides a checklist of critical issues to guide the project team
  - Focuses the business case to address such critical issues

- Clearly addressing the business case drivers strengthens the proposition put forth in the business case
  - Ensures appropriate scope
  - Addresses key technical and financial issues
  - Addresses any political or other issues thwarting the project's progress
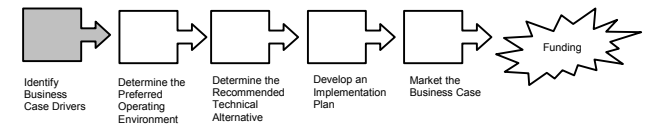
IDENTIFYING THE BUSINESS CASE DRIVERS INVOLVES A THOROUGH DATA COLLECTION AND ANALYSIS PROCESS

- This process consists of three efforts, each with distinct results
  - Identify project team objectives
  - Recognize business case constraints
  - Conduct a stakeholder analysis

- The data resulting from all three efforts is then analyzed to extract themes and form business case drivers

IDENTIFY OBJECTIVES → RESULTS

IDENTIFY CONSTRAINTS → RESULTS

IDENTIFY STAKEHOLDER INTERESTS → RESULTS
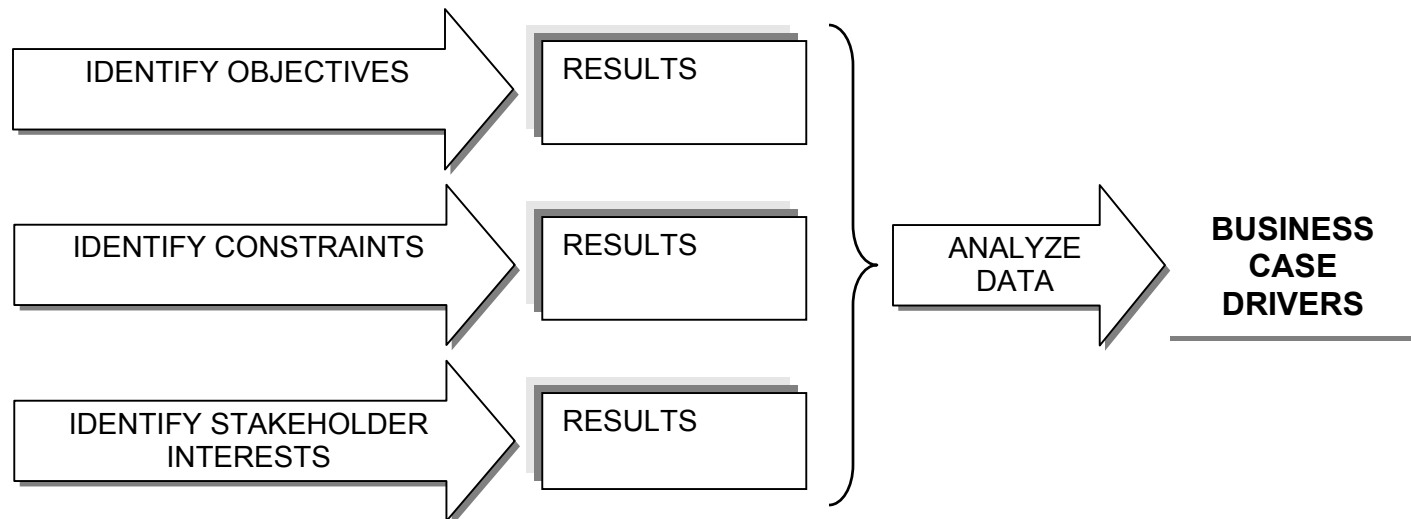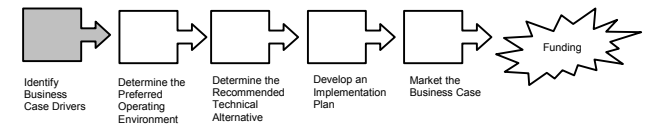
ANALYZE DATA → **BUSINESS CASE DRIVERS**

THE FIRST EFFORT IDENTIFIES THE PROJECT TEAM'S HIGH-LEVEL OBJECTIVES

- These objectives serve as the fundamental reasons that the project team initiates the project

- The project team should document these objectives to clearly define their direction during the developmental stages of the business case

- The objectives should also align with participating agencies' goals

IDENTIFY OBJECTIVES → WYDOT Project Team Objectives

IDENTIFY CONSTRAINTS → RESULTS

IDENTIFY STAKEHOLDER INTERESTS → RESULTS
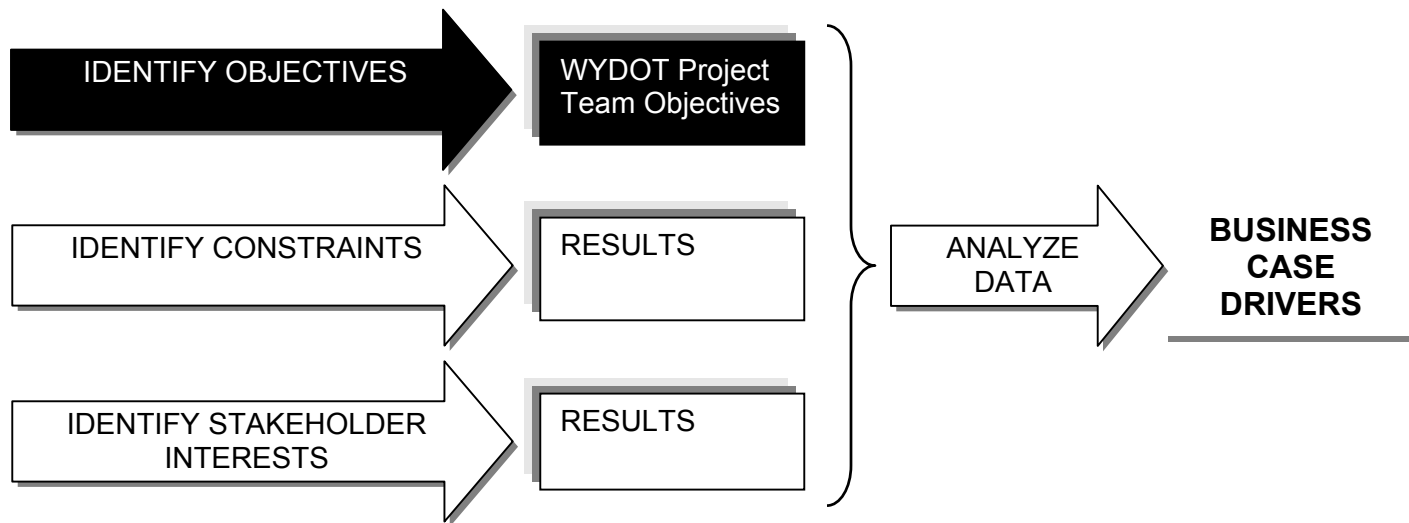
ANALYZE DATA → **BUSINESS CASE DRIVERS**

BASED ON DISCUSSIONS WITH THE PSMC PROJECT TEAM, THE HIGH-LEVEL PROJECT OBJECTIVES FOCUS ON THE IMPLEMENTATION OF A NEW STATEWIDE PUBLIC SAFETY LMR COMMUNICATIONS SYSTEM

- For the PSMC Initiative, the project team includes the WYDOT Telecommunications Program Office, and other supporting public safety officials—
  - Robert Wilson, WYDOT Telecommunications Program Manager
  - Bill Smith, WYDOT Telecommunications Program Office
  - Daniel Perko, President, Wyoming Chapter, Association of Public Safety Communications Officials (APCO)
  - Kelly Hamilton, Livestock Commission; SALECS Commission Chairman
  - Kent Drummond, Wyoming Department of Administration and Information (A&I), Planning and Coordination Office

- The high-level PSMC Project objectives include—
  - Improve interoperability among local, state, and federal public safety agencies and during emergencies
  - Replace aging equipment and obsolescent technologies
  - Enhance statewide radio coverage
  - Relieve channel congestion
  - Allow easily implemented upgrades for new features and technologies, such as Mobile Data Terminals (MDT) or Automatic Vehicle Location (AVL)
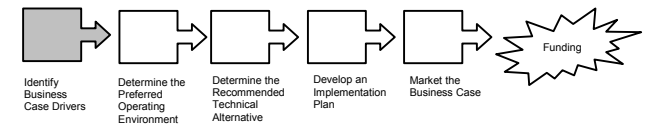
THE SECOND EFFORT INVOLVES RECOGNIZING PROJECT CONSTRAINTS—UNCHANGING EXTERNAL FACTORS AFFECTING THE PROJECT

- Constraints include factors outside the control of the project team but relevant to the proposition put forth in the business case

- Business case constraints may include—
  - Legal constraints involving regulations regarding the funding and implementation of the initiative
  - Political constraints involving the circumstances and priorities shaping the current local and state political landscapes and policies
  - Financial constraints involving the financial circumstances affecting the availability of potential funding resources

- Acknowledging and addressing constraints in the business case exhibits the project team's ability to address relevant external issues
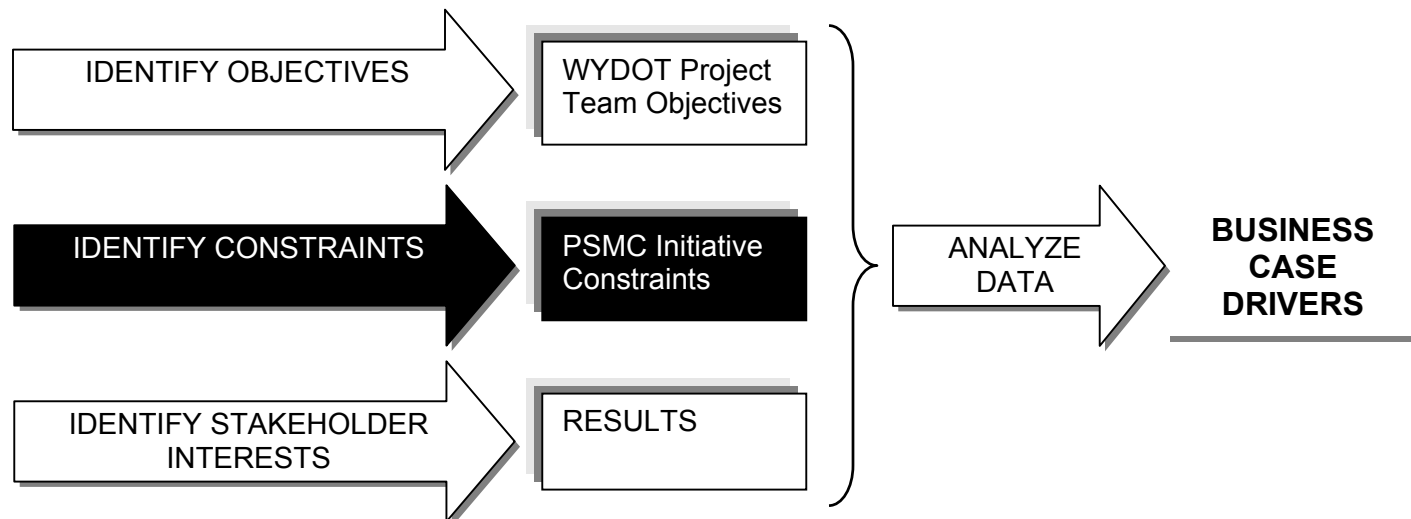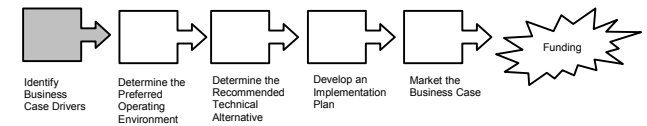
BASED ON PRELIMINARY RESEARCH AND DISCUSSIONS, FIVE CONSTRAINTS AFFECT THE PSMC INITIATIVE

- **There is uncertainty as to how to best administer fees for a much wider subscriber base**
  - It is debatable what agency is best positioned to fulfill this role and legislative direction is necessary
    - Under current state law, WYDOT now administers SALECS funds and infrastructure and several state agencies pay fees to use SALECS
    - A&I might be better positioned to charge fees for an expanded system to other agencies at all levels of government

- **The 2002 gubernatorial election will result in a new administration in January 2003**
  - Likely turnover of key policy makers will increase uncertainty during the 2002-2003 PSMC planning effort

- **Wyoming is a politically conservative state with strong local autonomy**
  - Localities (i.e., municipalities and counties) view statewide efforts with hesitancy
  - Turf issues arise if statewide efforts are perceived as a "big brother" mandate

- **The PSMC Initiative will likely be funded in large part from the state's general fund**
  - Much consensus building is needed for any statewide plan to gain financial support from autonomous local governments
  - Major funding requests require legislation separate from any single agency's budget proposal
  - Some existing taxes (i.e., gas tax) are unpopular and face opposition as a result of strong local autonomy, making a new tax unlikely as a funding mechanism

- **The state will likely need to provide major start-up funding for the system**
  - Wyoming's relatively small population density does not provide a large commercial market to leverage private business investment in a statewide wireless communications system

Identify
Business
Case Drivers

Determine the
Preferred
Operating
Environment

Determine the
Recommended
Technical
Alternative

Develop an
Implementation
Plan

Market the
Business Case

Funding
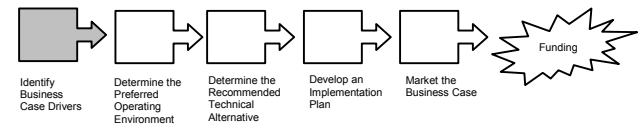
Identify Business Case Drivers…Stakeholder Analysis…

THE THIRD EFFORT INVOLVES PERFORMING A STAKEHOLDER ANALYSIS THAT IDENTIFIES AND EVALUATES STAKEHOLDER INTERESTS INFLUENCING, POSITIVELY OR NEGATIVELY, THE SUCCESS OF THE BUSINESS CASE PROPOSITION

- An effective stakeholder analysis involves documenting—
  - Stakeholders
  - Stakeholder power and influence
  - Stakeholder interests

IDENTIFY OBJECTIVES → WYDOT Project Team Objectives

IDENTIFY CONSTRAINTS → PSMC Initiative Constraints

IDENTIFY STAKEHOLDER INTERESTS → WY Stakeholder Interests
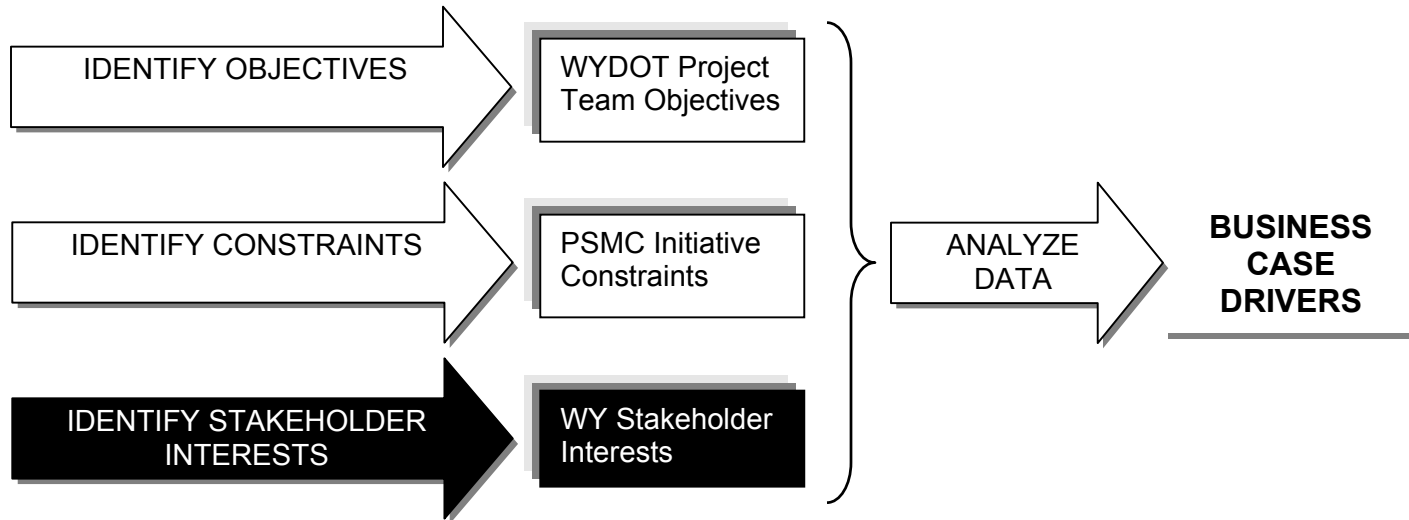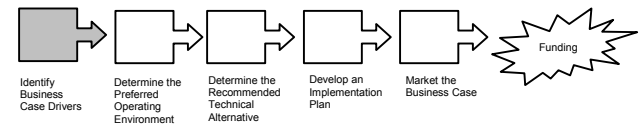
ANALYZE DATA → **BUSINESS CASE DRIVERS**

THE RESULTS OF EACH STEP OF THE STAKEHOLDER ANALYSIS ARE MOST EFFECTIVELY CAPTURED USING A COMPREHENSIVE STAKEHOLDER ANALYSIS TABLE

Stakeholders	Influence	Interests
• Stakeholders include any person who may positively or negatively affect the success of the proposition put forth in the business case • For a major IT project led by the state, stakeholders may include— – State constituents – The administration – State legislators – Municipal and county leaders	• Stakeholder influence is derived from the stakeholder's position in an organization, or the organization itself • Stakeholder influence is categorized by the power that stakeholder wields in regards to determining the success of the business case proposition • Each category of influence designates a certain level of support required from the stakeholder to ensure success for the business case proposition – High influence: mandatory support – Medium influence: partial support – Low influence: fractional support	• Stakeholder interests may include the stakeholder's specific goals for the project • Interests may also include stakeholder issues unrelated to the project, but may compete with the proposition put forth in the business case • Interests may reflect how the business case proposition may indirectly impact the stakeholder, or the stakeholder's organization • Stakeholder interests are prioritized by the influence of the stakeholder
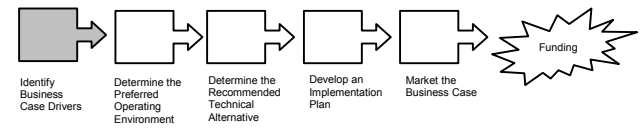
THE PSWN PROGRAM CONDUCTED INTERVIEWS WITH FIVE HIGH-INFLUENCE PSMC STAKEHOLDERS THAT YIELDED SEVERAL KEY INTERESTS

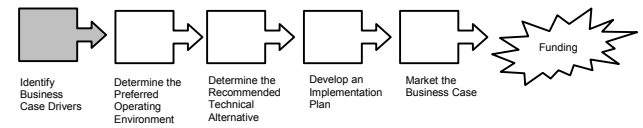| Stakeholders	Influence	Interests
• John W. Renneisen, Deputy Attorney General, Office of the Attorney General	• High influence	• Maintaining "good government"— initiatives that are wise, enduring, and comprehensive investments for the state • Implementing domestic security measures recommended by the Wyoming Counter Terrorism Commission
• Representative Wayne Johnson, Chairman, House Transportation and Highway Safety Committee	• High influence	• Representing and addressing constituent needs and concerns as explained through anecdotes • Improving mutual aid and interoperability at the local level
• George H. Parks, Executive Director, Wyoming Association of Municipalities (WAM)	• High influence	• Deteriorating local public safety communications technology • Municipalities and counties are skeptical of the PSMC Initiative, given the extended history of preceding consultant reports with no tangible results • Incorporating local involvement and concerns in statewide efforts
• Frank S. Galeotos, Director, A&I	• High influence	• Deploying efficient enterprise IT initiatives that involve local, state, and, when possible, private entities, and avoid redundancy • Preventing citizen privacy infringements tied to implementing state IT systems
• Joseph M. Evans, Executive Director, Wyoming County Commissioner Association (WCCA)	• High influence	• Implementing a technical solution that is clearly the best possible solution in regard to cost and technology, for improving public safety communications in Wyoming • Incorporating county participation and concerns in state-led initiatives
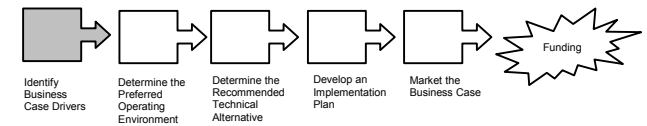
Identify Business Case Drivers…Analyzing the Data…

THE BUSINESS CASE DRIVERS ARE DRAWN FROM AN ANALYSIS OF THE DATA GATHERED FROM THE THREE PRECEDING EFFORTS

- The repository of data collected should be analyzed to identify common themes

- The business case drivers are derived from these common themes
  - Each driver encapsulates a theme supported by data drawn from the project objectives, constraints, and stakeholder analysis
  - Each driver should be action oriented—
    - Begins with a distinct verb (e.g., articulate, demonstrate, prove)
    - Helps focus the project team in its development of the business case

- This analysis is best documented by using a table that matches the data components sharing themes to individual business case drivers
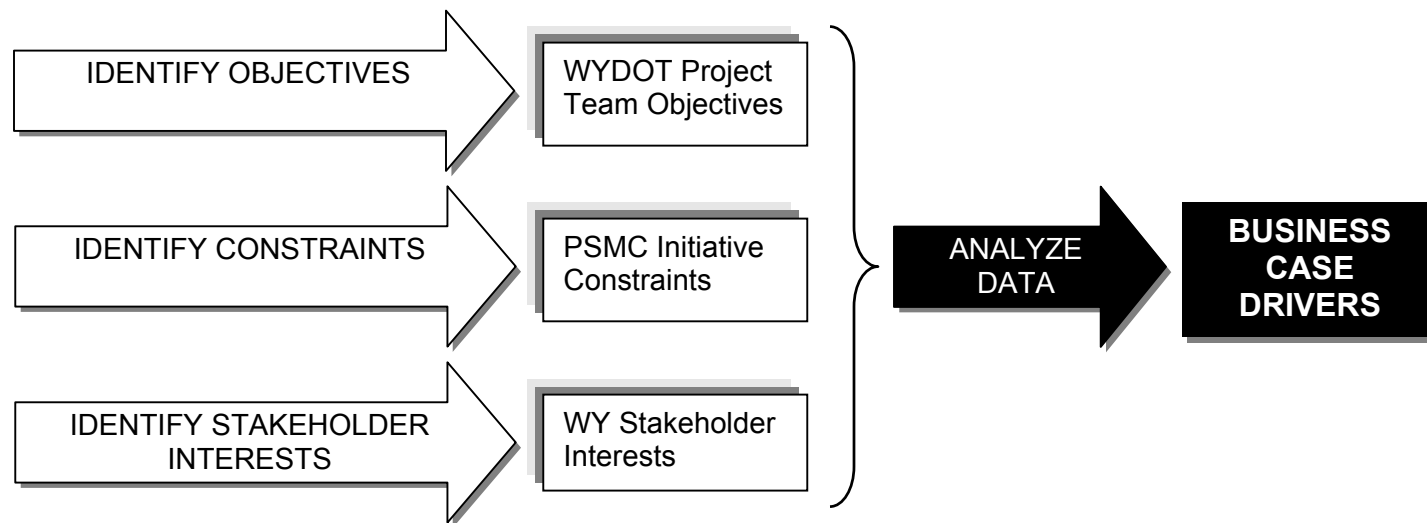
THE RESULTS FROM THE PSWN PROGRAM'S DATA COLLECTION EFFORTS IDENTIFIED SIX BUSINESS CASE DRIVERS FOR THE PSMC INITIATIVE

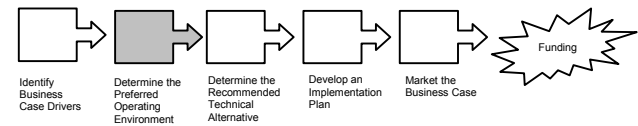| SUMMARIZED DATA COMPONENTS GROUPED BY THEME	BUSINESS CASE DRIVER
• Improving interoperability at the local, state, and federal level remains a primary PSMC Project Team objective • Enhancing mutual aid and interoperability remain priority concerns for Representative Wayne Johnson	**1. Demonstrate how the PSMC Initiative will improve interoperability across all levels of government (i.e., local, state, and federal)**
• Wyoming is a politically conservative state with strong local autonomy • WAM members are skeptic that the PSMC Initiative will not produce results and/or include local concerns • WCCA members want county concerns included in statewide initiatives led by the state • A&I is careful to protect citizen privacy concerns with the implementation of statewide IT projects	**2. Integrate local participation and input in the planning, development, and rollout of the PSMC Initiative**
• The chief funding source for the PSMC Initiative is likely to be the state's general fund • Although commercial services and leasing will be investigated in the PSMC planning effort, the state will likely need to provide major start-up funding for the system	**3. Focus the initial funding mechanism on monies from the state's general fund**
• PSMC infrastructure and technology should meet the PSMC Project Team objectives of enhancing statewide radio coverage, relieving current channel congestion problems, and allowing easily implemented upgrades for new features and technologies • WCCA members need to be certain that the selected technology is the optimum choice, in regard to cost and technology, for Wyoming	**4. Prove the PSMC technology is the optimum technical solution, among many considered, for meeting Wyoming's public safety communications needs**
• Representative Wayne Johnson emphasized the importance of using anecdotes to exhibit the need for the PSMC Initiative; this would help solidify constituent support and help the PSMC Initiative capitalize on the current "citizens legislature" motif	**5. Where appropriate, use anecdotal evidence to justify the need for the PSMC Initiative**
• Deputy Attorney General Renneisen stressed that the PSMC Initiative must not be perceived as a "reaction to September 11;" instead, it must be perceived as a wise, much needed investment that also serves as an important homeland security measure • A&I Director Galeotos encouraged the development of an enterprise IT initiative that benefits several agencies and consolidates and integrates participating agencies' resources • The upcoming gubernatorial election will likely result in a less IT-oriented governor	**6. Demonstrate the PSMC Initiative as a sound, enduring enterprise investment for Wyoming**

MOVING FORWARD, THE BUSINESS CASE DRIVERS ARE WOVEN INTO THE INDIVIDUAL COMPONENTS OF THE BUSINESS CASE

- The core components of the business case offer opportunities to individually or collectively address each business case driver
  - The description of the current operating environment included in the PSMC business case could address:
    - ➢ Business Case Driver #5: Where appropriate, use anecdotal evidence to justify the need for the PSMC Initiative
  - The costs, benefits, and risks analysis included in the PSMC business case could address:
    - ➢ Business Case Driver #4: Prove the PSMC technology is the optimum technical solution, among many considered, for meeting Wyoming's public safety communications needs
  - The risk mitigation plan and performance measures included in the PSMC business case could address:
    - ➢ Business Case Driver #1: Demonstrate how the PSMC Initiative will improve interoperability across all levels of government (i.e., local, state, and federal)
    - ➢ Business Case Driver #2: Integrate local participation and input in the planning, development, and rollout of the PSMC Initiative
    - ➢ Business Case Driver #3: Focus the initial funding mechanism on monies from the state's general fund
    - ➢ Business Case Driver #6: Demonstrate the PSMC Initiative as a sound, enduring enterprise investment for Wyoming

- Throughout Sections III, IV, and V of this strategy, these potential opportunities to address the PSMC business case drivers in individual sections of the PSMC business case are highlighted and further explained
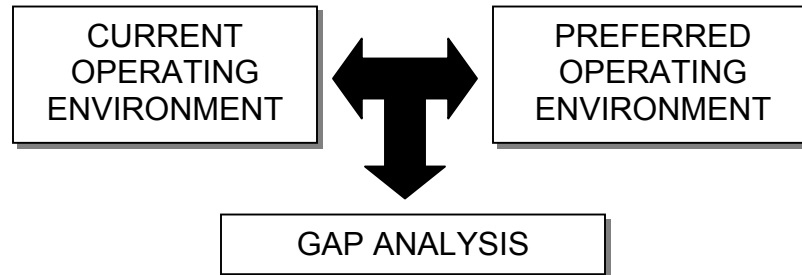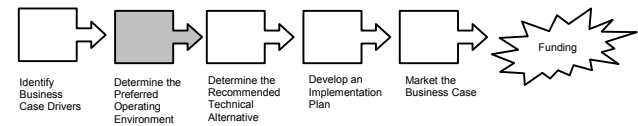
III. DETERMINE THE PREFERRED OPERATING ENVIRONMENT

Determine the Preferred Operating Environment…Introduction…

THIS SECTION DISCUSSES HOW TO DEVELOP THE DESCRIPTION OF THE PREFERRED OPERATING ENVIRONMENT INCLUDED IN THE BUSINESS CASE

- This section guides the development of the description of the current operating environment included in the business case
  - In the business case, this description exposes several, high-level limitations of the current operating environment
  - By exposing these limitations, the preferred operating environment is determined and justified

- A gap analysis evaluating the current operating environment using high-level preferred operational requirements serves as the foundation of the description of the current operating environment included in the business case

- This section describes the process leading to the gap analysis in three subsections–
  - Describe the current operating environment
  - Describe the preferred operating environment
  - Perform a gap analysis

- The discussion of each step is supported by factual information gathered by the PSWN Program through preliminary research and interviews
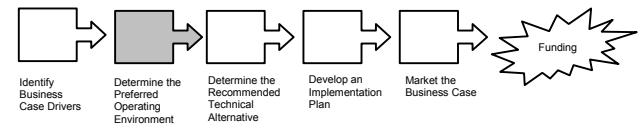
DOCUMENTING THE CURRENT OPERATING ENVIRONMENT COMPRISES THREE AREAS OF CONCERN: HISTORY, CURRENT INFRASTRUCTURE, AND HIGH-LEVEL OPERATIONAL CHARACTERISTICS

- The historical component describes the funding, technology, systems architecture, and functional background of the current operating environment

- The description of the current public safety LMR infrastructure addresses several technical characteristics—
  - Number, location, and coverage of LMR sites
  - Number of mobile and portable units
  - Number of public safety user agencies
  - Operational frequencies
  - Maximum number of users
  - Incumbent proprietary technologies (i.e., trunking technologies such as logical trunked radio [LTR], SmartZone, or Enhanced Digital Access Communications System [EDACS])
  - Security applications (e.g., Data Encryption Standard [DES], Triple DES)

- The high-level operational characteristics include key functional LMR aspects—
  - Dispatch operations
  - Mutual aid and interoperability communications capacity
  - Channel capacity
  - Maintenance requirements
 - Coverage
  - Obsolescence
  - Scalability
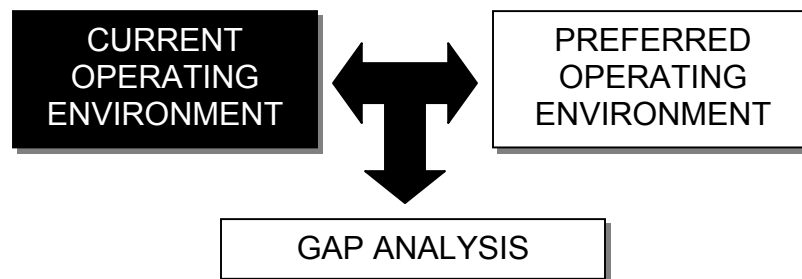
III-2

THE PSWN PROGRAM GATHERED DATA SUPPORTING AN INITIAL DESCRIPTION OF THE CURRENT PUBLIC SAFETY LMR ENVIRONMENT IN WYOMING

- **History:** A brief history of the public safety LMR operating environment in Wyoming includes—
  - The Wyoming public safety community uses LMR to support life-saving operations over great distances
  - A statewide public safety LMR system was built in the 1970s operating in the low-band very high frequency (VHF) frequency band
  - Since then, state and local public safety agencies have built their own hi-band VHF systems to meet individual agency needs
  - In 1980, SALECS was created and consolidated four state public safety agencies onto one system
  - Nine state agencies use SALECS today as primary users
  - For the most part, localities continue to use and maintain their own public safety LMR systems

- **Current Infrastructure:** Key technical aspects of the Wyoming State Highway Patrol's LMR system, which is one of five statewide LMR systems currently in use, include—
  - 26 sites situated throughout the state
  - 2 Gigahertz (GHz) analog microwave backbone
  - Single-channel, conventional, analog, hi-band VHF system
  - Centralized dispatch located in Cheyenne
  - Nonencrypted radio transmissions

- **Operational Characteristics:** High-level details of the public safety LMR operational environment include—
  - Some counties have three or more separate dispatch centers, whereas others have consolidated dispatch centers
  - Two law enforcement agencies in the state have mobile data capabilities
  - Most VHF systems are single-channel systems, and additional VHF frequencies are usually unavailable
  - Mobile-to-mobile radio communications are limited resulting from conventional, analog channel features
  - Most public safety agencies do not have interoperable communications capacity to coordinate multiagency responses to incidents
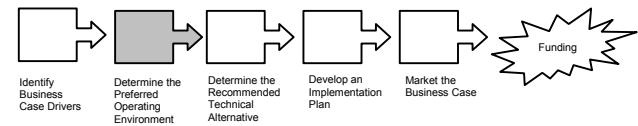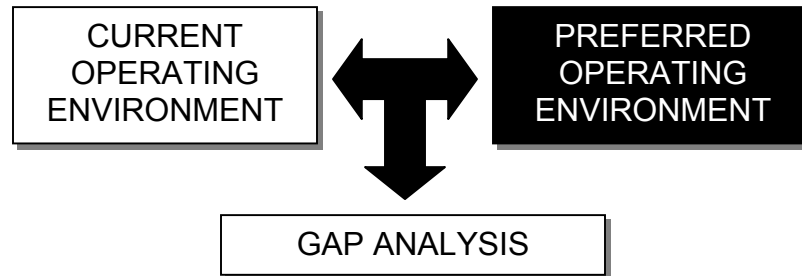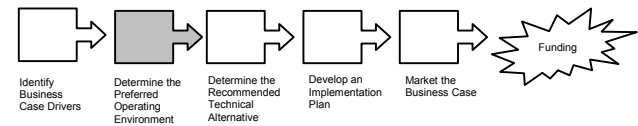
Determine the Preferred Operating Environment…Preferred Operating Environment…

THE PREFERRED OPERATING ENVIRONMENT IS COMPRISED OF SEVERAL FAVORABLE OPERATIONAL REQUIREMENTS

- The desired operational requirements are drawn from several sources of information—
  - Goals of the project team
  - User requirements analysis
  - Vendor offerings
  - Business case drivers
  - Stakeholder analyses

- The set of favored operational requirements ranges from high-level (e.g., improving interoperability) to more detailed technical requirements (e.g., field programmability for portable units)

- In support of completing the work outlined in the PSMC Initiative's systems planning RFP, the selected contractor will identify most of the preferred operational requirements of the Wyoming public safety LMR user community
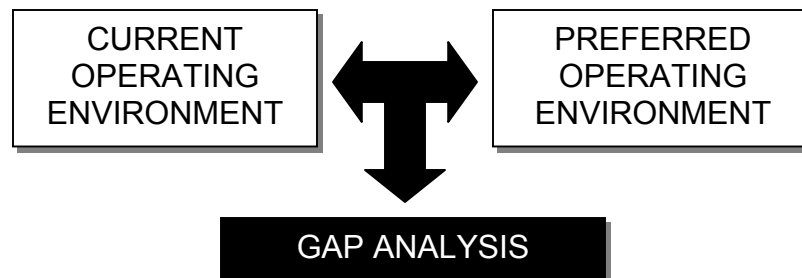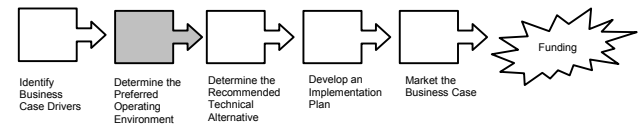
```
CURRENT                    PREFERRED
OPERATING      ←→          OPERATING
ENVIRONMENT                ENVIRONMENT
                ↓
           GAP ANALYSIS
```

Determine the Preferred Operating Environment…Gap Analysis…

THE GAP ANALYSIS SERVES AS A CRITICAL EXERCISE THAT RESULTS IN A CLEAR JUSTIFICATION OF THE PREFERRED OPERATING ENVIRONMENT

- The gap analysis evaluates the current operating environment using preferred operational requirements
  - Each high-level operational requirement stands as a highlighted criterion for evaluating the current operating environment
  - Through this evaluation, several limitations of the current operating environment are exposed

- The gap analysis helps capture the high-level limitations of the current operating environment that are used in the business case's description of the current operating environment
  - The limitations identified as part of the gap analysis serve as key characteristics in the description of the preferred operating environment in the business case

- Where possible, the limitations are best described using anecdotal evidence and/or graphical depictions
  - Simplifies complex technical issues
 - Better acquaints the impact of the limitation for the reader

```
+------------------+          +------------------+
|     CURRENT      |   <--->  |    PREFERRED     |
|    OPERATING     |          |    OPERATING     |
|   ENVIRONMENT    |          |   ENVIRONMENT    |
+------------------+          +------------------+
              |
              v
       +----------------+
       |  GAP ANALYSIS  |
       +----------------+
```

III-5

DRAWN FROM INITIAL RESEARCH PERFORMED BY THE PSWN PROGRAM, SEVERAL PREFERRED OPERATIONAL REQUIREMENTS HELP PINPOINT THE HIGH-LEVEL LIMITATIONS OF THE CURRENT PUBLIC SAFETY LMR OPERATING ENVIRONMENT IN WYOMING
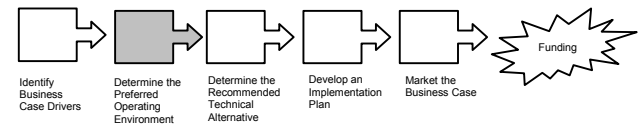
- The current operating environment lacks sufficient interoperable communications capacity among local, state, and federal public safety agencies responding to emergencies
  - Disparate systems using varying operational frequencies and proprietary technologies obstruct interoperability between agencies
  - For some forest fire responses, the Bureau of Land Management (BLM) field officers establish interoperability by distributing a cache supply of portable radios to responders

- The current operating environment does not provide sufficient system coverage as a result of the indigenous mountainous terrain: Albany County anecdotal evidence includes—
  - Radio communications along WY HWY 287, south of Punkin Vine, and WY HWY 34 East are very poor, and often require users to operate on County Road and Bridge mutual aid channels
  - For forest fires in the region, responders commonly operate on the state Forest Service's channels, forcing most communication transmissions through the Rawlins dispatch center, and subsequently delaying messages and slowing response times

- The current operating environment does not provide sufficient system coverage in many regions of the state for state public safety personnel: Sweetwater County anecdotal evidence includes—
  - During a routine pullover on Flaming Gorge Way, a Wyoming State Highway Patrol officer was suddenly confronted and beaten by the driver while attempting to communicate to a dispatcher using the mutual aid channel
  - Poor system coverage resulted in dispatcher receiving only portions of the officer's communication
  - With limited knowledge of the location of the incident, the State Patrol's and other law enforcement officials' responses were seriously delayed—citizens actually broke up the fight between the driver and the officer
  - The officer was seriously injured and might have been killed had the responding citizens not been able to subdue the driver
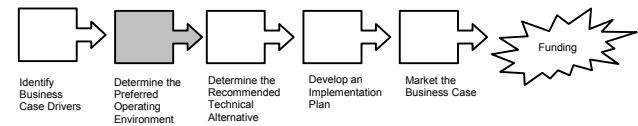
DRAWN FROM INITIAL RESEARCH PERFORMED BY THE PSWN PROGRAM, SEVERAL PREFERRED OPERATIONAL REQUIREMENTS HELP PINPOINT THE HIGH-LEVEL LIMITATIONS OF THE CURRENT PUBLIC SAFETY LMR OPERATING ENVIRONMENT IN WYOMING (CONTINUED)
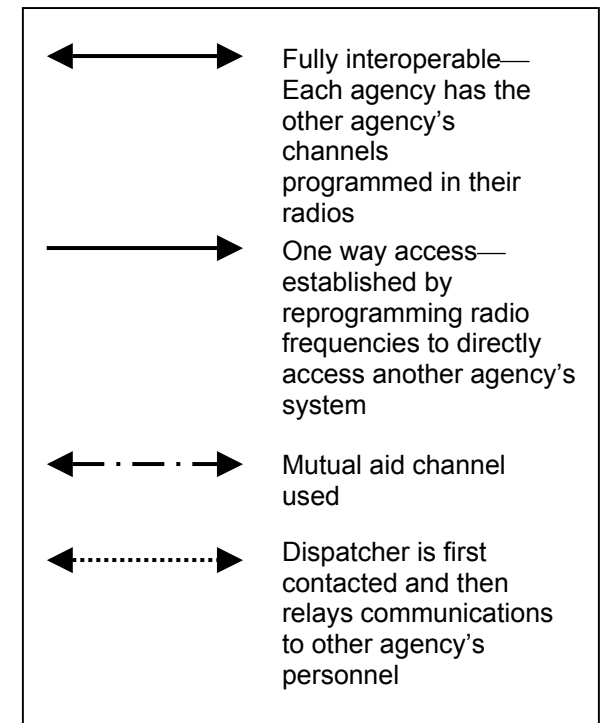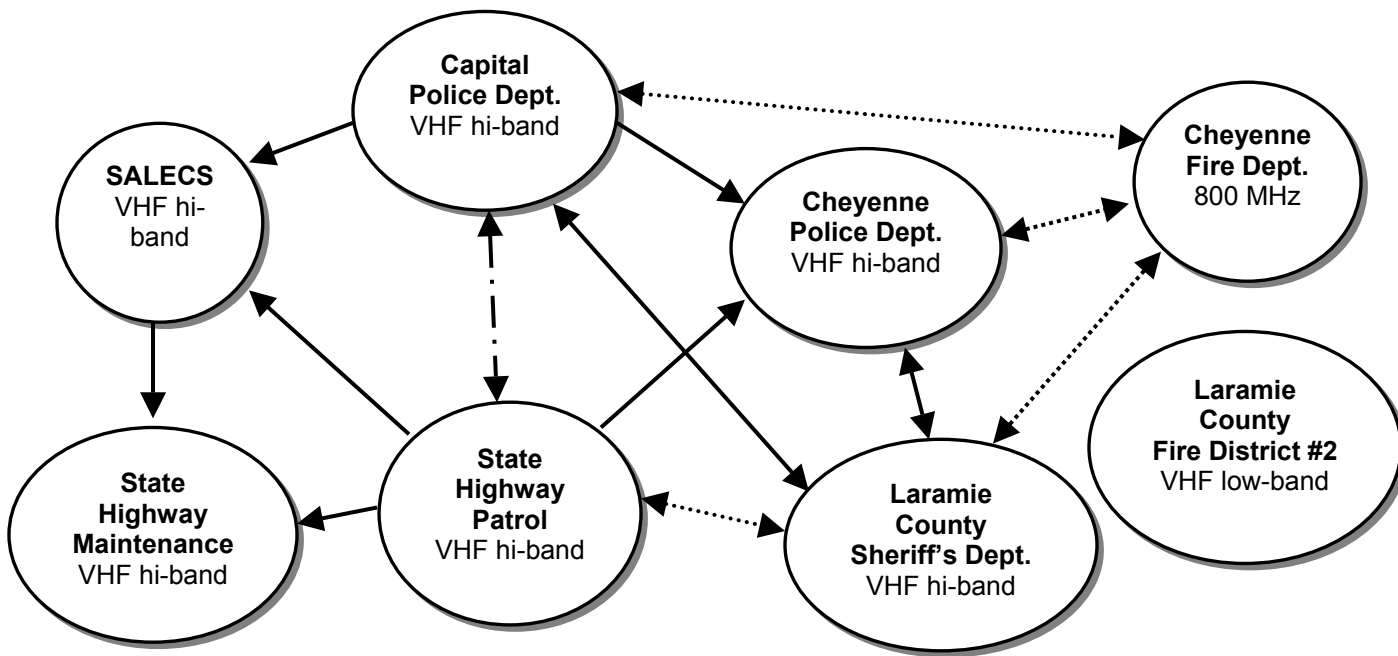
- The current operating environment does not provide sufficient channel capacity for public safety personnel
  - Channel congestion on the State Highway Patrol's system often prohibits spontaneous requests for backup
    - Single-channel conventional, analog system allows one voice transmission at a time per user group
    - Increasing number of users and administrative requests (e.g., license plate checks) frequently limits communications capacity

- The current operating environment does not support encrypted voice communications
  - State and local public safety agencies are not able to interoperate with encrypted LMR systems maintained by military bases in Wyoming
  - The issue threatens coordination among local, state, and federal personnel supervising military convoys transporting nuclear weapons through the state
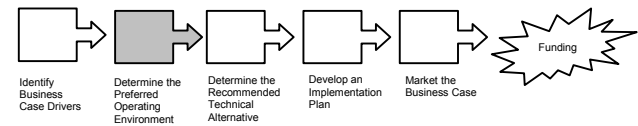
IN ADDITION TO ANECDOTES, GRAPHICAL PRESENTATIONS AND SUMMARY CHARTS EFFECTIVELY CONVEY THE HIGH-LEVEL LIMITATIONS OF THE CURRENT OPERATING ENVIRONMENT

- Some high-level limitations of public safety LMR environments that are more effectively explained graphically include—
  - Lack of interoperability among public safety agencies
  - Redundancy in public safety LMR architecture
  - Insufficient system coverage

- The following graphic and corresponding summary chart provide examples of how to exhibit the level of limited interoperability among the incumbent public safety LMR systems in Laramie County; the graphic and chart serve as models and do not include comprehensive data for all public safety agencies operating in Laramie County
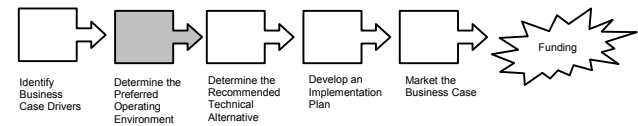

III-8

IN ADDITION TO ANECDOTES, GRAPHICAL PRESENTATIONS AND SUMMARY CHARTS EFFECTIVELY CONVEY THE HIGH-LEVEL LIMITATIONS OF THE CURRENT OPERATING ENVIRONMENT (CONTINUED)

METHODS USED BY LARAMIE COUNTY PUBLIC SAFETY AGENCIES TO INITIATE INTEROPERABILITY	Cheyenne Police Department	Cheyenne Fire Department	Laramie County Sheriff's Department	Laramie County Fire District #2	Capital Police Department	State Highway Maintenance	State Highway Patrol	SALECS
Cheyenne Police Department		4	1					
Cheyenne Fire Department	4		4	**X**	4			
Laramie County Sheriff's Department	1	4		**X**	1		4	
Laramie County Fire District #2		**X**	**X**					
Capital Police Department	2	4	1				3	2
State Highway Maintenance								
State Highway Patrol	2		4		3	2		2
SALECS							2	

(Row label spanning down the left side: AGENCIES IN LARAMIE)

1	Fully Interoperable	2	Reprogram Radio	3	Mutual Aid Channel	4 Through dispatcher
5	Exchange radios	6	Satellite	7	Cellular phone	**X** Need to communicate but unable to

Identify Business Case Drivers | Determine the Preferred Operating Environment | Determine the Recommended Technical Alternative | Develop an Implementation Plan | Market the Business Case | Funding
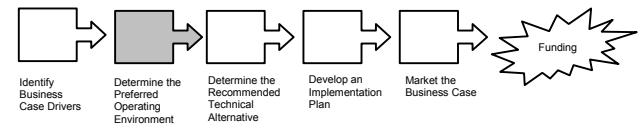
Determine the Preferred Operating Environment…Description in the Business Case…

THE DESCRIPTION OF THE CURRENT OPERATING ENVIRONMENT INCLUDED IN THE BUSINESS CASE IS DRAWN FROM THE GAP ANALYSIS

- The description of the current operating environment and its limitations serves as the first main section of the business case

- The structure of the description draws on the results of the gap analysis–
  - High-level limitation of the current operating environment is identified
  - A subsequent description details the implications and severity of the limitation using anecdotes, factual information, and/or graphics

- An abbreviated, sample format of the description of the preferred operating environment for one limitation includes—

Current Limitation: **Duplication of network infrastructure and ineffective sharing of resources**

The current public safety LMR environment in Wyoming is characterized by several "islands" of individual public safety wireless communications systems spread across the state. In addition to the problems associated with incompatibility, these systems pose significant maintenance and upkeep costs on the individual agencies that own and operate them. These costs can be minimized for each agency, however, through the development of shared systems in which costs are distributed among many agencies and all available resources (e.g., spectrum, infrastructure) are shared across agency lines. This consolidated system design would also identify potential systems overlaps, locations for shared infrastructure…

FOR THE PSMC INITIATIVE'S BUSINESS CASE, THE DESCRIPTION OF THE CURRENT OPERATING ENVIRONMENT PROVIDES AN OPPORTUNITY TO SPECIFICALLY ADDRESS THE FIFTH AND SIXTH BUSINESS CASE DRIVERS IDENTIFIED IN SECTION II

Section II, Business Case Drivers

5. Where appropriate, use anecdotal evidence to justify the need for the PSMC Initiative.

- The inclusion of anecdotal information describing the limitations of the current operating environment helps simplify and clarify the technical and operational needs of the Wyoming public safety community for high-level decision makers

- Soliciting and collecting useful anecdotes from the Wyoming public safety LMR user community remains an important, ongoing effort for the PSMC Project Team in its development of the business case

---

Section II, Business Case Drivers

6. Demonstrate the PSMC Initiative as a sound, enduring enterprise investment for Wyoming.

- The description of the disparateness of the current public safety LMR landscape in Wyoming helps exhibit the need for an enterprise public safety communications network
    - Prevents redundancy in technology
    - Promotes efficient use of existing and new public safety resources
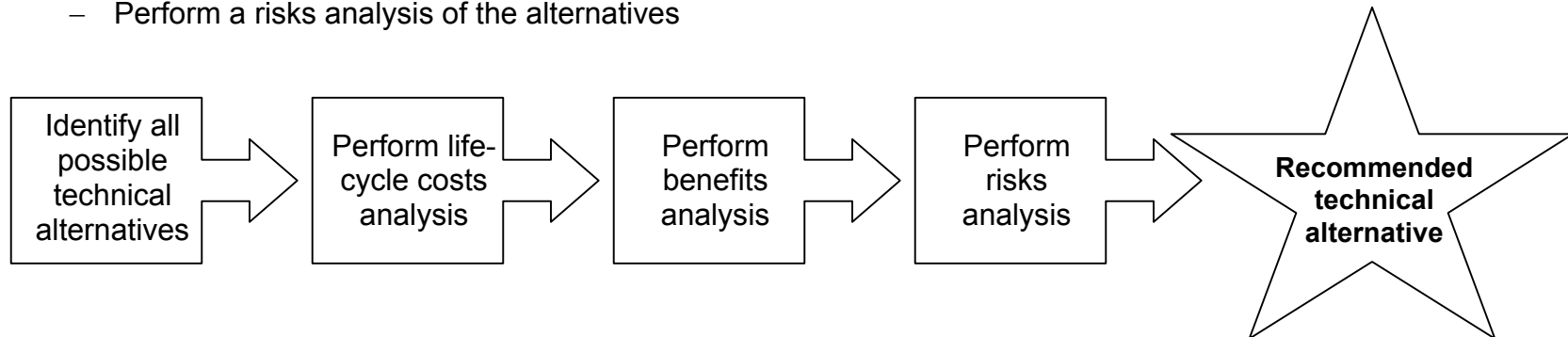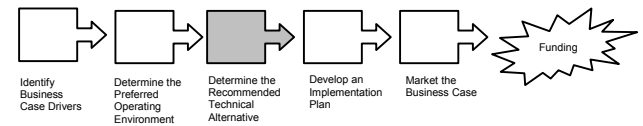
IV. DETERMINE THE RECOMMENDED TECHNICAL ALTERNATIVE
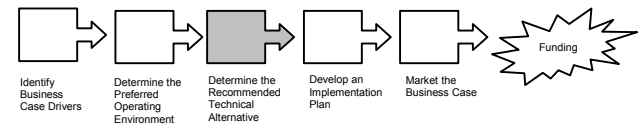
THIS SECTION DESCRIBES THE PROCESS FOR JUSTIFYING THE RECOMMENDED TECHNICAL ALTERNATIVE

- This section supports development of the Costs, Benefits, and Risks Analysis section of the business case

- In the business case, a recommendation for a technical solution is derived using analyses of the life-cycle costs, benefits, and risks of several technical alternatives

- This section describes the process for deriving the recommended technical alternative in the business case

- This process is comprised of four sequential steps, each described in this section—
  - Identify all possible technical alternatives
  - Perform a life-cycle costs analysis of the alternatives
  - Perform a benefits analysis of the alternatives
  - Perform a risks analysis of the alternatives

- Factual data gathered by the PSWN Program is not used to support the discussion in this section because multiple alternatives for the PSMC Initiative had not yet been identified at the time of this document's production
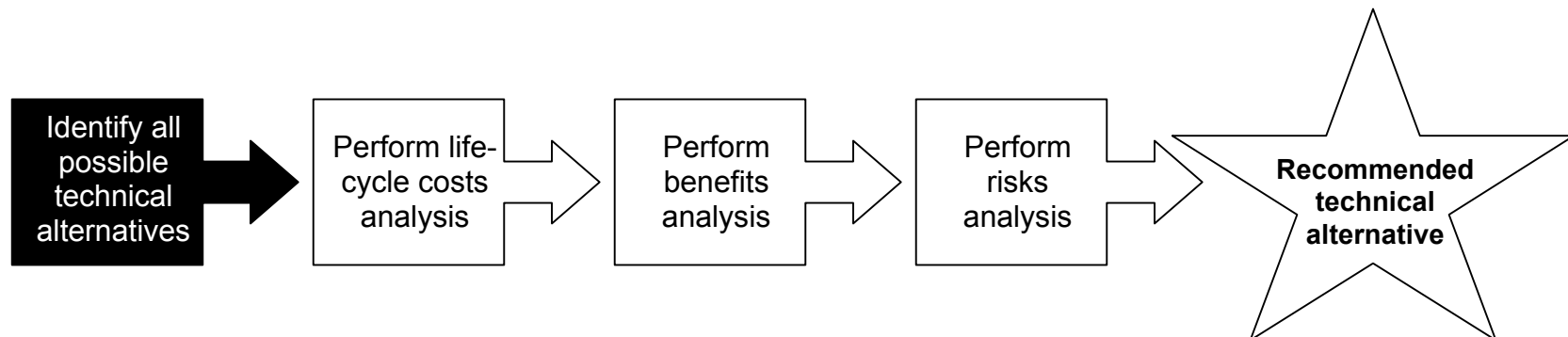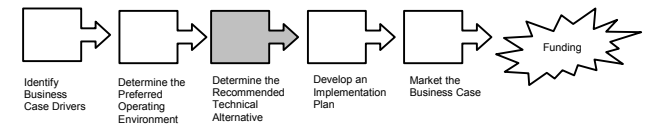
THE PROCESS FOR RECOMMENDING A TECHNICAL ALTERNATIVE BEGINS WITH AN IDENTIFICATION OF SEVERAL FEASIBLE TECHNICAL ALTERNATIVES

- Each technical alternative serves as a possible solution for improving the current operating environment

- The following table provides a high-level view of a sample technical alternative identification table; the data included is provided only for demonstration purposes, and is not based on factual information

| ALTERNATIVE	DESCRIPTION
1. Status quo	• State upgrades SALECS on an as-needed basis • Remaining local, state, and federal public safety agencies continue to maintain and operate individual public safety LMR systems
2. State builds and implements new statewide system	• All state public safety agencies subscribe to the system • Localities and federal agencies are charged monthly airtime fees for use of mobile and portable units
3. Commercial entity builds and implements new statewide system	• All subscribing public safety agencies enter fee-for-service agreements with the commercial entity for leasing airtime on mobile and portable units
4. State and local public safety agencies coordinate the implementations of a shared statewide network	• All participating local and state public safety agencies consolidate LMR resources and share initial acquisition costs to implement new statewide public safety LMR infrastructure • Delineated through Memoranda of Understanding (MOU) agreements, life-cycle costs are shared by all participating local and state public safety agencies

Identify all possible technical alternatives → Perform life-cycle costs analysis → Perform benefits analysis → Perform risks analysis → **Recommended technical alternative**

ONCE A SET OF ALTERNATIVES HAS BEEN IDENTIFIED, THE LIFE-CYCLE COSTS OF EACH ALTERNATIVE ARE ASSESSED USING A SET OF RELEVANT AND UNDERSTANDABLE CRITERIA

- Example criteria assessing the life-cycle costs of major public safety LMR initiatives are listed in the following costs analysis table for sample Alternative 2, the state-owned system–

Alternative 2: State-Owned System	Grand Total	FY 03	FY 04	FY 05	FY 06
Systems Planning Costs	$	$	$	$	$
Transition Costs	$	$	$	$	$
Acquisition Costs	$	$	$	$	$
Operations and Maintenance (O&M) Costs	$	$	$	$	$
TOTAL	$	$	$	$	$

- Using the Status Quo Alternative as a life-cycle costs baseline, each technical alternative is compared against the same set of criteria

- Cost estimates included in each alternative's cost analysis table are derived from several resources, including—
  - Technician and engineering judgments for transition and operations and maintenance (O&M) costs
  - Manufacturer Suggested Retail Prices (MSRP) for dispatch and subscriber equipment
 - Vendor estimates for infrastructure acquisition costs
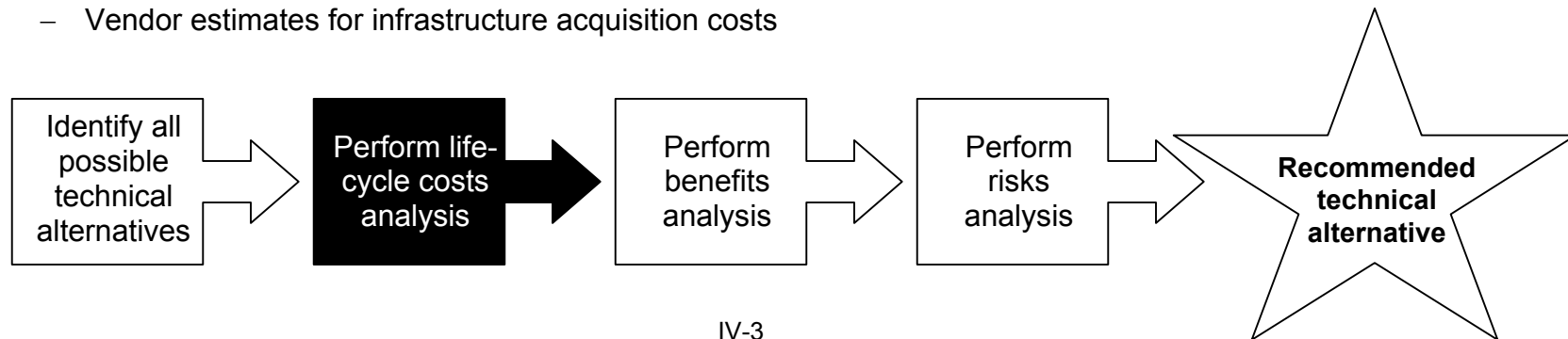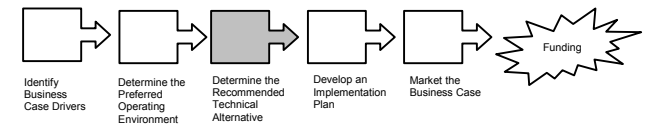
Determine the Recommended Technical Alternative…Graphical Comparisons…

THE INTUITIVE RESULTS OF THE LIFE-CYCLE COSTS ANALYSIS ARE MORE EFFECTIVELY CAPTURED USING GRAPHICAL COMPARISONS OF MULTIPLE ALTERNATIVES

- The true cost over time value, such as that relating to O&M costs, are more effectively exhibited using graphs

- The figure below illustrates life-cycle costs over time for hypothetical Alternatives A and B
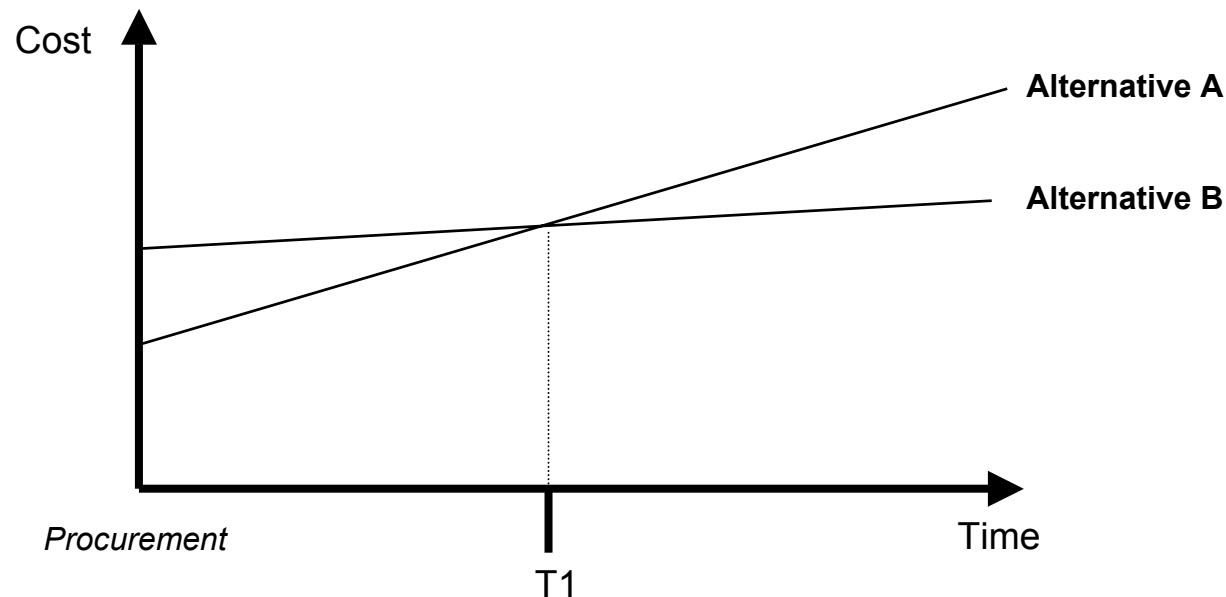

- According to the graph, although the initial procurement costs of Alternative B are higher than those of Alternative A, Alternative B is more cost effective in the long run than Alternative A beginning at time T1; these results are important to capture in the business case
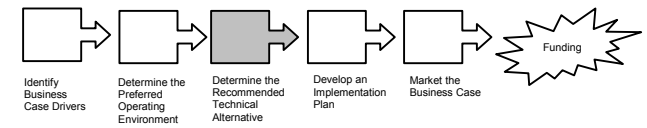
OVERALL, THE IMPLEMENTATION OF A STATEWIDE PUBLIC SAFETY LMR SYSTEM INVOLVES A BROAD RANGE OF COSTS AND METHODS OF PAYMENT

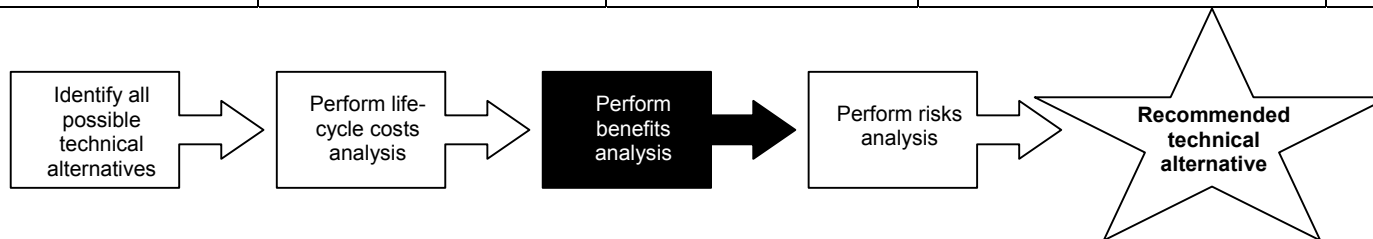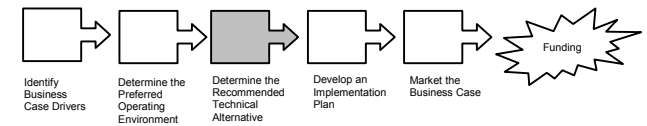| State	Cost	Method of Funding	Type of System	Coverage	Number of Users
MICHIGAN (57,022 square miles; 9,938,444 residents)	$234.2 million	• State Building Authority Funds ($184.4 million) • State General fund/general purpose ($49.8 million)	• 800 MHz Motorola SmartZone digital trunked radio system • P25 compliant	• 181 sites (186 towers and 5 antennas) • 97% mobile coverage	• 83 agencies on system • 7,593 radios • 106 agencies signed letters of intent
COLORADO (103,729 square miles; 4,301,261 residents)	Estimated at $120 million (microwave backbone already in place)	• State funded • County participation is voluntary	• 800 MHz Motorola ASTRO digital trunked radio system • P25 compliant	• 125 radio sites, supporting 5 channels • 95% mobile coverage through out the state along major highways	• State agencies alone; about 11,000 mobile and portable radios
FLORIDA (53,997 square miles; 15,982, 378 residents)	• $40 million up front for immediate O&M costs • $15 million per year for the next 20 years	• M/A-COM private radio system provides statewide LMR coverage to authorized users on a fee-for-service basis	• M/A-COM 800 MHz digital radio system (SLERN)	• 130 sites • Guaranteed coverage over 98% of the state	• Local, state, and federal law enforcement agencies • Public safety providers operating in state
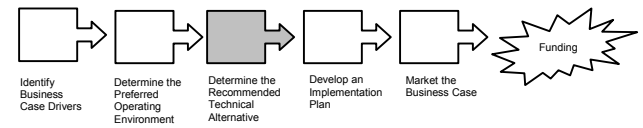
THE BENEFITS ANALYSIS CLOSELY EXAMINES EACH ALTERNATIVE'S ABILITY TO MEET THE HIGH-LEVEL PREFERRED OPERATIONAL REQUIREMENTS

- The preferred operational requirements used in the gap analysis performed in Section III (in support of the description of the current operating environment included in the business case) provides an initial set of benefits criteria
  - In the business case, it is important to provide a brief review of how each operational requirement was derived for the reader
  - Additional preferred operational requirements are included in the benefits analysis as appropriate

- A simple scoring system indicates the degree in which each technical alternative meets each operational requirement
  - Scoring systems can vary in the level of detail (e.g., percentages versus letter grades)
  - In the sample table below, the following basic scoring system is used: ● fully meets the requirements;

    ◐ partially meets the requirements; and ○ does not meet the requirements

TECHNICAL ALTERNATIVE	PREFERRED OPERATIONAL REQUIREMENTS			
	INTEROPERABILITY	ADEQUATE (80%) COVERAGE	SUFFICIENT CHANNEL CAPACITY	VOICE SECURITY
Alternative 1: Status Quo	○	○	○	○
Alternative 2: State-Owned System	○	◐	●	●
Alternative 3: Commercially Owned System	◐	○	●	○
Alternative 4: Shared Statewide System	●	●	●	●

Identify all possible technical alternatives → Perform life-cycle costs analysis → **Perform benefits analysis** → Perform risks analysis → **Recommended technical alternative**
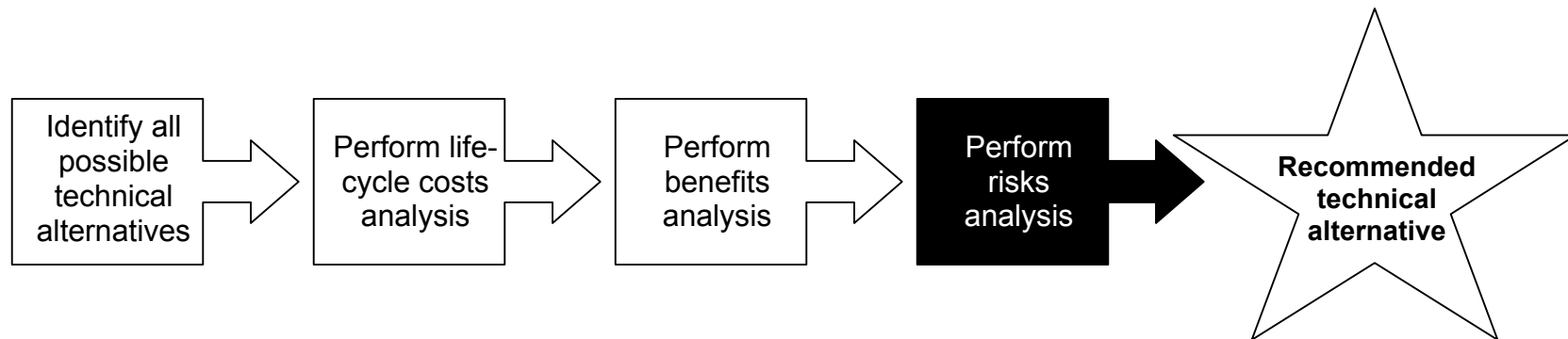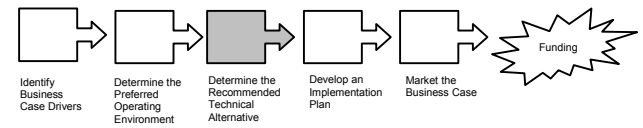
THE RISKS ANALYSIS RATES EACH TECHNICAL ALTERNATIVE AGAINST SEVERAL BROAD-BASED RISK CATEGORIES

- The risk analysis provides an overall risk status for each technical alternative

- In the business case, it is important to explain each risk category; for statewide public safety LMR initiatives, some key risk categories include—
  - Coordination complexities—relate to the difficulty in coordinating and collaborating multiple public safety LMR users across all government levels when implementing the system
  - Technical risks—encompass the most obvious technical risks, such as interference, availability of technology, and system security requirements of various agencies
  - Spectrum risks—relate to participating agencies' ability to obtain sufficient spectrum
  - Financial risks—involve the relative risks in participating agencies' ability to acquire adequate funding for LMR resources
  - Implementation risks—relate to the difficulties in managing the implementation of a statewide LMR system involving multiple implementation schedules
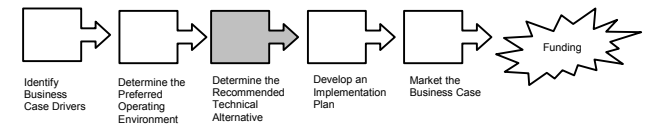
IN THE BUSINESS CASE, THE RISKS ANALYSIS IS CAPTURED IN A TABLE USING RISK CATEGORIES TO RATE EACH TECHNICAL ALTERNATIVE

- In the following sample risk analysis table, each risk is rated on its level of probability: high, medium, and low

TECHNICAL ALTERNATIVE	RISK CATEGORIES				
	COORDINATION COMPLEXITIES	TECHNICAL RISKS	SPECTRUM RISKS	FINANCIAL RISKS	IMPLEMENTATION RISKS
Alternative 1: Status Quo	High	Low	Medium	Medium	Low
Alternative 2: State-Owned System	Low	Medium	Medium	High	Medium
Alternative 3: Commercially Owned System	High	High	High	High	High
Alternative 4: Shared Statewide System	Medium	Medium	Medium	High	High

Identify Business Case Drivers | Determine the Preferred Operating Environment | Determine the Recommended Technical Alternative | Develop an Implementation Plan | Market the Business Case | Funding

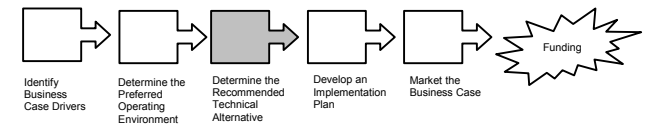Determine the Recommended Technical Alternative…Deriving the Recommended Technical Alternative…

OVERALL, THE RESULTS OF THE COSTS, BENEFITS, AND RISKS ANALYSES POINT TO A CLEARLY SUPERIOR ALTERNATIVE—THE RECOMMENDATION

- Collectively, the analyses (i.e., life-cycle costs, benefits, and risks) provide an objective, quantitative and qualitative, evaluation of the possible alternatives, and clearly exhibit an optimum technical alternative

Identify all possible technical alternatives → Perform life-cycle costs analysis → Perform benefits analysis → Perform risks analysis → **Recommended technical alternative**
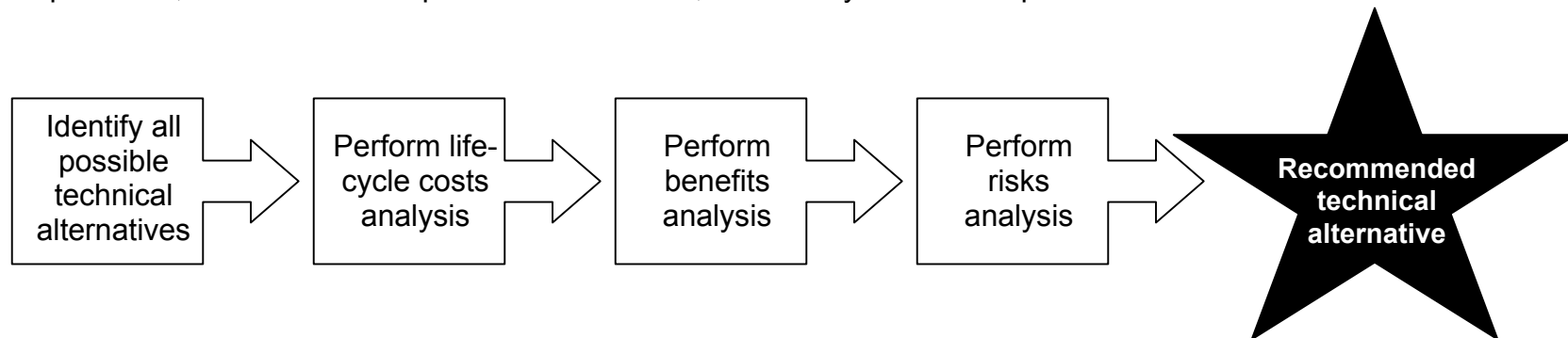
- In the business case, it is important to conclude the Costs, Benefits, and Risks Analysis section by explicitly identifying the recommended technical alternative

- Further explanation and justification of the recommended technical alternative is performed in the ensuing segment of the business plan—the implementation plan for the recommended technical alternative—discussed in Section V
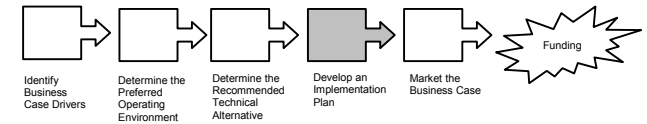
FOR THE PSMC INITIATIVE'S BUSINESS CASE, THE COSTS, BENEFITS, AND RISKS ANALYSIS SECTION PROVIDES AN OPPORTUNITY TO CLEARLY ADDRESS THE FOURTH BUSINESS CASE DRIVER IDENTIFIED IN SECTION II

> **Section II, Business Case Drivers**
>
> **4. Prove the PSMC technology is the optimum technical solution, among many considered, for meeting Wyoming's public safety communications needs.**

- Performing a thorough costs, benefits, and risks analysis of several technical alternatives will address the concerns of certain PSMC Initiative stakeholders—particularly, the County Commissioners—questioning the choice of technology for the PSMC Initiative
    - Conveys that the PSMC Project Team has considered and investigated several technical options
    - Clearly demonstrates the superiority of the recommended technical alternative among several feasible technologies

- Evaluates each technical alternative using criteria based on the needs of the Wyoming public safety community
    - Proves that the recommended technical alternative is the best choice given the Wyoming public safety community's distinct needs
   - Addresses specific concerns of technology cost, obsolescence, and scalability
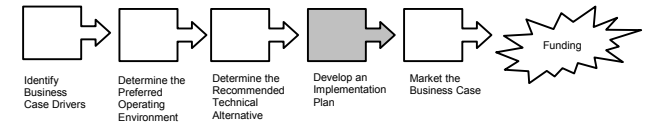
V. DEVELOP AN IMPLEMENTATION PLAN

Identify Business Case Drivers | Determine the Preferred Operating Environment | Determine the Recommended Technical Alternative | Develop an Implementation Plan | Market the Business Case | Funding

THIS SECTION EXPLAINS HOW TO DEVELOP THE KEY PARTS OF THE BUSINESS CASE THAT ADDRESS THE IMPLEMENTATION OF THE RECOMMENDED TECHNICAL ALTERNATIVE

- The implementation plan comprises two subject areas—funding and management—which are discussed in this section as separate subsections:
  - Funding—
    - ➢ Discusses the selection of the primary funding sources for the initiative
    - ➢ Discusses the selection of the procurement methods (e.g., owning, leasing, and hybrid) for the initiative
  - Management—
    - ➢ Describes the purpose, role, and process for developing a risk mitigation plan in the business case
    - ➢ Describes the purpose, role, and process for setting performance measures in the business case

- The implementation plan included in the business case focuses solely on the recommended technical alternative identified at the conclusion of the costs, benefits, and risk analysis
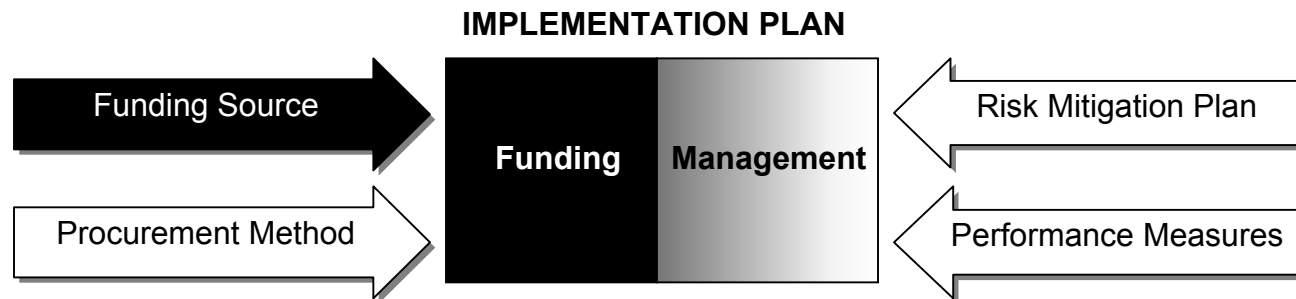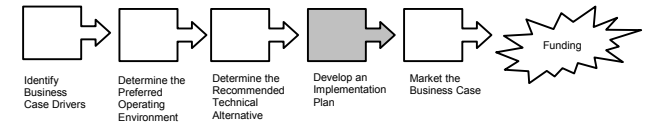
IMPLEMENTATION PLAN

Funding Source → | Funding | Management | ← Risk Mitigation Plan

Procurement Method → | | | ← Performance Measures
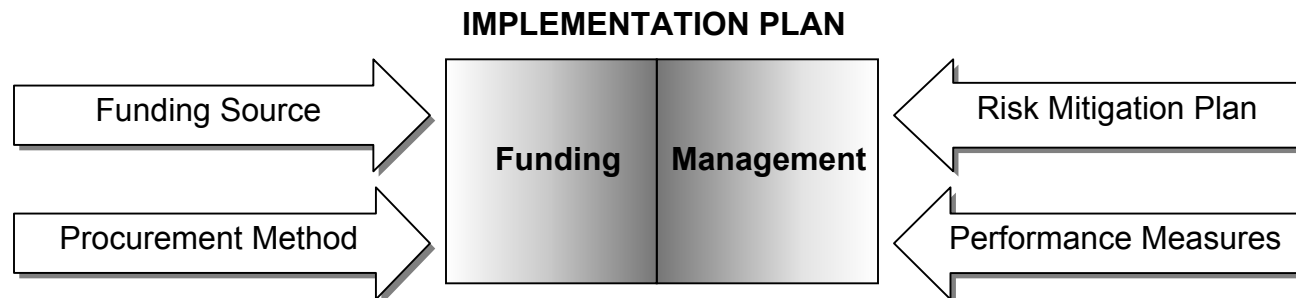
PROVIDING A BRIEF, OBJECTIVE ANALYSIS OF ALL POSSIBLE FUNDING SOURCES JUSTIFIES THE FINAL SELECTION PRESENTED IN THE BUSINESS CASE

- The discussion of the funding source in the business case is optional and determined by the circumstances surrounding the primary and secondary sources of funding
    - In some cases, the choice of funding sources is limited to one or two alternatives
    - In others, the competition for the targeted funding source invokes political issues and rivalries

- The decision of the primary funding source for major IT initiatives is frequently surrounded by political sensitivities and/or intense competition
    - Requests for politically sensitive funding sources arouse immediate and outspoken opposition
    - Under such circumstances, it is important for the business case to clearly and objectively explain why the funding source was selected
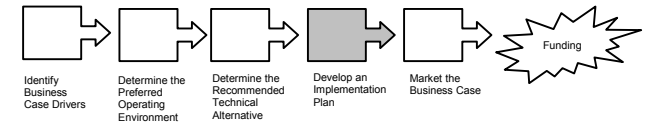
IMPLEMENTATION PLAN

Funding Source → **Funding** **Management** ← Risk Mitigation Plan

Procurement Method → | ← Performance Measures

OBJECTIVELY SELECTING A FUNDING SOURCE, OR SOURCES, FOR A MAJOR PUBLIC SAFETY LMR SYSTEM REQUIRES CRITICAL EVALUATION OF SEVERAL FUNDING OPTIONS

- For the public safety LMR initiatives, several funding options exist—
  - Federal funds—
    - ➢ Federal budget appropriations
    - ➢ Federal asset forfeiture bonds
    - ➢ Federal grants
  - State funds—
    - ➢ State budget appropriations
    - ➢ State grants
    - ➢ State taxes
    - ➢ State trust, technology, or capital funds
  - Public and private partnerships

- Justifying the selected funding source(s) in an objective manner involves evaluating each possible funding source against several criteria
  - Example criteria include—
    - ➢ Acknowledging the focus of, and stipulations tied to, the funding source: can the funding source be used for major public safety IT initiatives?
    - ➢ Identifying the magnitude of the funding source: can the funding source cover the total cost estimate for the recommended technical alternative (as derived in the cost analysis of the business case)?
    - ➢ Recognizing feasible uses of the funding source: can the funding source serve as a supplementary resource, providing funding for certain components (e.g., subscriber units) of the recommended technical alternative?

Identify Business Case Drivers | Determine the Preferred Operating Environment | Determine the Recommended Technical Alternative | Develop an Implementation Plan | Market the Business Case | Funding
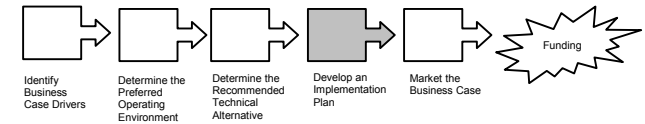
FOR THE PSMC INITIATIVE'S BUSINESS CASE, THE EXPLANATION OF THE SELECTED FUNDING SOURCE PROVIDES AN OPPORTUNITY TO ADDRESS THE THIRD BUSINESS CASE DRIVER IDENTIFIED IN SECTION II

> **Section II, Business Case Drivers**
>
> **3. Focus the initial funding mechanism on monies from the state's general fund.**

- Provides an opportunity to objectively identify, discuss, and eliminate the possible funding sources for the PSMC Initiative
  - Clearly addresses one of the more politically sensitive issues (i.e., funding source) surrounding the implementation of the PSMC Initiative
  - Exhibits the PSMC Project Team's understanding of possible funding sources, and provides insight into the final decision

- Based on the PSWN Program's preliminary research and interviews with Wyoming stakeholders, the source for funding new PSMC infrastructure will likely be the state's general fund
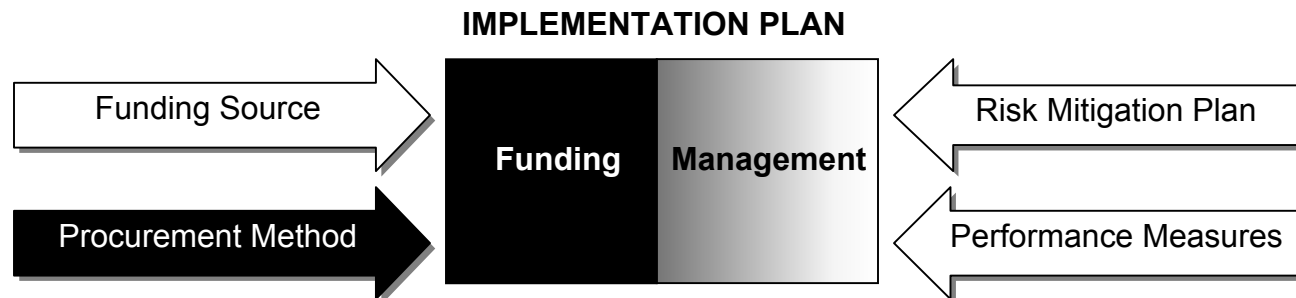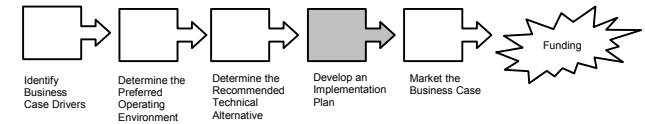
Identify
Business
Case Drivers

Determine the
Preferred
Operating
Environment

Determine the
Recommended
Technical
Alternative

Develop an
Implementation
Plan

Market the
Business Case

Funding

Develop an Implementation Plan…Procurement Method…

SIMILAR TO THE ISSUE OF FUNDING SOURCE(S), THE METHOD OF PROCUREMENT STANDS AS A HIGH-PROFILE ISSUE AND WARRANTS A CLEAR, OBJECTIVE ANALYSIS DESCRIBED IN THE BUSINESS CASE

- The procurement method refers to how the funding monies are spent to implement the recommended technical alternative

- The discussion of the selected procurement method in the business case includes a brief analysis—
  - Evaluates multiple procurement methods using a set of criteria that emphasizes feasibility and efficiency
 - Results in demonstrating the suitability of the selected method of procurement

IMPLEMENTATION PLAN

Funding Source →

Procurement Method →

Funding **Management**

← Risk Mitigation Plan

← Performance Measures

PUBLIC SAFETY AGENCIES AT ALL LEVELS OF GOVERNMENT EMPLOY A VARIETY OF PROCUREMENT METHODS TO MEET THEIR COMMUNICATIONS NEEDS
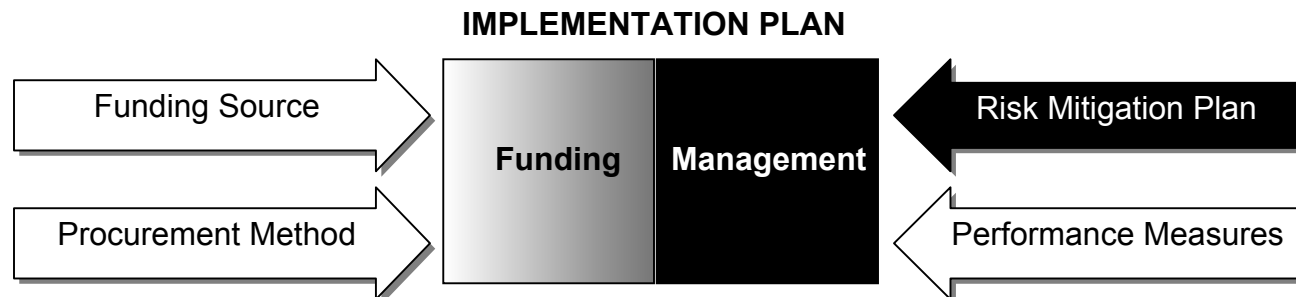
- The most common approach for state and local public safety agencies is purchasing and owning the system

- Several state-level public safety agencies, such as those in South Carolina, Georgia, and Alabama, have entered leasing agreements with commercial entities for using the system infrastructure

- As demonstrated by the Cheyenne Fire Department's contract with Nextel, several public safety agencies across the Nation have chosen to enter fee-for-service agreements with commercial entities for leasing airtime on private, commercial networks for subscriber units (i.e., mobile and portable radios). Note: This agreement is ending and the Cheyenne Fire Department is building an agency-owned system

- Hybrid arrangements⎯using multiple procurement methods (e.g., owning and leasing network infrastructure)⎯have also been used to meet the budgetary needs of public safety agencies at the local and state levels

- Because several methods of procurement for public safety LMR systems involve commercial entities, the commercial business perspective must also be considered (e.g., would the commercial entity be making a wise business decision entering an agreement?)
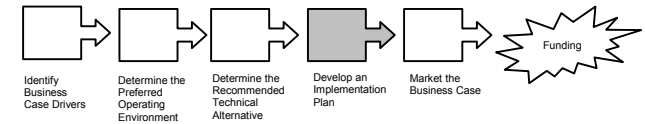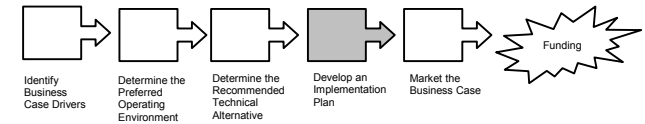
TURNING TO THE MANAGEMENT ASPECTS OF THE IMPLEMENTATION PLAN, THE RISK MITIGATION PLAN ENSURES THAT THE RECOMMENDED TECHNICAL ALTERNATIVE WILL BE IMPLEMENTED ON TIME, WITHIN BUDGET, AND IN ACCORDANCE WITH SPECIFIC TECHNICAL AND OPERATIONAL OBJECTIVES

- Risks are defined as potential events or outcomes that negatively impact the implementation of the recommended technical alternative

- The risk mitigation plan serves as a management tool for guiding an uninterrupted implementation of the recommended technical alternative

- Displaying a risk mitigation plan in the business case also provides the reader with a forecast of risks specific to the recommended technical alternative
    - Provides a more detailed account of risks than the risk analysis described in Section IV
    - Demonstrates the project team's understanding of the vulnerabilities of the initiative

- Specifically, the risk mitigation plan—
    - Forecasts, analyzes, and prioritizes risks
    - Develops mitigation strategies for accepting, transferring, or reducing the impact of each risk throughout the project's life cycle
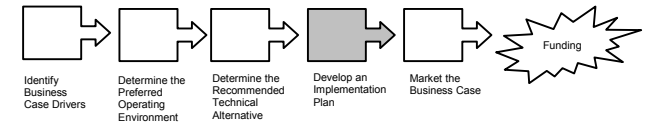
IMPLEMENTATION PLAN

Funding Source →

Procurement Method →

Funding | **Management**

← Risk Mitigation Plan

← Performance Measures

THE RISK MITIGATION PLAN IS BEST RECORDED IN THE BUSINESS CASE USING A TABLE TO CONCISELY PORTRAY THE DATA

- At a minimum, the risk mitigation plan lists, by column, the following factors
  - Risk (listed in order of priority)
  - Entity responsible for addressing risk
  - Risk measurements (e.g., cost, impact on public safety, and probability of occurrence)
  - Risk mitigation strategy

- The following risk mitigation plan includes mock data related to major public safety LMR projects and is intended to serve solely as a model for the PSMC Initiative

| RISK (By Priority)	RESPONSIBLE ENTITY	RISK MEASUREMENTS			MITIGATION STRATEGIES
		Cost	Impact on Public Safety	Probability	
Inability to change culture of local autonomy (municipalities and counties accustomed to owning and operating own systems)	WYDOT and PSMC Initiative Partners	Low	Medium	High	1) Establish partnership agreements with several agencies in the development process, and allow others to join when they are ready; 2) Continue outreach and education of successful state and local partnerships
Communications and interoperability irregularities experienced during transition	LMR infrastructure and equipment vendors	Medium	High	Medium	1) Develop comprehensive transition plans supported by best practices; 2) Hold training and exercises for new system elements to minimize irregularities
Inability to acquire additional funding from the state's general fund	WYDOT and PSMC Initiative Partners	High	High	Medium	1) Continually review and revise funding requests to suit needs of state legislators; 2) Keep high-level decision makers informed of progress
Insufficient availability of interoperability frequencies	WYDOT and PSMC Initiative Partners	Low	High	Medium	1) Coordinate with the Federal Communications Commission (FCC) for sufficient interoperability spectrum; 2) Petition the FCC for the use of more interoperability spectrum in public safety, federal, and nonfederal bands

IN ADDITION TO THE RISK MANAGEMENT PLAN, PERFORMANCE MEASURES ENSURE THAT THE IMPLEMENTATION PLAN MEETS THE INITIATIVE'S STRATEGIC END GOALS

- Performance measures are used as a management strategy directing the implementation schedule toward specific end goals
  - Designate critical milestones denoting important technical, managerial, and financial accomplishments
  - Promote vendor accountability and maximize effectiveness by identifying goals at the outset of the project

- Documenting the performance measures in the business case—
  - Exhibits the standards set for the project team and the vendor partners
 - Offers opportunities to explicitly address business case drivers
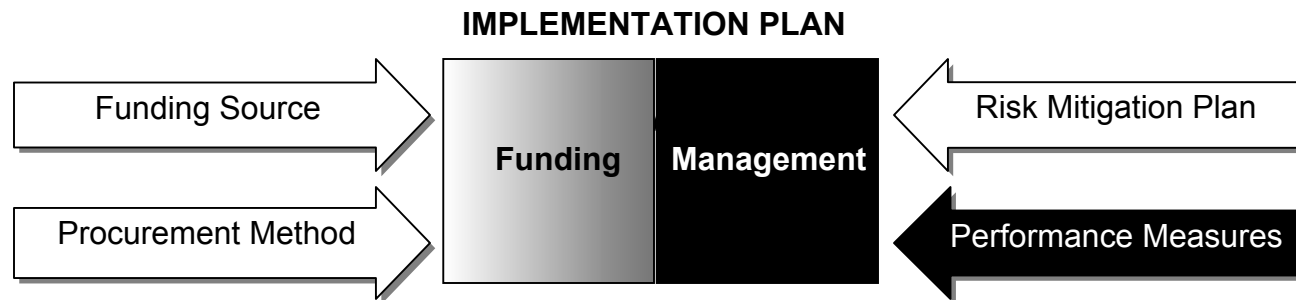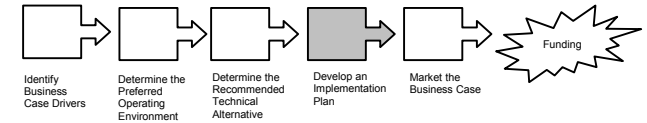
IMPLEMENTATION PLAN

SIMILAR TO THE RISK MITIGATION PLAN, PERFORMANCE MEASURES ARE MOST EFFECTIVELY DOCUMENTED IN THE BUSINESS CASE BY USING A TABLE

- The performance measures table evaluates the recommended technical alternative periodically, culminating in targeted end goals
  - Performance measures are grouped by task area (e.g., technical, financial, and management)
  - Targeted end goals are deliberately set in the business plan—before implementation—to illustrate the level of accomplishment envisioned for each performance measure (e.g., 5 out of 23 county agencies using the system)

- The following table of performance measures includes mock data related to major public safety LMR projects and is intended to serve solely as a model for the PSMC Initiative

Performance Measure	Year 1	Year 2	Year 3	Years 4	Year 5—Target
Technical Measures					
Number of participating municipal and county public safety agencies (115 possible participants)	20	35	50	65	80
Number of participating state public safety entities (15 possible participants)	4	8	11	13	15
Percentage increase in composite coverage area available to participating agencies	5%	15%	25%	35%	40%
Financial Measures					
Percentage reduction in LMR contract actions for participating agencies	5%	15%	25%	40%	50%
Cost savings contributed to consolidated, shared LMR resources for participating agencies	10%	20%	30%	40%	50%
Management Measures					
Number of partnerships with local, state, and federal, entities (25 possible partnerships)	4	10	14	18	20
Percentage of participating agencies involved in planning efforts	15%	35%	65%	85%	100%
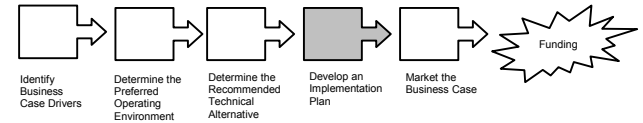
FOR THE PSMC INITIATIVE BUSINESS CASE, THE PERFORMANCE MEASURES PLAN PROVIDES AN OPPORTUNITY TO ADDRESS THE FIRST, SECOND, AND SIXTH BUSINESS CASE DRIVERS IDENTIFIED IN SECTION II

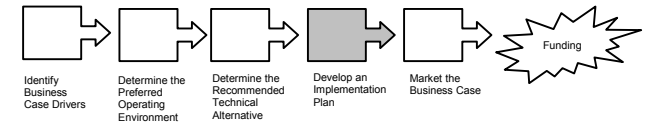|		
Section II, Business Case Drivers **1. Demonstrate how the PSMC Initiative will improve interoperability across all levels of government (i.e., local, state, and federal).**	**Section II, Business Case Drivers** **2. Integrate local participation and input in the planning, development, and rollout of the PSMC Initiative.**	**Section II, Business Case Drivers** **6. Demonstrate the PSMC Initiative as a sound, enduring enterprise investment for Wyoming.**

- To address each of these drivers, the performance measures for the PSMC Initiative can set goals for, and track the progress of, the following issues–
  - The level of interoperability achieved among participating public safety agencies as the PSMC Initiative is implemented (Business Case Driver #1)
  - The degree of integrating municipal and county public safety agencies as partners in planning, developing, and implementing the PSMC Initiative (Business Case Driver #2)
  - The degree to which the wireless communications needs of several state and local public safety agencies are met by the PSMC Initiative (Business Case Driver #6)
  - Long-term cost savings resulting from shared costs and technical scalability (Business Case Driver #6)

MOVING FORWARD WITH THE DEVELOPMENT OF THE IMPLEMENTATION PLAN IN THE BUSINESS CASE, IT IS IMPORTANT TO EMPHASIZE FLEXIBILITY

- Given the complexities of major IT projects, the ability to adjust appropriately and effectively remains crucial

- The components of the implementation plan discussed in this section provide a flexible approach that helps anticipate and adjust to unforeseen occurrences or variables

- Regularly monitoring the implementation relative to the funding source, procurement method, risk mitigation plan, and performance measures helps predict needed adjustments caused by evolving or unforeseen variables
  - For major IT initiatives, practical effects of such adjustments could include—
    - Changes in network design
    - Refinements in how funding is managed
    - Enhancements to organizational responsibilities and project policies

VI. MARKET THE BUSINESS CASE
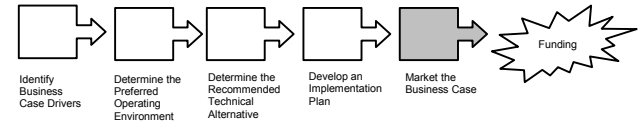
THIS SECTION DISCUSSES HOW TO BEST MARKET THE BUSINESS CASE TO STAKEHOLDER AUDIENCES

- This section first defines the purpose of marketing the business case and then discusses the four key factors shaping the marketing effort—
    − Stakeholder audiences
    − Preferred presentation formats
    − Stakeholder audience primary interests
    − Optimal communications means (e.g., formal presentations, meeting discussions)

- Where appropriate, factual data gathered by the PSWN Program is included as supporting information
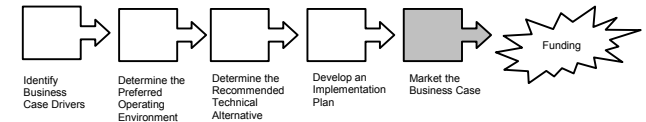
MARKETING THE BUSINESS CASE SERVES AS A CRITICAL STEP THAT HELPS REDUCE OPPOSITION AND GAIN WIDESPREAD SUPPORT

- The marketing effort involves carefully and deliberately addressing the primary interests of the many stakeholder audiences that the IT initiative may affect

- Marketing the business case serves two purposes: (1) raise awareness and (2) educate
    - Raising awareness among stakeholder audiences involves—
        - Exposing and explaining the need for the project
        - Explaining how the initiative meets the need effectively
        - Building support for the initiative
    - Educating stakeholder audiences involves—
        - Increasing the understanding of how—technically and operationally—the initiative will work
        - Increasing the understanding of how the initiative will specifically benefit each stakeholder audience
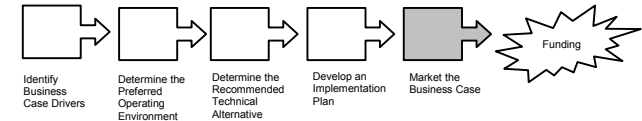
THE MARKETING EFFORT IS SHAPED BY FOUR FACTORS: STAKEHOLDER AUDIENCES, PREFERRED PRESENTATION FORMATS, STAKEHOLDER AUDIENCE INTERESTS, AND OPTIMAL COMMUNICATIONS MEANS

- Stakeholder audiences include the broad-based groups that will be positively or negatively affected by the initiative put forth in the business case
  - The focus of the marketing effort is segmented by each stakeholder audience
  - The remaining marketing factors apply to the unique characteristics of each stakeholder audience

- Presenting the business case in multiple formats suits the varying informational needs of the stakeholder audiences
  - Each stakeholder audience will have distinct preferences for informational material formats
  - The data contained in the business case can be tailored to multiple formats (e.g., one-page glossy, presentation slides, and detailed report)
  - Each presentation of the business case includes the core components of the business case
    - ➢ Description of the limitations of the current operating environment
    - ➢ Costs, benefits, and risks analysis of several technical alternatives
    - ➢ Recommended technical alternative
    - ➢ Implementation plan

- Stakeholder audience interests include the distinct set of priority issues that relates to the initiative put forth in the business case
  - Much of this information may be leveraged from previous data collection efforts (e.g., stakeholder analysis)
  - Highlighting and addressing the audience's key interests in the presentation of the business case garners each audience's initial support

- The means in which the business case is delivered is critical to securing a positive first impression
  - Example communications means include civic forums, conference or meeting presentations, or informal conversations
  - Note that a sizeable portion of the marketing effort may be delivered through formal or informal dialogue, excluding the use of "hard copies" for marketing the business case
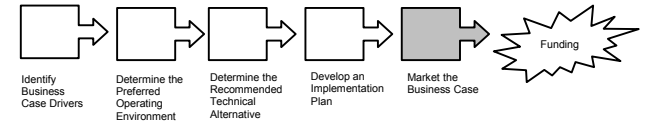
ONCE INFORMATION FOR EACH OF THE FOUR MARKETING FACTORS HAS BEEN GATHERED, IT IS CRITICAL TO "TRAIN" MARKETING TEAM MEMBERS ON THE BASIC FACTS OF EACH STAKEHOLDER AUDIENCE

- The marketing team is likely composed of a diverse collection of advocates, ranging from those developing the business case to high-level champions (e.g., state representatives or senators)

- Critical to the marketing effort is getting the marketing team "on the same page"—a uniform, basic marketing message prevents inconsistencies in regard to the key aspects of the initiative

- Capturing and instilling in the marketing team the fundamental marketing factors associated with each stakeholder audience helps ensure a uniform delivery
  - A table succinctly capturing the four marketing factors serves as a useful base for the marketing team
  - The elements captured in this table subsequently serve as a checklist for the project team in their development of marketing tools and strategies
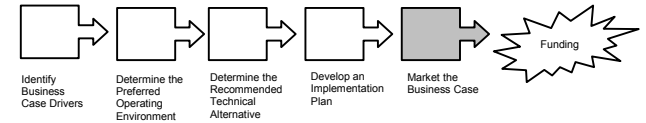
STAKEHOLDER AUDIENCE	PREFERRED PRESENTATION FORMAT	PRIORITY INTERESTS	OPTIMAL COMMUNICATIONS MEANS
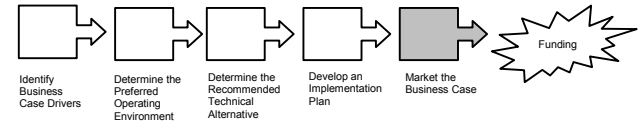
THE PSWN PROGRAM COLLECTED PRELIMINARY DATA FOR EACH FACTOR SHAPING THE PSMC INITIATIVE'S MARKETING EFFORT

- **Stakeholder Audiences:** Based on initial research, there are three broad-based stakeholder audiences for the PSMC Initiative–
    - High-level decision makers: state legislators, senior representatives and senators, and the governor's office and cabinet
    - Wyoming public safety LMR user community
    - Wyoming constituents

- **Preferred Presentation Format:** According to Representative Wayne Johnson, legislators prefer informational briefs presented in fewer than two pages and supported with anecdotal evidence

- **Priority Interests:** Drawn from the data collection efforts documented in Section II, some stakeholder audiences' priority interests include—
    - For high-level decision makers: good government and improving local interoperability
    - For the Wyoming public safety LMR user community: improving statewide coverage and relieving channel congestion

THE PSWN PROGRAM COLLECTED PRELIMINARY DATA FOR EACH FACTOR SHAPING THE PSMC INITIATIVE'S MARKETING EFFORT (CONTINUED)

- **Optimal Communications Means:** Based on the PSWN Program's initial research, one possible high-impact communications means for educating Wyoming constituents is presenting before meetings of various municipal organizations
  - A large portion of Wyoming constituents belongs to one or more municipal organization
  - Examples of such organizations include Kiwanis International, Lions Club, or The League of Women Voters (LWV)

STAKEHOLDER AUDIENCE	PREFERRED PRESENTATION FORMAT	PRIORITY INTERESTS	OPTIMIAL COMMUNICATIONS MEANS
High-level decision makers	• Under two pages, with anecdotal evidence	• Good government • Anecdotal evidence • Improving local interoperability	*No data collected*
Public safety LMR user community	*No data collected*	• Improved statewide coverage • No channel congestion	*No data collected*
Wyoming constituents	*No data collected*	*No data collected*	• Municipal organization meetings (e.g., Kiwanis, Lions, LWV)

VII. CONCLUSION

Conclusion…Importance of Flexibility…

THE BUSINESS CASE STRATEGY SERVES AS A FLEXIBLE MODEL FOR GAINING FUNDING

Identify Business Case Drivers → Determine the Preferred Operating Environment → Determine the Recommended Technical Alternative → Develop an Implementation Plan → Market the Business Case → Funding

IDENTIFY OBJECTIVES	RESULTS
IDENTIFY CONSTRAINTS	RESULTS
IDENTIFY STAKEHOLDER INTERESTS	RESULTS

ANALYZE DATA → **BUSINESS CASE DRIVERS**

STAKEHOLDER AUDIENCE	PREFERRED PRESENTATION FORMAT	PRIORITY INTERESTS	OPTIMAL COMMUNICATIONS MEANS

IMPLEMENTATION PLAN

Funding Source Analysis → **Funding** **Management** ← Risk Mitigation Plan

Procurement Method → ← Performance Measures

CURRENT OPERATING ENVIRONMENT ⬍ PREFERRED OPERATING ENVIRONMENT

GAP ANALYSIS

Identify all possible technical alternatives → Perform life-cycle costs analysis → Perform benefits analysis → Perform risks analysis → Recommended technical alternative

Conclusion…Importance of Flexibility…

THE BUSINESS CASE STRATEGY SERVES AS A FLEXIBLE MODEL FOR GAINING FUNDING (CONTINUED)

- The comprehensive strategy is designed to easily adapt to the changing circumstances that frequently characterize long-term major IT investments
  - For public safety LMR initiatives, such circumstances include—
    - ➢ Evolving technology
    - ➢ Varying primary and secondary funding sources
    - ➢ Spectrum availability
    - ➢ New operational requirements

- The individual components of the strategy also provide a flexible framework for crafting the pieces and maximizing the effectiveness of the business case to meet the informational needs of specific stakeholders

- The strategy may also be used to build business cases to gain stakeholder buy-in for various end goals supporting the public safety communications mission
  - On a recurring or one-time basis
  - Involving technical or nontechnical goals

Conclusion…Results of PSMC Request for Proposal…

LOOKING AHEAD, THE RESULTS OF THE RFP SOON TO BE ISSUED BY WYDOT WILL POSITION THE PSMC PROJECT TEAM WELL FOR DEVELOPING A BUSINESS CASE

- By completing many of the requirements set forth by the RFP, the awarded contractor will provide several key data components needed to build the PSMC Initiative business case
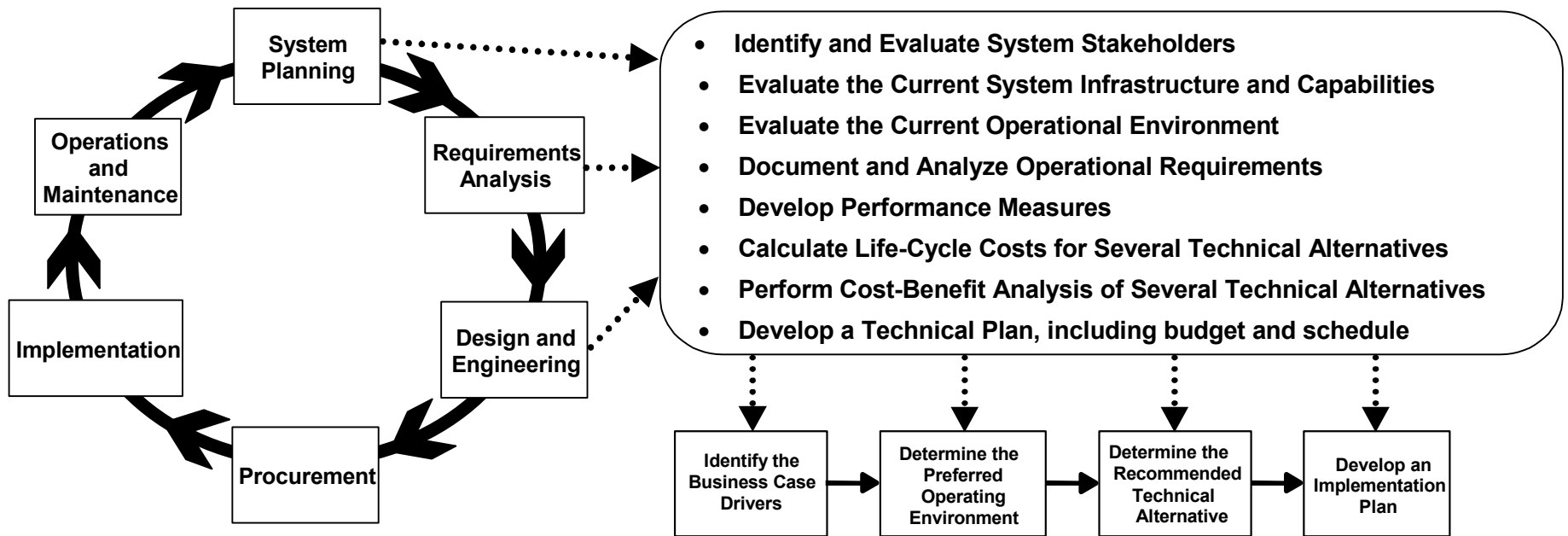
- As an initial basis of support for the business case, these data components will help initiate the development of the PSMC Initiative business case

APPENDIX A. ACRONYMS

ACRONYMS

A&I	Department of Administration and Information
APCO	Association of Public Safety Communication Officials–International
AVL	Automatic Vehicle Location
BLM	Bureau of Land Management
DES	Data Encryption Standard
EDACS	Enhanced Digital Access Communications System
FCC	Federal Communications Commission
FD	Fire Department
GHz	Gigahertz
IT	Information Technology
MDT	Mobile Data Terminal
LMR	Land Mobile Radio
LTR	Logic Trunked Radio
LWV	League of Women Voters
MOU	Memorandum of Understanding
MHz	Megahertz
MSRP	Manufacturer Suggested Retail Price
O&M	Operations and Maintenance
PD	Police Department
PSMC	Public Safety Mobile Communications
PSWN	Public Safety Wireless Network Program
RFP	Request for Proposal
SALECS	State Agency Law Enforcement Communications System
SD	Sheriff's Departments
SIEC	State Interoperability Executive Committee
UHF	Ultra high frequency
VHF	Very high frequency
WAM	Wyoming Association of Municipalities
WCCA	Wyoming County Commissioners Association
WYDOT	Wyoming Department of Transportation