Executive Decision Making for Transportation Capacity: The Multiagency Context

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Executive Decision Making for Transportation Capacity

The Multiagency Context

CAMBRIDGE SYSTEMATICS, INC.

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FRED SKAER
Consultant

AND

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The Second Strategic Highway Research Program

America's highway system is critical to meeting the mobility and economic needs of local communities, regions, and the nation. Developments in research and technology—such as advanced materials, communications technology, new data collection technologies, and human factors science—offer a new opportunity to improve the safety and reliability of this important national resource. Breakthrough resolution of significant transportation problems, however, requires concentrated resources over a short time frame. Reflecting this need, the second Strategic Highway Research Program (SHRP 2) has an intense, large-scale focus, integrates multiple fields of research and technology, and is fundamentally different from the broad, mission-oriented, discipline-based research programs that have been the mainstay of the highway research industry for half a century.

The need for SHRP 2 was identified in *TRB Special Report 260: Strategic Highway Research: Saving Lives, Reducing Congestion, Improving Quality of Life,* published in 2001 and based on a study sponsored by Congress through the Transportation Equity Act for the 21st Century (TEA-21). SHRP 2, modeled after the first Strategic Highway Research Program, is a focused, time-constrained, management-driven program designed to complement existing highway research programs. SHRP 2 focuses on applied research in four areas: Safety, to prevent or reduce the severity of highway crashes by understanding driver behavior; Renewal, to address the aging infrastructure through rapid design and construction methods that cause minimal disruptions and produce lasting facilities; Reliability, to reduce congestion through incident reduction, management, response, and mitigation; and Capacity, to integrate mobility, economic, environmental, and community needs in the planning and designing of new transportation capacity.

SHRP 2 was authorized in August 2005 as part of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The program is managed by the Transportation Research Board (TRB) on behalf of the National Research Council (NRC). SHRP 2 is conducted under a memorandum of understanding among the American Association of State Highway and Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), and the National Academy of Sciences, parent organization of TRB and NRC. The program provides for competitive, merit-based selection of research contractors; independent research project oversight; and dissemination of research results.

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SHRP 2 STAFF

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Cynthia Allen, *Editor*
James Bryant, *Senior Program Officer, Renewal*
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David Plazak, *Senior Program Officer, Capacity*
Dean Trackman, *Managing Editor*
Connie Woldu, *Administrative Coordinator*

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FOREWORD

Jo Allen Gause, *SHRP 2 Senior Program Officer, Capacity*

Transportation for Communities—Advancing Projects through Partnerships (TCAPP) is a web-based resource that provides agencies and practitioners with guidance on reaching collaborative decisions as they work through the transportation planning, programming, and permitting processes. TCAPP is designed for practitioners, but to succeed in practice, it will need support from upper-level managers and CEOs within transportation and environmental resource agencies. Based on extensive market research, this report presents strategies for communicating the value of TCAPP to the target audience.

This report sets out marketing principles, potential marketing strategies, and key messages that can serve as foundational research for subsequent outreach efforts and implementation of TCAPP. The audience for TCAPP includes any agency that has involvement in a transportation capacity project, on any level. This is a vast and diverse audience, encompassing numerous federal agencies, tribal entities, state governments, metropolitan areas, and nongovernmental agencies. While the agencies' missions are distinct, they are often overlapping, and they approach issues relevant to transportation in different ways. The first step in the research was to document and synthesize the leadership context and structure of these agencies.

The research included an effort to illuminate the issues various audiences of TCAPP face, how collaboration and TCAPP can play a role, and the best way to disseminate information about TCAPP and its benefits. The first phase was a facilitated charrette-style meeting with industry leaders. In the second phase, the research team, led by Elizabeth Sanford of Cambridge Systematics, expanded on the preliminary findings from the charrette through interviews with decision makers across agencies, positions, and geographic regions. Based on the results of the market research, the research team developed messages and potential strategies that effectively convey the value of TCAPP to decision makers in transportation agencies as well as executives of resource agencies who review and often approve or reject alternatives for transportation capacity projects.

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Executive Summary

The second Strategic Highway Research Program (SHRP 2) Capacity area is working toward designing a transportation planning and project development decision-making framework that better integrates transportation decisions with social, economic, and environmental considerations. Transportation for Communities—Advancing Projects through Partnership (TCAPP) is the cornerstone of the SHRP 2 Capacity program area. TCAPP delineates a systematic process for interest-based problem solving and collaborative decision making. The final product, found on the website www.transportationforcommunities.com, provides agencies and practitioners with guidance on reaching collaborative decisions as they work through the traditional transportation planning, programming, and permitting processes. TCAPP and its Decision Guide are supported by a series of related research projects that cover topics such as performance measures, greenhouse gas emissions, community visioning, economic impacts, and others.

TCAPP was originally developed with practitioners as the main audience; however, to succeed in practice, TCAPP will need support from and understanding of the executives of transportation agencies and environmental resource agencies. These leaders will need to be the champions for collaborative decision making in a multi-agency context. The objective of SHRP 2 C22, Executive Decision Making for Transportation Capacity: The Multiagency Context, is to ascertain what benefits of TCAPP resonate with leaders of transportation and resource agencies, and to inquire about what messages are appropriate for and make a compelling case for the TCAPP approach to collaborative decision making. The final product of this effort is the identification of marketing principles, potential marketing strategies, messages, and media that can serve as foundational research for subsequent marketing, outreach, and implementation efforts. The principles, potential strategies, messages, and media approaches were developed on the basis of aggregate findings from conversations and interviews with past and current leaders of transportation and environmental resource agencies. The interviews sought to gather data about the attributes of these individuals, their experiences and perspectives on collaboration, and their understanding of TCAPP. These findings translate into considerations for future marketing plan actions, including SHRP 2 C37, Develop a Marketing and Communications Plan for TCAPP, and implementation planning activities under way by others, and suggest specific messages and methods that could be effective when marketing TCAPP to executive leaders.

The Audience

The audience for TCAPP includes any agency that has involvement in a transportation capacity project, on any level. One of the inherent issues with project delivery is the fact that the partner agencies on a particular project may potentially come to the table with misaligned goals and dissimilar desired outcomes for a proposed project. This misalignment is rooted in the fact that the agencies are driven by different missions and is then magnified by the varied cultures and structures

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of these agencies. In addition, the agency's leaders are likely to be quite different, both in career experience and background and in the way they hold their position (e.g., appointed, career). This section explores the attributes of the agencies and the characteristics of their leadership positions, and includes federal agencies, Native American tribes, state governments, metropolitan governments, and nongovernmental organizations.

Research Findings

Qualitative data were gathered for this effort through structured interviews and conversations with a range of current and past transportation and resource agency leaders. These leaders had a variety of relationships with TCAPP and collaboration, ranging from the strong supporters of the concepts contained in TCAPP to those who had very little familiarity with the SHRP Capacity research. While a range of messages was heard throughout the interviews, leaders in all types of agencies agreed that there are some collective issues and challenges facing everyone today. These include

- A shift in thinking about highway capacity;
- A focus on performance management;
- Valuation of strategic planning; and
- A reliance on partnerships.

Indeed, all interviewees recognized that collaboration and effective partnering are necessary parts of getting transportation projects built. Though the method and the relationship with TCAPP might vary some, there are three key ingredients for success in highway capacity projects that leaders from all agency types agreed on:

1. Relationships matter, and although they take time, they are worth building;
2. Goals must be aligned, or the partnership will inevitably break down; and
3. Without funding and other resources, no project (collaborative or not) will ever be successful.

The interviews revealed a number of ways that leaders and their agencies differ in their perspectives on, and relationships with, collaboration. These distinctions are important to note, as the messages for marketing TCAPP need to be crafted to reach the range of agencies that should be involved in the process. The messages that will resonate most easily across all agency types are those that specifically define and quantify benefits of collaborative processes (e.g., cost savings or time savings), as well as the outcome.

The interviews also revealed that peer agencies and those professional associations such as the American Association of State Highway and Transportation Officials (AASHTO) and Transportation Research Board (TRB) are the ones that agency leaders looked to for guidance and communication about new research. The most effective method of transmitting the information was face-to-face meetings with peers.

Marketing Principles, Strategies, Messages, and Media

The marketing principles were derived directly from the findings aggregated from the interviews. One theme heard during interviews revolved around the finding that there exists a range of (and sometimes negative) connotations of the word "collaboration." While it is viewed as inevitable, integral, and critical in today's environment, it also can be understood as bogging down the process or used by those who are not strong enough to carry a process through on their own. At the same time, executive leaders understand that successfully managing complex transportation capacity projects requires working together with partner agencies. It may be prudent to consider using a new term to invoke a partnership that is based upon a common desire to solve problems.

The marketing principles identified in this work are as follows:

- Peer-to-peer marketing is central to success. Executive leaders need to hear about collaborative practices from their peers and partner agencies in the same geographic area.
- Messengers are as important as the message. Slogans without the right speaker are hollow. Messages need to be tiered and tailored to meet the geographic and organizational contexts of each agency audience.
- Geographic and organizational structures dictate a need for flexible marketing approaches. These factors are different for each agency and also vary among state departments of transportation (DOTs). It is very important to structure marketing approaches with this diversity as a starting point. Decision makers are found in different positions and different geographies, depending on the agency in question.

A series of potential marketing strategies also arose for consideration. For example, one potential approach to ensure that TCAPP is fully adopted by an organization is to market TCAPP's concepts from both the top down and the bottom up. This will result in leaders who are familiar with the process and its possible benefits, and also a cadre of young staff who can bring the culture of interest-based problem solving into the organization.

While transportation and environmental resource agencies may differ on the key elements of a successful collaborative process, the agencies are relatively unified on the messages that they need to hear in order to adopt a particular process, and how they prefer to hear them. Potential messages include pointing out that this collaborative or interest-based problem-solving process will

- Save you time;
- Save you money;
- Lead to a better outcome; and
- Lead to better, easier decisions.

When one is ascertaining the most effective ways to reach executive leaders, it is important to recognize that decision makers are notoriously busy, preoccupied with urgent matters and important initiatives. Peer-to-peer exchange and authoritative information from trusted sources were often cited as preferred ways to receive information.

The outcomes of this research, including the marketing principles, potential strategies, messages, and media, are directly relevant to the work currently under way on SHRP 2 C37 and other related work on implementation of the program. Coordination with SHRP 2 staff and the principal investigator of SHRP 2 C37 has been an important element of SHRP 2 C22.

CHAPTER 1

Project Background

Purpose of the Project

The second Strategic Highway Research Program (SHRP 2) Capacity program area is working toward designing a transportation planning and project development decision-making framework that better integrates transportation decisions with social, economic, and environmental considerations. Transportation for Communities—Advancing Projects through Partnership (TCAPP) is the cornerstone of the SHRP 2 Capacity program area and contains a systematic decision guide for collaborative, or interest-based, problem solving. The final product, found on the website www.transportationforcommunities .com, provides agencies and practitioners with guidance on reaching collaborative decisions as they work through the traditional transportation planning, programming, and permitting processes (*1*). TCAPP and the Decision Guide are supported by a series of related research projects that cover topics such as performance measures, greenhouse gas emissions, community visioning, economic impacts, and others.

At this point, TCAPP is aimed at practitioners. However, to succeed in practice, it will need support from upper-level managers and CEOs within DOTs, other transportation agencies, and environmental resource agencies. These managers and chief executive officers (CEOs) will need to be the champions for process change. The purpose of SHRP 2 Capacity Project C22, Executive Decision Making for Transportation Capacity: The Multiagency Context, is to translate the benefits of TCAPP into marketing principles, potential strategies, and messages that are appropriate for, and will make a compelling case for, transportation and resource agency decision makers.

This final report documents the research conducted under this task, synthesizes the findings, and presents principled direction from the market research and some potential next steps that could be used by the SHRP 2 implementation team. The potential marketing approach includes strategies, messages, and media approaches which, based on the research, should reach and persuade decision makers to consider implementation of one or more of the tools included on the TCAPP website.

Organization of the Project

Chapter 2 is a brief overview of TCAPP and provides background context for this research. Though TCAPP is an evolving product and will continue to be refined and expanded, the description in this report is consistent with how it was presented to interviewees for the SHRP 2 C22 research effort in the fall of 2011. Chapter 3 is an overview of the target audience: a profile of related agencies and their leaders. It is a summary of the work conducted under Task 1 and documented in the Task 1 Technical Memorandum. Chapter 4 describes the research findings from this effort and is a synthesis of data gathered through the agency research, charrette, and interviews. Chapter 5 identifies marketing principles, potential marketing strategies, messages, and media and is the key takeaway from this work. While it builds upon the research, Chapter 5 also can be viewed as a stand-alone document for those who are solely interested in foundational principles for marketing TCAPP to executive leaders. Chapter 6 presents an array of potential next steps.

CHAPTER 2

The Product

SHRP 2 Capacity Program

The SHRP 2 Capacity program is founded in the desire to deliver highway capacity projects faster and in a more environmentally beneficial way. Congress's charge to the SHRP 2 Capacity program was to "develop approaches and tools for systematically integrating environmental, economic, and community requirements into the analysis, planning, and design of new highway capacity" (2).

To accomplish this aim, the SHRP 2 Capacity program has developed Transportation for Communities—Advancing Projects through Partnerships (TCAPP). While much of the projected expansion of highways involves widening and upgrades, the public expects that transportation professionals first will pursue operations management strategies to optimize facility performance and second will be stewards of the environment and their communities. This broadening of goals (beyond simply constructing a highway system) involves many perspectives and interests, and makes collaborative decision making, or interest-based problem solving, a critical path for finding the most appropriate solution.

TCAPP Objectives

TCAPP is the product of SHRP 2 Capacity Project C01, A Framework for Collaborative Decision Making on Additions to Highway Capacity. TCAPP is a decision support tool that provides how-to information for advancing highway capacity projects through long-range planning, corridor planning, programming, and environmental review. TCAPP is built from the experiences of transportation partners and stakeholders, and it can improve how decisions are made to develop, prioritize, and inform transportation plans and projects.

The aim of this web-based resource is to enhance collaboration in transportation decision making. In order for transportation agencies to speed project delivery and have flexibility to consider nontraditional solutions, a systematic approach to collaboration is needed. This ensures that the right people are engaged at the right time. TCAPP outlines approaches for integrating environmental, economic, and community requirements into the analysis, planning, and design of new highway capacity.

TCAPP is based on the premise that users will benefit from detailed information that supports their current needs. One does not need to understand the entire transportation planning and project delivery process to benefit from TCAPP's resources. It does not have to be used all at once, but rather can be used to obtain resources and tools at each key decision point (KDP), and only those that are relevant.

TCAPP contains user portals for both partners and stakeholders. Partners are the four groups who make decisions affecting transportation: the Federal Highway Administration (FHWA), state departments of transportation (DOTs), metropolitan planning organizations (MPOs), and resource agencies. Stakeholders are anyone with an interest in transportation but without authority to make decisions. These user portals contain assessment tools and identify steps to improve one's ability to engage collaboratively.

In addition to providing collaborative tools, information, and resources, TCAPP also will integrate web resources developed through other SHRP 2 capacity projects, including Capacity Project C02, Performance Measurement Framework for Highway Capacity Decision Making, and Capacity Project C03, Interactions between Transportation Capacity, Economic Systems, and Land Use.

Summary of Key Features

TCAPP is divided into five sections: Collaboration Assessment, Decision Guide, My Agency Is, Practical Applications, and a Library. Links to additional research topics used to enhance TCAPP also are provided. Each section is briefly described. (Note: This summary represents TCAPP as it existed in the fall of 2011, when the outreach interviews commenced.

Refinements and changes have been made since this time in response to user feedback.)

Collaboration Assessment

The Collaboration Assessment portion of TCAPP helps to highlight specific ways in which collaboration can assist in scoping a plan or project, engaging stakeholders, and gaining consensus. The assessment consists of a survey geared toward either practitioners or stakeholders and designed to identify areas where the individual process or team dynamics are not supportive of collaboration and where miscommunication, misunderstanding, or infrequent participation has become a barrier for stakeholders. The assessment also provides some strategies to address these issues. General advice also is offered, providing definitions, potential risks, questions to consider, and reference links.

The survey asks users to respond to a series of statements in order to evaluate how well things are working in key areas. Results are provided on a 5-point scale from weak to strong, indicating areas that currently represent the greatest challenge to collaboration. Also included are strategies that one may consider to improve collaborative efforts as well as recommendations for using the Decision Guide to identify changes that will support greater collaboration.

Collaboration assessment areas are earmarked as important to either practitioner assessment or stakeholder assessment. Practitioner assessment areas include process steps, data and information, operational structure, tools and technology, decision-making authority, participant stability, role clarity, shared goals, sense of ownership, and practitioner communication. Stakeholder assessment areas include stakeholder communication, stakeholder understanding, and stakeholder commitment.

Decision Guide

The Decision Guide is the foundation of TCAPP (see Figure 2.1). It is an extensive web-based tool, with several key features. The Decision Guide has been created to build collaboration into transportation decision making systematically by allowing the right people to be at the table at the right time with the right information to make good choices that will stand up to scrutiny.

At its core, the Decision Guide outlines KDPs as required by the current legally mandated process within the four phases of transportation decision making: long-range planning, corridor planning, programming, and environmental review and permitting. Each KDP is outlined with information related to purpose and outcome, roles of partners, integration with other processes and decision points, questions that policy makers must consider, case study examples, technical support, and

special topics. The guide is kept at a relatively high level in order to remain applicable to all transportation agencies and is accompanied by a glossary of relevant terms as well as *TCAPP Connect,* an online forum where people can post questions, comments, and replies to each other.

Based on the principles of context sensitive solutions (CSS), the Decision Guide takes into consideration the transportation network as a whole, as well as its relationship with the community, environment, and economy. This approach to decision making has significant implications for the relationships and processes that support transportation decision making. The foundation of CSS and project management ensures that stakeholder concerns are addressed continuously during decision making, thus creating greater transparency and accountability.

KDPs are those points in the planning process that require approval from a high level or authority, need consensus among decision makers, or are required by law or regulation. Forty-two key decision points are outlined in the Decision Guide as common to all transportation agencies. The final key decision represented in the Decision Guide is the approval of the Record of Decision and the rendering of permits required to implement a transportation improvement.

TCAPP supports the integration of six specific external processes within transportation decision making: air quality conformity, land use, natural environment, human environment, capital improvement, and safety/security. The Decision Guide identifies the data, analysis, or decision from these external processes that should be considered at each key decision.

My Agency Is

TCAPP recognizes four decision-making partners in the transportation planning process: FHWA, state DOTs, MPOs, and resource agencies. In addition to these partners, TCAPP also provides information related to stakeholders, those with no decision-making authority who are affected or interested in the outcome of the process. The My Agency Is portion of TCAPP outlines each agency's interests in order for all partners to gain an understanding of what other partners care about. This section also assists in accessing the information in TCAPP tailored toward each agency.

The role of each partner depends on the decision being addressed, with the guide assigning one of the following roles to each of the agencies at each key decision point:

- Decision Maker: Acts as the lead agency or is required to take legal action at the key decision. May not be required to take legal action, but must agree to the decision before the process can move forward.
- Advisor: Provides feedback as to whether the decision is supported or opposed and whether there are particular

LONG RANGE TRANSPORTATION PLANNING

LRP-1	LRP-2	LRP-3	LRP-4	LRP-5	LRP-6	LRP-7	LRP-8	LRP-9
Approve Scope of LRTP Process	Approve Vision and Goals	Approve Evaluation Criteria, Methods and Measures	Approve Transportation Deficiencies	Approve Financial Assumptions	Approve Strategies	Approve Plan Scenarios	Adopt Preferred Plan Scenario	Adopt Finding of Conformity by MPO

LRP-10	LRP-11
Adopt LRTP by MPO	Approve Conformity Analysis

PROGRAMMING

PRO-1	PRO-2	PRO-3	PRO-4	PRO-5	PRO-6	PRO-7	PRO-8	PRO-9
Approve Revenue Sources	Approve Methodology for Identifying Project Costs and Criteria for Allocating Revenue	Approve Project List Drawn from Adopted Plan Scenario or Solution Set	Approve Project Prioritization	Reach Consensus on Draft TIP	Adopt TIP by MPO	Approve TIP by Governor and Incorporate into Draft STIP	Reach Consensus on Draft STIP	Approve STIP with respect to Conformity and Fiscal Constraint

CORRIDOR PLANNING

COR-1	COR-2	COR-3	COR-4	COR-5	COR-6	COR-7	COR-8	COR-9
Approve Scope of Corridor Planning Process	Approve Problem Statements and Opportunities	Approve Goals for the Corridor	Reach Consensus on Scope of Environmental Review and Analysis	Approve Evaluation Criteria, Methods and Measures	Approve Range of Solution Sets	Adopt Preferred Solution Set	Approve Evaluation Criteria, Methods and Measures for Prioritization of Projects	Adopt Priorities for Implementation

ENVIRONMENTAL REVIEW/NEPA MERGED WITH PERMITTING

ENV-1	ENV-2	ENV-3	ENV-4	ENV-5	ENV-6	ENV-7	ENV-8	ENV-9
Reach Consensus on Scope of Environmental Review	Approve Notice of Intent	Approve Purpose and Need/Reach Consensus on Project Purpose	Reach Consensus on Study Area	Approve Evaluation Criteria, Methods and Measures	Approve Full Range of Alternatives	Approve Alternatives to be Carried Forward	Approve Draft EIS with Conceptual Mitigation	Approve Resource Agency Public Notice

ENV-10	ENV-11	ENV-12	ENV-13	ENV-14	ENV-15
Approve Preferred Alternative/ LEDPA	Approve Final Jurisdictional Determination	Reach Consensus on Avoidance and Minimization for the LEDPA	Approve Final EIS	Approve the Record of Decision	Render Permit Decision and Approve Avoidance and Minimization

Figure 2.1. The Decision Guide.

issues of concern. Does not need to agree to the decision for the process to move forward, but may have decision-making power in subsequent key decisions or phases; thus, agreement is preferable.

- Observer: Limited involvement. Provides no input or direction in the decision, but is kept informed.
- No Role: No participation in the key decision.

TCAPP also assists stakeholders in identifying KDPs where there should be a flow of information between decision makers and stakeholders in order to ensure decisions incorporate the interests of those stakeholders.

Lastly, the My Agency Is section identifies key steps necessary in adding a new partner to the decision-making framework by using TCAPP.

Practical Applications

Any transportation project needs to move through the four stages of the decision-making process before it becomes a

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viable project for construction. The Practical Applications section provides information on how to use the Decision Guide to tackle relevant interest areas or challenges throughout these four stages. More specifically, this section assists in showing how to apply collaboration or interest-based problem solving to a subset of decision points in order to meet a specific challenge. Collaboration can help to overcome challenges that arise within each of these stages. Current topics include

- Long-range transportation planning;
- Corridor planning studies;
- Integrated programming and fiscal constraint;
- Environmental review mixed with permitting;
- Stakeholder collaboration;
- Integrated planning;
- Linking MPO planning and the National Environmental Policy Act of 1969 (NEPA);
- Streamlining a bottleneck project;
- Performance measures;
- Cumulative effects assessment and alternatives; and
- Visioning and transportation.

A summary of each of these topic areas is provided, including relevant reference links. Additionally, the Decision Guide is provided, with only those KDPs highlighted that are relevant to the topic at hand. This helps to identify those sections in the planning process that are affected by the topic being discussed.

Library

TCAPP's Library includes resources to assist in collaborative decision making, including case studies and reports. Case studies include a number of studies developed as part of TCAPP and related SHRP 2 projects. These studies provide real-world examples of successful practices, pitfalls, and lessons learned. The Reports section contains a variety of reports that also have been developed as part of TCAPP and related SHRP 2 projects. These reports provide detailed information on specific projects, including those associated with Project C06, Integration of Conservation, Highway Planning, and Environmental Permitting Using an Outcome-Based Ecosystem Approach, and a variety of others related to resource agency collaboration. The case study portion of the Library section is divided into the following categories:

- Long-range transportation planning;
- Corridor planning studies;
- Integrated programming and fiscal constraint;
- Environmental review merged with permitting;
- Natural environment;
- Stakeholder collaboration;
- Integrated planning;
- Linking MPO planning and NEPA;
- Streamlining a bottleneck project;
- Performance measures;
- Land use and economic impacts of transportation projects;
- Cumulative effects assessment and alternative (CEAA);
- Visioning and transportation; and
- Miscellaneous.

TCAPP and SHRP 2 C22

As of the writing of this report, TCAPP is a work in progress. It is still growing with new research being added as it is completed. It also is evolving in the sense that pilot test projects are providing an important feedback loop to assess user needs and preferences. Changes are made in direct response to pilot project input, and are still under way. The current site is a beta site, meaning that it will continue to change and evolve over time. However, the central concept of collaboration to support decision making among transportation agencies and their partners will remain. It is this concept that was emphasized during the course of the interviews conducted for this SHRP 2 C22 research.

During the course of the SHRP 2 C22 research, TCAPP was presented to decision makers to get their reactions and feedback on its benefits of TCAPP and how best to communicate its value to others, including other executives and the staff within their organizations. It is anticipated that TCAPP will be finalized as the SHRP 2 Capacity research program winds down. It will be completed and turned over to FHWA for ongoing upkeep and long-term residency. As additional research is added, more pilot tests are executed, and TCAPP gets out on the street, there will be additional feedback opportunities for the SHRP 2 implementation team, and it is anticipated that this feedback will ensure that TCAPP is kept current.

The Audience

In addition to the staff-level practitioners, the audience for TCAPP includes the leaders of the organizations that need to be engaged in collaboration. These leaders and their agencies each have unique interests, geographic organization, organizational hierarchies, and cultural leanings. By understanding the various segments of this diverse market, the C22 team can craft potential messages that are relevant to the backgrounds, motivations, and contexts for members of the target audience.

This section discusses key considerations in the overall context for collaboration and interest-based problem solving. Further, it identifies and describes the leadership cadres in the various organizations that are important in implementing a collaborative approach for advancing transportation capacity projects. This description of the context within which leadership is displayed is organized according to the following organizational groupings:

- Federal agencies;
- Native American tribes;
- State governments;
- Metropolitan area governments; and
- Nongovernmental organizations (NGOs).

This is a vast and diverse audience, encompassing an extensive federal government, 564 tribal entities, 50 state governments, 381 metropolitan areas, and thousands of NGOs. While the agencies' missions are distinct, they are often overlapping, and the agencies approach issues relevant to transportation from different perspectives. In addition, the leadership structure and decision-making authority surrounding transportation varies among the agencies. Add this to the inconsistent geographic boundaries of divisions or districts, and it can lead to a confusing situation for partnering agencies. As such, the detailed information that follows is fairly lengthy. It is the hope of the authors that a reader will go directly to the agency of interest and delve into relevant details. For those readers seeking an overview of audience characteristics, Table 3.1 provides an overview of the federal agencies, including their missions and how they are organized into regions or divisions.

Information was compiled primarily from web research of the various organizations profiled. When questions arose, clarification, interpretation, and contextualization were obtained via e-mail exchanges and telephone conversations, as needed.

The Context for Collaboration

When agency leaders create a climate of collaboration that spans a broad spectrum of project and process interactions and that aims to build productive long-term relationships among the agencies, this climate facilitates efficient and effective transportation decision making. By sending the right message through their words and actions, leaders will secure a greater level of partnership among the front line staff of each organization.

While the TCAPP Decision Guide focuses on capacity projects from planning through transportation improvement programming and project development, the reality is that the leadership of federal and state environmental resource and permitting agencies is not likely to get personally involved in any but the most highly visible transportation projects—and even then, not until that project faces a serious problem. Leaders rarely engage in the substantive issues involved in transportation planning. A more likely—but still rare—situation is for environmental agency leaders to get involved in approving and launching the products of initiatives to change business practices, processes, and relationships involving two or more key agencies (*3*). These programmatic agreements offer the potential of achieving positive outcomes for the agencies involved while saving staff time and budget, reducing project timelines, and avoiding interagency conflicts.

While these programmatic initiatives can take years to consummate, they can pay dividends to the agencies for decades. For example, a national initiative to merge the NEPA process used by FHWA with the permitting process of the U.S. Army

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Table 3.1. Federal Agency Missions and Organizational Structure

Agency Name	Mission	Senior Executive Title	Organizational Structure
Federal Highway Administration	To improve mobility on our nation's highways through national leadership, innovation, and program delivery.	Administrator	**3 Regions** (52 Field Service Offices, adhere state or district boundaries) Map: http://www.fhwa.dot.gov/about/field.cfm North (CT, IL, IN, IA, ME, MA, MI, MN, MS, NH, NJ, NY, OH, PA, RI, VT, WV, WI) South (AL, AR, DE, DC, FL, GA, KS, KY, LA, MD, MS, NC, OK, PR, SC, TN, TX, VA) West (AK, AZ, CA, CO, HI, ID, MN, NE, NV, NM, ND, OR, SD, UT, WA, WY)
U.S. Army Corps of Engineers	USACE Mission: Provide vital public engineering services in peace and war to strengthen our nation's security, energize the economy, and reduce risks from disasters. USACE Civil Works Mission: Contribute to the national welfare and serve the public by providing the nation and the Army with quality and responsive development and management of the nation's water resources; protection, restoration, and management of the environment; disaster response and recovery; engineering and technical services in an environmentally sustainable, economic, and technically sound manner through partnerships.	Assistant secretary of the Army	**8 Divisions** (37 District Offices, do not adhere to state boundaries) Map: www.usace.army.mil/Locations.aspx North Atlantic (6 district offices) South Atlantic (5 district offices) Great Lakes and Ohio River Division (7 district offices) Mississippi Valley Division (6 district offices) Northwestern Division (5 district offices) Southwestern Division (4 district offices) South Pacific Division (4 district offices)
Environmental Protection Agency	To protect human health and the environment.	Administrator	**10 Regions** (adhere to state boundaries) Map: http://www.epa.gov/aboutepa/where.html Region 1 (ME, NH, VT, MA, RI, CT) Region 2 (NY, NJ, PR, US VI) Region 3 (PA, DE, MD, DC, VA, WV) Region 4 (KY, TN, NC, SC, GA, AL, FL, MS) Region 5 (OH, IN, IL, MI, WI, MN) Region 6 (AR, LA, OK, TX, MN) Region 7 (IA, MO, NE, KS) Region 8 (ND, SD, MT, WY, CO, UT) Region 9 (NV, AZ, CA, HI) Region 10 (WA, OR, ID, AK)
Department of the Interior, Office of the Secretary	The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.	Secretary	**8 Regions** (adhere to state boundaries) Map: http://www.doi.gov/pmb/oepc/reo.cfm Boston, Mass., Regional Office (ME, NH, VT, MA, RI, CT, NY, NJ) Philadelphia, Pa., Regional Office (PA, DE, MD, VA, WV, OH, IN, MI, IL, WI, MN) Atlanta, Ga., Regional Office (NC, SC, KY, TN, GA, FL, AL, MS, PR, US VI, Guam) Albuquerque, N.M., Regional Office (AR, LA, OK, TX, NM) Denver, Colo., Regional Office (ND, SD, NE, IA, MO, KS, CO, MT, WY, UT) Portland, Ore., Regional Office (WA, OR, ID) San Francisco, Calif., Regional Office (CA, NV, AZ, HI) Anchorage, Alaska, Regional Office (AK)

Table 3.1. Federal Agency Missions and Organizational Structure (continued)

U.S. Fish and Wildlife Service	Work with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.	Director	**8 Regions** (generally adhere to state boundaries) Map: http://www.fws.gov/where/ Pacific Region (ID, OR, WA, HI, Pacific Islands) Southwest Region (AZ, NM, OK, TX) Great Lakes-Big Rivers Region (IL, IN, IA, MI, MS, MN, OH, WS) Southeast Region (AL, AR, FL, GA, KY, LA, MS, NC, PR, SC, TN) Northeast Region (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV) Mountain-Prairie Region (CO, KS, MN, ND, NE, SD, UT, WY) Alaska Region (AK) California and Nevada Region (CA, NV, Klamath Basin of Oregon)
National Park Service	The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.	Director	**7 Regions** (adhere to state boundaries) Map: www.nps.gov/aboutus/images/nps_regions_1.jpg Northeast Region (ME, NH, VT, MA, NY, RI, CT, NY, NJ, PA, DE, MD, VA, WV) National Capital Region (DC) Southeast Region (NC, SC, KY, TN, GA, FL, AL, MS, LA, PR) Midwest Region (OH, MI, IN, IL, WI, MN, IA, MS, AR, ND, SD, NE, KS) Intermountain Region (OK, TX, CO, WY, UT, NM, AZ) Pacific West Region (WA, OR, ID, NV, CA, HI) Alaska Region (AK)
National Marine Fisheries Service	Stewardship of living marine resources through science-based conservation and management and the promotion of healthy ecosystems.	Assistant administrator	**6 Regions** (adhere to state boundaries) Map: www.nmfs.noaa.gov/pr/health/coordinators.htm Alaska (AK) **Northeast** (ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, VA) **Northwest** (WA, OR) **Southeast** (NC, SC, GA, FL, AL, MS, LA, TX, PR, VI) **Southwest** (CA) **Pacific Islands** (HI, Guam, American Samoa, Commonwealth of the Northern Mariana Islands)
U.S. Forest Service	To sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.	Chief	**9 Regions** (generally adhere to state boundaries) Map: www.fs.fed.us/wildflowers/regions/index.shtml Eastern Region (ME, NH, VT, MA, RI, CT, NY, PA, NJ, DE, MD, WV, OH, MI, IN, IL, WI, MN, IA, MO) Southern Region (DC, VA, NC, SC, GA, FL, KY, TN, AL, MS, AR, LA, OK, TX) Rocky Mountain Region (SD, NE, KS, part of WY, CO) Northern Region (ND, MT, northern ID) Intermountain Region (Southern ID, part of WY, UT, NV) Southwestern Region (AZ, NM) Pacific Southwest Region (CA, HI) Pacific Northwest Region (WA, OR) Alaska Region (AK)
Advisory Council on Historic Preservation	The Advisory Council on Historic Preservation promotes the preservation, enhancement, and sustainable use of our nation's diverse historic resources, and advises the president and the Congress on national historic preservation policy.	Executive director	No regional designation

Corps of Engineers began in the mid-1980s and did not fully mature until after 2000. The NEPA-404 merger concept was largely ineffectual until a complaint that delays in the 404 process were preventing highways projects from contributing to the economic recovery from the 1990-to-1991 recession. Agency heads and top field executives from partner organizations convened at a summit, pledging to forge regional agreements to implement the NEPA-404 merger. By the end of the decade, NEPA-404 merge processes were in place covering most of the country.

Other programmatic initiatives seek simply to give agency staff permission to experiment and innovate along certain lines. One example is *Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects,* an interagency framework developed by the staffs of FHWA and seven federal environmental agencies that culminated in a report signed in 2005 by leaders at all eight agencies. More information can be found at www.environment.fhwa.dot.gov/ecological/eco_index.asp.

An important context for interagency collaboration is the nature of long-standing relationships among the agencies. The relationships are complex and varied, and an understanding of the major undercurrents in these relationships can help in crafting effective collaboration messages. To better understand the dynamics between transportation and environmental agencies, FHWA commissioned a survey by the Gallup Organization. The results of the 2006 transportation and resource agency manager survey, summarized in Table 3.2, underscore the conclusion that relationships could be improved by a number of trust-building measures on both sides of the transportation-environmental agency table. Respondents were asked for their overall general assessment of the sister agencies with which they worked. Transportation managers were asked general questions about the resource agencies and resource managers were asked general questions about transportation agencies.

Federal Agencies

Nine federal agencies (listed in Table 3.3) are involved in satisfactorily addressing key regulatory processes for transportation capacity projects. The TCAPP Decision Guide explicitly

Table 3.2. What Transportation and Environmental Agency Managers Think of Each Other

Ratings	Somewhat Agree (%)	Strongly Agree (%)
Resource Agencies Rating Transportation Agencies		
Understands your agency's mission.	41	26
Cares about your agency's mission.	34	16
Is committed to doing quality work.	43	33
Has competent staff.	51	27
There is a sufficient level of trust between your two agencies.	35	18
Is committed to making the environmental review process a timely one while ensuring environmentally sound projects.	33	19
Is willing to compromise.	37	11
There is a sufficient level of communication between your two agencies.	36	19
Is committed to protecting the environment.	30	16
Transportation Agencies Rating Resource Agencies		
Understands your agency's mission.	40	20
Cares about your agency's mission.	27	10
Is committed to doing quality work.	43	30
Has competent staff.	43	22
There is a sufficient level of trust between your two agencies.	30	14
Is committed to making the environmental review run efficiently.	30	13
Is willing to compromise.	26	4
There is a sufficient level of communication between your two agencies.	39	14
Is committed to transportation improvements.	16	12

Source: www.environment.fhwa.dot.gov/strmlng/Gallup/05-07_report/ch7_Genl_Managers.htm. *Survey for FHWA, Gallup Organization, 2006.*

Table 3.3. Federal Agencies and Their Involvement in Regulatory Processes

Agency	NEPA	404	4(f)	ESA	NHPA
Federal Highway Administration	●	●	●	●	●
U.S. Army Corps of Engineers	●	●		●	●
Environmental Protection Agency	●	●			
Department of the Interior, Office of the Secretary	●	●	●	●	
U.S. Fish and Wildlife Service	●	●		●	
National Park Service	●		●		
National Marine Fisheries Service	●	●		●	
U.S. Forest Service	●		●		
Advisory Council on Historic Preservation	●				●

Source: Cambridge Systematics, 2011.

addresses two major processes involving federal agencies: the NEPA process and the 404 permit process. The Decision Guide assumes that these two processes have been merged so that common elements such as purpose and need and analysis of alternatives are handled in a single integrated process. Other common federal processes that affect the timing and outcome of project approvals are those involved in complying with the following laws: Section 4(f) of the Department of Transportation Act, the Endangered Species Act, and the National Historic Preservation Act. Recognizing the need to address the issues in these areas efficiently, FHWA has a long-standing policy and practice of demonstrating compliance with these and other less common federal environmental laws through the analyses, coordination, documentation, and decision making carried out under a NEPA umbrella.

The following sections describe the leadership context and structure for each of the federal agencies listed above. Each agency description addresses the following items: mission; vision; strategic plan; organization chart (link provided); leadership (head and field); and backdrop for collaboration (including notes on interagency relations, institutional culture, and recent initiatives).

The leadership description includes those key positions likely to interact with transportation decision makers for capacity projects and the transportation program in general. It is important to note that, in most cases, transportation issues do not constitute a major element of their job responsibilities. The leadership description also indicates which positions are political appointments and which are career appointments and places them in a hierarchical ranking, as illustrated in Table 3.4. Table 3.4 helps in interpreting the leadership descriptions and backdrop for collaboration. In making comparisons among the various types of appointments and how best to approach an agency, it is most instructive to look at the positions within the context of each agency's hierarchy. Their geographical and organizational structures matter.

Agency: Federal Highway Administration

Mission

To improve mobility on our nation's highways through national leadership, innovation, and program delivery.

Vision

Our agency and our transportation system are the best in the world.

Table 3.4. Leadership Rank by Type of Appointment

Type of Appointment	Hierarchy/Rank (in Descending Order)
Presidential appointment (political slots, some requiring Senate confirmation), noncareer appointment	I II III IV V Senior Executive Service
Career appointment	Senior Executive Service GS-15 GS-14 GS-13
Military	General Lieutenant General Major General Brigadier General Colonel Lieutenant Colonel

Strategic Plan

In 2010, FHWA updated its strategic plan (www.fhwa.dot.gov/policy/fhplan.html). Collaboration is explicitly called out as one of FHWA's core values. Under the program delivery goal, FHWA has an objective to develop and continually improve FHWA's ability to deliver its programs in a way that reduces impacts on the environment and maximizes opportunities for enhancement.

Organization Chart

See www.fhwa.dot.gov/about/org/.

Leadership

FHWA is headed by an Administrator, who is presidentially appointed and Senate confirmed, Level II on the executive scale. The FHWA deputy administrator is a noncareer Senior Executive Service (SES) appointment. The executive director, a career SES position, is the top career official of the FHWA and the one who leads FHWA during political transitions. The executive director has historically been an engineer, but nonengineers have filled this position. The associate administrator for policy and the chief counsel, two noncareer SES political positions, frequently get involved in environmental issues at either a project or policy level, especially those in which members of Congress are actively engaged.

Regarding its major program area, federal aid to the states, FHWA divides the nation into three geographic regions, each headed by a career SES director of field services. The nation is further subdivided into 52 federal aid divisions (one for each state, plus Washington, D.C., and Puerto Rico), each headed by a division administrator. Division administrators are all at the GS-15 level, except those in California, Texas, and Florida, which are career SES slots. Directors of field services evaluate the performance of division administrators but do not have technical line authority over divisions. They sometimes get involved in project or program matters when protocol demands that a higher-level official than a division administrator represent FHWA. The vast majority of FHWA's field leadership have an engineering background and have spent the majority of their careers with FHWA.

Backdrop for Collaboration

FHWA institutionalized collaboration through its oversight of the NEPA process, employing concepts of lead and cooperating agency and intensive interagency cooperation and public involvement under the "NEPA umbrella." Other initiatives promoting collaboration include the FHWA support and development of CSS as a project development philosophy and its long-time relationship with the Institute for Environmental Conflict Resolution. FHWA also focuses on the environment by embedding it in other goals, especially program delivery.

Agency: U.S. Army Corps of Engineers

Mission

- USACE Mission: Provide vital public engineering services in peace and war to strengthen our nation's security, energize the economy, and reduce risks from disasters.
- USACE Civil Works Mission: Contribute to the national welfare and serve the public by providing the nation and the U.S. Army with quality and responsive development and management of the nation's water resources; protection, restoration, and management of the environment; disaster response and recovery; engineering and technical services in an environmentally sustainable, economic, and technically sound manner through partnerships.

Vision

A great engineering force of highly disciplined people working with our partners through disciplined thought and action to deliver innovative and sustainable solutions to the nation's engineering challenges.

Strategic Plan

The Corps' strategic plan for civil works explicitly embraces a watershed approach and stresses collaboration as one of the key elements of this approach (www.iwr.usace.army.mil/About/History/CivilWorksStrategicPlan.aspx).

Organization Chart

www.usace.army.mil/about/HQORG/Pages/HQStructure.aspx.

Leadership

The civil works element of the USACE responsibilities is overseen by an assistant secretary of the Army (civil works), a presidentially appointed, Senate-confirmed position, Level IV on the executive scale. Also prominent on environmental issues is the principal deputy assistant secretary, a noncareer SES slot. These two individuals are not part of the USACE per se, but have oversight responsibilities within the Department of the Army. Their backgrounds vary, but they often come from state government, Congress, or White House backgrounds and can have academic backgrounds in various fields.

The head of the USACE itself is the chief of engineers, an army lieutenant general. The civil works program is headed by the deputy commanding general for civil and emergency operations, a major general, with a civilian, career SES slot as the director of civil works. Other headquarters positions involved in the transportation program are chief, operations division (career SES), and the chief of the regulatory branch (GS-15). The military positions tend to be held by officers with engineering degrees who have had some prior experience with USACE as well as assignments in other parts of the U.S. Army. The civilian slots are usually long-time USACE employees. Many have an engineering background, while the regulatory branch chief tends to have an environmental background.

The United States is subdivided into eight divisions and further subdivided into 37 districts. Each division is commanded by a division commander, an army major general, brigadier general, or colonel, depending on workload and complexity of the division. Reporting to them are district commanders, also known as district engineers, who are army colonels or lieutenant colonels. These army officers are engineers with varied military backgrounds. The districts are the focal point for issuing 404 permits, a function that is managed by district regulatory chiefs, who are typically at the GS-14 level but may be at the GS-15 level in large districts. Regulatory chiefs tend to have environmental backgrounds.

Backdrop for Collaboration

As its name implies, the Corps of Engineers is an engineering organization, built on a long tradition of military engineers (West Point was the nation's first engineering school). The leadership must pay attention to both military construction and civil works, and environmental protection and enhancement has evolved to become a USACE emphasis. From a leadership perspective, the Corps is unique among federal agencies in terms of its military/civilian dichotomy. At the highest level, USACE military leaders interact with a number of civilian politically appointed assistant secretaries of the Army. The assistant secretary for civil works—the one who is relevant to the transportation world—is just one of several assistant secretaries of the Army who oversee the policies and operations of the Corps. USACE has a long history of supporting collaboration and has recently developed a report, *Building Strong Collaborative Relationships for a Sustainable Water Resource Future: National Report.* The current USACE director of civil works played a substantial personal role in this report. The USACE engineering history and culture have helped in creating positive relationships with FHWA and state DOTs, which have historically been engineering organizations.

Agency: Environmental Protection Agency

Mission

To protect human health and the environment.

Strategic Plan

EPA recently released its fiscal year 2011–2015 strategic plan. To accomplish the goals outlined in the plan, EPA has a number of crosscutting fundamental strategies. The one of greatest interest to TCAPP is strengthening state, tribal, and international partnerships. More information is available at www.epa.gov/planandbudget/strategicplan.html.

Organization Chart

See www.epa.gov/aboutepa/organization.html.

Leadership

EPA is an independent federal agency (not a department) headed by an Administrator, a presidentially appointed, Senate-confirmed post, Level II on the executive scale. The deputy administrator also is a presidentially appointed, Senate-confirmed slot, but is Level III on the executive scale. EPA has nine assistant administrators, all of whom are presidentially appointed, Senate confirmed, Level IV on the executive scale. Of greatest interest are the assistant administrator for enforcement and compliance assurance, assistant administrator for water, and assistant administrator for air and radiation. Within those offices career leadership include the director of the Office of Federal Activities that deals with NEPA matters in other agencies, the director of wetlands, oceans, and watersheds, and the director of the Office of Transportation and Air Quality. These are all career SES slots. The political leadership above typically have an environmental background with states, nongovernmental organizations, and congressional committees and often have been with EPA earlier in their career. Law and public policy degrees are fairly common. Career executives typically have an academic background in environmental policy and science and have considerable tenure with EPA.

EPA has 10 regions, each led by a regional administrator, a political, noncareer SES slot, who is assisted by a deputy administrator, a career SES slot. Each region then has different names and titles for the next organizational subdivision; however, it is typical to have separate subdivisions that address NEPA reviews, water issues, and air quality. The division director at the regional level would typically be at the GS-15 level.

Backdrop for Collaboration

EPA has done a great deal of work in interest-based negotiation and collaboration, including extensive internal training.

One product of this effort was a cooperative grant program for environmental justice collaborative problem solving.

Agency: Department of the Interior

Mission

The Department of the Interior (DOI) protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to Native Americans, Alaska Natives, and affiliated island communities.

Strategic Plan

DOI recently released its fiscal year 2011–2016 strategic plan. See www.doi.gov/bpp/data/PPP/DOI_StrategicPlan.pdf.

Organization Chart

See www.doi.gov/whoweare/orgchart.cfm.

Leadership

The Secretary (presidentially appointed, Senate confirmed, executive Level I) and deputy secretary (presidentially appointed, Senate confirmed, executive Level II) are supported by six assistant secretaries, five of whom have line authority over the subagencies of the department (collectively called bureaus). Of particular note to the transportation program are the assistant secretary for policy, management and budget; the assistant secretary for fish, wildlife, and parks; and the assistant secretary for Indian affairs. All of these positions are presidentially appointed, Senate-confirmed, executive Level IV slots. These political appointees generally have an academic background in law, policy, or liberal arts and have previous job experience as leaders of state agencies, NGOs, or as elected officials or Congressional staff. Another headquarters position of note is the director of the Office of Environmental Policy and Compliance (career SES), who oversees the department's review of NEPA actions of other federal agencies, including synthesizing comments and concerns of the various bureaus within the department. This person usually has an environmental management background. Leadership of the U.S. Fish and Wildlife Service and the National Park Service are described in detail in subsequent agency profiles.

The department has eight regional offices that are organizationally attached to the headquarters Office of Environmental Policy and Compliance. These offices are headed by regional environmental officers who are at the GS-15 level.

Backdrop for Collaboration

Section 4(f) is one issue that DOI handles that can have an important effect on a transportation capacity project timing and outcome. DOI also gets involved in approving replacement land under the Land and Water Conservation Act process.

Agency: U.S. Fish and Wildlife Service

Mission

Work with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

Vision

Unite all Service Programs to lead or support ecosystem-level conservation. We will achieve this by becoming a more technically capable and culturally diverse organization; through involving stakeholders; through scientific expertise; through land and water management; and through appropriate regulation.

Organization Chart

See www.fws.gov/offices/orgcht.html.

Leadership

The director of the U.S. Fish and Wildlife Service (USFWS) is a Senate-confirmed presidential appointment, Level V on the executive scale. The position is usually filled by a career member of USFWS or by the head of a state fish and wildlife agency. The incumbent almost always has a background in the biological sciences. This position is the only noncareer (political) leadership position within USFWS.

The director is supported by two deputy directors and 11 assistant directors. The two that have the most interaction with transportation are the assistant director for fisheries and habitat conservation and the assistant director for endangered species. Another of the leadership corps who presents opportunities for collaboration is the director of the National Conservation Training Center. These three positions are career SES positions and are typically filled with individuals with long tenure at USFWS who have backgrounds in the biological sciences.

USFWS has eight regional offices led by regional directors, who manage the full USFWS portfolio in their geographic areas. Managing program issues involving endangered species and wildlife refuges often represent their biggest time commitment, in addition to generalized leadership and management duties. These are career SES positions, and USFWS considers them to be executive leadership positions.

At the subregional level, USFWS splits into different program responsibilities. Wildlife refuges are a major staffing component. However, the principal program area that interfaces with DOTs is the Ecological Services Offices. These offices are typically one per state and are headed by a field supervisor. USFWS considers these to be senior leadership positions. They are typically filled at the GS-14 level.

Backdrop for Collaboration

USFWS has an internal leadership development document, *USFWS Leadership Competency Development Model,* that offers a pathway for employees at all levels to develop the skills and experiences needed to reach the top levels of the organization. This model offers insights into how a collaboration message might be packaged to be relevant and appealing to USFWS senior and executive leaders. USFWS strategic documents emphasize partnering with others. While typically this model relates to partnering with private landowners and NGOs, it nevertheless provides a starting point for any message that emphasizes a collaborative model for interacting with outside entities.

Agency: National Park Service

Mission

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. NPS cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

Strategic Plan

The NPS strategic plan has a number of strategies for accomplishing its goals. One strategy emphasizes collaboration with partners of all kinds, including federal and state agencies. See http://planning.nps.gov/document/NPS_strategic_plan.pdf.

Organization Chart

See www.nps.gov/aboutus/upload/nps_org.pdf (also www.nps.gov/aboutus/organization.htm).

Leadership

NPS is led by a director, who is presidentially appointed and Senate confirmed. This position is Level V on the executive scale and is frequently filled by a career employee and sometimes by a state park director. The remainder of the leadership cadre within headquarters are career SES officials and include two deputy directors, two assistant directors, and five associate directors. Of greatest importance to the transportation program are the deputy director for operations, who oversees the regions and interacts extensively with park road issues, and the associate director for cultural resources, who oversees the office of the keeper of the National Register of Historic Places. NPS leaders usually have spent their career with NPS and have academic backgrounds in history or natural resources.

NPS has seven regions, led by regional directors who occupy career SES slots. The regions oversee the Park Service units, of which there are 394, including 58 national parks, and partnership programs with states, such as the wild and scenic rivers program. An NPS unit is managed by a park superintendent, who is responsible for all matters relating to one or more units. Superintendents of the most politically important units are career SES slots, with other slots being at the GS-15 level or below.

Backdrop for Collaboration

NPS has a long-standing relationship with FHWA due to their partnership on the park road program.

Agency: National Marine Fisheries Service (also known as NOAA-Fisheries)

Mission

Stewardship of living marine resources through science-based conservation and management and the promotion of healthy ecosystems.

Vision

The American people enjoy the riches and benefits of healthy and diverse marine ecosystems.

Strategic Plan

The introduction to the strategic plan emphasizes partnerships. More information is available here: www.nmfs.noaa.gov/mb/strategic/.

Organization Chart

See www.nmfs.noaa.gov/org_chart.htm.

Leadership

The National Marine Fisheries Service (NMFS) is led by the assistant administrator for fisheries, a noncareer SES slot that

is filled from within the National Oceanic and Atmospheric Administration (NOAA) or from outside organizations, such as coastal state departments of natural resources. The remaining headquarters leadership positions are career slots and include the deputy assistant administrator for regulatory programs (SES), who oversees the director, Office of Protected Resources (SES), and the director, Office of Habitat Conservation (GS-15 level), both of whom manage programs that interface with transportation. Their backgrounds are in biology, natural resource management, and law.

NMFS has six regional offices that are led by regional administrators. All but one are career SES slots; the Seattle regional administrator is a noncareer SES position. Regional administrators have varied backgrounds, including natural resource management, ecology, economics, engineering, and law.

Agency: U.S. Forest Service

Mission

To sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.

Vision

- We are recognized nationally and internationally as a leader in caring for the land and serving people.
- We are a multicultural and diverse organization.
- Employees work in a caring and nurturing environment where leadership is shared.
- All employees are respected, accepted, and appreciated for their unique and important contribution to the mission.
- The work is interesting, challenging, rewarding, and fun—more than just a job!
- We are an efficient and productive organization that excels in achieving its mission.
- Responsibility and accountability for excellence are shared by employees and partners.
- The American people can count on the U.S. Forest Service (USFS) to perform.

Strategic Plan

The strategic plan stresses the importance of partnerships as a way for the USFS to leverage its effectiveness in stewardship, research, and interagency coordination. See www.fs.fed.us/publications/strategic/fs-sp-fy07-12.pdf.

Organization Chart

See www.fs.fed.us/plan/par/2005/docs/par-appendixes-back-2005.pdf.

Leadership

The chief of the USFS is a career SES position. The incumbent invariably comes from within USFS ranks and generally has an academic background in forest management.

The chief is supported by an associate chief and five deputy chiefs. Of these five, the deputy chief of the National Forest System is the position most likely to engage with transportation issues. These are career SES positions with incumbents coming to the jobs with significant field experience and backgrounds in forest management.

USFS has nine regional offices led by regional foresters who report directly to the chief. Regional foresters are responsible for leading and coordinating among the national forests in their respective regions, including an emphasis on natural resource and social programs and land use coordination with neighboring state and local authorities. Regional foresters are career SES positions.

The national forest system consists of 155 national forests and 20 national grasslands. Each national forest is managed by a forest supervisor, who has line authority for all functions within the national forest, including recreation, timber, and natural resource management. Forest supervisor slots are typically filled at the GS-15 level. Most of the national forests are in the western United States.

Backdrop for Collaboration

On national forests, USFS has a statutory authority to manage for multiple objectives, some of which are conservation oriented and some of which seek to use the resource (through recreation, timbering, mining). USFS uses partnering and collaboration techniques to resolve these competing interests. USFS has documented this approach in a Partnership Guide, which it developed in cooperation with the National Forest Foundation.

In the transportation arena, USFS interacts extensively with FHWA's Federal Lands Highway Office, which partners with USFS to develop federal roads within the national forests. USFS also deals extensively with state DOTs and local governments which administer roads that penetrate the national forests. This interaction often involves coordination on NEPA, Section 4(f), and Endangered Species Act issues and may involve negotiations regarding rights-of-way on national forest lands.

Agency: Advisory Council on Historic Preservation

Mission

The Advisory Council on Historic Preservation (ACHP) promotes the preservation, enhancement, and sustainable use of

our nation's diverse historic resources, and advises the president and the Congress on national historic preservation policy.

Strategic Plan

The Strategic Plan explicitly calls for ACHP to facilitate collaboration and partnerships between federal agencies and other parties as a way of advancing historic preservation (www.achp.gov/docs/strat_plan.pdf).

Organization Chart

See www.achp.gov/staff.html.

Leadership

ACHP is a small independent agency. It is governed by a council with part-time members and consists of the following: eight members appointed by the president, a member of an Indian tribe or native Hawaiian organization, a governor, a mayor, nine federal agency heads, the architect of the Capitol, the chairman of the National Trust for Historic Preservation, and the president of the National Conference of State Historic Preservation Officers.

The staff is led by an executive director, a career SES slot. Other leadership positions include the director of the Office of Federal Agency Programs and the assistant director for federal permitting, licensing, and assistance. The persons occupying these positions tend to have backgrounds in history, architecture, and law.

Backdrop for Collaboration

ACHP has collaborated with FHWA on programmatic matters, such as how to handle the issue of the Interstate Highway System turning 50 years old and potentially being subject to historic preservation reviews.

Tribal Entities

As of October 1, 2010, the Bureau of Indian Affairs (BIA) listed 564 federally recognized tribal entities. "Tribal entity" is a term used to encompass tribes per se and other organizing units such as native Alaskan villages. Collaboration with tribal entities on transportation capacity projects can involve two principal situations: (1) projects that are proposed to be located on Indian lands, or (2) projects that affect tribal interests outside of tribal lands, such as off-reservation sacred sites or ancestral areas. Occasionally, a transportation project requires coordination with many tribes. Such was the case with the South Lawrence Trafficway in Lawrence, Kansas. This project required the Kansas DOT and the FHWA to contact hundreds of tribes with an interest in Haskell Indian Nation's University, one of two BIA-administered universities nationwide. In this case, the project was adjacent to the university and affected areas historically used by students for spiritual purposes.

Effective collaboration with tribes involves both cultural and historical sensitivity and a thorough familiarity with legal constructs governing the relationship of federal and state governments with tribes in general as well as with specific tribes. A fundamental concept is the government-to-government relationship between the tribe and the federal government. Best results are found when federal agencies await a tribe's consent before delegating coordination responsibilities to state agencies. In those cases in which a collaboration protocol has not been established, it is helpful to build time into the process to arrive at a mutually acceptable understanding. Collaboration is also enhanced when federal and state agencies build in time to research and understand any treaty obligations that the federal government might have to specific tribes.

One area of federal law in which tribes have assumed an increasing role is the National Historic Preservation Act. Amendments to the law established that tribal historic preservation offices would function analogously to state historic preservation offices.

BIA maintains a directory of leaders of the tribal entities (www.bia.gov/idc/groups/public/documents/text/idc-001866.pdf). Each tribal entity has its own governance structure with executive and legislative functions taking many forms. Leaders go by such titles as chairman, president, chief, and governor.

State Government

In contrast to the federal government, transportation is a highly visible issue in state government. Governors get directly involved in some matters. The state DOT is typically one of the most influential agencies. State environmental agencies are apt to have a more cooperative attitude toward advancing the DOT's projects, legislatures and legislators are more involved in transportation programs and projects, and state transportation commissions can play an important role in advancing projects. All these factors point to a number of entities that can be influential in promoting or retarding the adoption of collaborative approaches:

- Governors;
- Legislatures;
- State transportation commissions;
- State transportation executives;
- State environmental, resource, and planning agency executives; and
- State-chartered turnpike and toll authorities.

Because of the wide variety of state situations, it is not feasible to identify specific organizational structures and positions comprehensively. Instead, this report attempts to describe the organization and leadership concepts in play at the state level across the country and uses examples to illustrate these points. The majority of these examples are taken from case studies of five states: California, Colorado, Maryland, Minnesota, and Mississippi. These states were selected on the basis of several factors, including

- Geographic diversity;
- Range of population and land area size;
- Range of complexity of state environmental laws;
- Centralized and decentralized state-level transportation decision making; and
- Range of collaboration experiences.

It also is interesting to note the diverse educational and professional backgrounds of leaders at the state level—and the different approaches agencies take to selecting their leaders. Some organizations typically hire individuals with long professional careers within their agency; others are more likely to recruit executives with strong management expertise or with backgrounds in political leadership or advocacy. The training and professional experience among these leaders shape their expectations about their agency's business approach and inform their values and perceptions about the utility of collaboration.

Governors

It is not uncommon for governors to get involved in transportation matters, including not only policy matters involving funding and legislation, but also in project decisions as well. Governors will directly promote specific capacity projects, often as a measure that supports economic development in a certain area of the state. As such, the governor's attitude about collaboration can be a critical determinate to the climate in which state agencies, in particular, will operate during the governor's tenure in office. If the executive message is that a speedy completion is the only thing that matters, then state DOTs may burn precious relationship capital with agencies and the public in order to complete a project quickly. If the governor also emphasizes working together to get a good outcome that gives weight to environmental and community factors as well as transportation needs, the relationship among state agencies is likely to be improved.

The Maryland Intercounty Connector is a case in point. For this project, the governor not only set a tone that demanded collaboration across state agencies, but he also reached out to federal and local governmental leaders and was committed to a philosophy that assumed that considerable project funding would be devoted to an environmental stewardship package. As a result, the project became the means by which a number of worthwhile environmental improvements were implemented. These measures went well beyond traditional environmental mitigation measures.

Working through the National Governors Association (NGA), governors have articulated a commitment to collaboration. For example, the NGA Natural Resources Committee recently adopted Policy Position NR-01 on environmental management that explicitly advocates the use of collaborative processes to break down barriers and find solutions.

Legislatures

Like governors, state legislatures and state legislators often weigh in on individual transportation projects and sometimes debate the role of collaboration in advancing the transportation agenda. Most state legislatures have transportation committees in which these discussions typically take place.

State legislators discuss issues of national scope through the National Conference of State Legislatures (NCSL). While the NCSL Transportation Committee has not taken a policy position on collaborative approaches per se, it has recommended that federal transportation legislation replace prescriptive environmental requirements with incentives for states to achieve environmental quality standards through transportation projects. The roster of the NCSL Transportation Standing Committee offers a list of several hundred state legislators from almost all states with an interest in transportation issues. All of the case study states except Mississippi are represented on the committee.

State Transportation Commissions

At one time, state highway commissions or boards played a critical decision-making role in virtually every state. In some states, the commission or board members are elected. In other cases, they are appointed by the governor or legislature, or they are members on an ex officio basis because of another position they occupy (e.g., state auditor). The commissions often selected and oversaw the chief highway executive. Today, transportation commissions often have a limited number of narrowly prescribed responsibilities. The majority rely on state DOTs for staff support, while some commissions have their own independent staffs. Appointees to state transportation commissions have varied backgrounds, with law, politics, business, and transportation industry backgrounds predominating.

Of the case study states, Mississippi has the strongest role for its commission. The Mississippi Transportation Commission (MTP) is comprised of three elected commissioners

representing three different geographic areas. The executive director of the Mississippi DOT serves at the pleasure of the MTP; the governor has no executive authority over the Mississippi DOT. The MTP is the policy-making body for the Mississippi DOT and must approve the location of all new highways. Commissioners frequently get personally involved in projects in their geographic areas.

The California Transportation Commission (CTC) has 13 members, 11 of whom are voting and two of whom are nonvoting ex officio members. Nine of the voting members are appointed by the governor, one by the Senate Rules Committee, and one by the speaker of the California Assembly. The CTC programs and allocates funds for surface transportation improvements throughout the state. The CTC has its own staff, consisting of an executive director and about 15 other transportation professionals.

Colorado has an 11-person Transportation Commission. The commissioners are appointed by the governor to staggered 4-year terms and represent specific geographic districts. The commission has general policy-making duties but does not get involved in project-specific decision making.

Maryland has a State Transportation Commission (STC) that has 17 members. Ten are appointed by the governor; the other seven serve as ex officio members, based on their also being members of the State Roads Commission (SRC). The STC has a strictly advisory role, providing advice to the Maryland DOT secretary on policy and program matters. The SRC's main role is in condemnation proceedings.

In those states where the commission has a strong oversight or advisory role, it can provide support for collaboration by influencing the actions of state DOT executives, the legislature, and the governor.

State Transportation Executives

Today, state transportation chief executives in most states come to their jobs via political appointment by the governor. Some require the confirmation of the state legislature. In rare instances, they are appointed by the state transportation commission (e.g., Mississippi). While historically the chief executives of state DOTs have been engineers, this has been changing over the last several decades; many chief executives now have financial, legal, planning, or political backgrounds.

Many states engage in a formal search process in looking for new chief executives and usually look both within the career ranks of the state DOT and to outsiders. When filled from outside the DOT, the new chief executive often has transportation experience in federal, local, or metropolitan government, public agency consulting and contracting, or working with the state legislature or Congress. Often the selected candidate has a varied background.

The chief executives of state transportation agencies go by various titles: secretary, director, commissioner, and executive director. In all cases but Nebraska, the chief executives head a transportation agency. Nebraska has a Department of Roads. For a full list, see the membership of the AASHTO board of directors at www.transportation.org/Default.aspx?siteid=37&pageid=310.

In most state DOTs, the rest of the leadership team is comprised of career employees. This includes such positions as deputy secretary/director, district/regional/area director, and the directors of major functional areas, such as program/project development, operations, or finance. Most states continue to have a chief engineer, although increasingly this title goes along with another more organizationally descriptive title, such as deputy director.

Interpreting the organization of state DOTs can be challenging. Terms such as agency, department, division, office, and branch mean different things in different states. The roles of geographic units within the state also vary from state to state. These substate units can be called districts, regions, or areas. In the larger states, the substate units often directly handle project and program development, while relying on the central office primarily for policy guidance and technical assistance on complex issues. In smaller states, these units may only handle maintenance and other operational responsibilities.

In California, the California Department of Transportation (Caltrans) is an executive department, but it is part of a larger agency, the Business, Transportation, and Housing Agency, headed by a secretary. The Caltrans director is appointed by the governor and requires senate confirmation. Historically, Caltrans directors have come from both within and outside the department, with neither path predominating. Virtually all of the other leadership positions in Caltrans are filled by career employees. This includes 12 district directors, who report to the Caltrans director and are responsible for project delivery within their districts. Engineers tend to predominate among the district directors, even though it is not a job requirement (aside from the deputy director of project delivery/chief engineer). The Caltrans organization chart is found at www.dot.ca.gov/orgchart/departmentalorgchart.pdf.

The Colorado DOT is led by the executive director, appointed by the governor. Recent executive directors have tended to come from outside the department, but with significant transportation experience. Other key central office posts include the chief engineer, who oversees the six regional offices, and the director of the Division of Transportation Development, who manages statewide environmental and intermodal planning programs. The regional offices, managed by regional transportation directors, are responsible for project delivery. The Colorado DOT organization chart is at www.coloradodot.info/about/CDOT-org-chart/view.

The Maryland DOT is one of the most multimodal of state DOTs. It is headed by the secretary, who is appointed by

the governor and confirmed by the state senate. Typically, secretaries are not career employees although some secretaries have substantial tenure with the DOT, including the current secretary, who has a finance background. The secretary has six modal administrators, including the administrator of the State Highway Administration (SHA), who is appointed by the secretary with the governor's approval. This position has historically been filled by individuals with engineering backgrounds, even though this is not a requirement. Another key leadership position within the SHA is the deputy administrator for planning, engineering, real estate, and development, who heads the group responsible for delivering projects to construction. This is a statewide function handled centrally; district offices primarily handle maintenance and operations functions. The deputy administrator also holds the title of chief engineer. The Maryland DOT organization chart is at www.msa.md.gov/msa/mdmanual/24dot/pdf/24dot.pdf.

The Minnesota DOT is headed by the commissioner, appointed by the governor for a term that coincides with the governor's term. Most commissioners have an engineering background. The deputy commissioner and chief engineer is the number two slot in the Minnesota DOT and is a career slot. The Minnesota DOT district offices take the lead on project delivery and work closely with others through area transportation partnerships, mandated by Minnesota law. Each district is headed by a district engineer. The organization chart is at www.dot.state.mn.us/information/orgchart.html.

The Mississippi DOT is led by the executive director, who is appointed by and serves at the pleasure of the MTP. The governor has no line authority over the Mississippi DOT. Past executive directors have come from within the department and from outside. An engineering background is not required, although some past executive directors have been engineers; others have liberal arts or other academic backgrounds. The deputy executive director/chief engineer, oversees the Office of Highways, occupies a career slot, and is an engineer. Reporting to the chief engineer is the assistant chief for preconstruction, also an engineer, who is responsible for developing new highway capacity projects. In Mississippi, the seven district offices play a supporting role to headquarters on new capacity projects. The Mississippi DOT organization chart is at www.gomdot.com/Home/AboutMDOT/Divisions.aspx.

State Environmental, Resource, and Planning Agency Executives

State environmental and resource agency structure varies from state to state, but the predominant model seems to be one that is patterned roughly on the federal model, with air quality and water quality responsibilities residing in an

environmental protection agency (similar to the federal EPA) and wildlife park, and historic preservation responsibilities in a natural resources agency (similar to the U.S. DOI). State forestry responsibilities are more often in a natural resources agency than in an agriculture agency—a departure from the federal model. States also have no organizational concept analogous to the permitting authority of the U.S. Army Corps of Engineers. Any state-level water quality permitting authority tends to be in the state environmental protection agency. While in general, state environmental and resource management responsibilities are housed in executive agencies that report directly to the governor, it is not unusual to have some areas overseen by boards, whose members are appointed by the governor, legislature, or some combination thereof.

A few states, such as Maryland, have statewide planning agencies that get involved in transportation projects as a result of growth management mandates, such as the Maryland smart growth legislative requirements. In cases such as this, the state planning agency can be a catalyst for synchronizing transportation capacity improvements with land use decisions made by local governments.

The chief executives of most state agencies serve at the pleasure of the governor, often with the head of subagencies doing likewise. For example, both the secretary of the California Natural Resources Agency and the director of its subordinate Fish and Game Department are gubernatorial appointees. These individuals usually have a professional background in the area for which the agency is responsible. The vast majority of leadership positions below the agency head are career slots filled most often from within the agency. Individuals selected for these positions usually have a background that includes technical experience relevant to the agency's mission or relevant management/administrative experience.

Leaders of state environmental and resource agencies spend their time governing matters under the purview of their agency, most not directly related to transportation. Their agencies interact with the state DOTs at staff levels, with several management levels between them and the front-line staff. Due to staffing constraints, it is common to have a single individual at a state environmental agency handle all transportation matters in his or her functional area. This can cause a workflow bottleneck, which can impede efforts in collaboration. State DOTs sometimes provide staff or consultants to overcome this staffing constraint, but report that these individuals often have limited authority to sign key documents or make approvals.

State-Chartered Turnpike and Toll Authorities

FHWA data show that there are more than 300 toll roads, bridges, and tunnels in the United States. These facilities are owned and operated by a number of public and private

entities. The membership roster of the International Bridge, Tunnel and Turnpike Association shows 74 tolling entities, including 13 state DOTs, in the United States.

While some of the public toll authorities are housed within the state DOTs, many are organizationally independent with a governing board and a relatively small staff. They tend to do much of their work through consultants.

These toll authorities are an important target audience for the TCAPP Decision Guide because they are an increasingly important implementer of highway capacity projects. Furthermore, their culture is often quite different from that of the state DOTs, despite their leaders having similar backgrounds and skill sets. This difference in culture is chiefly because toll authorities have much more focused interests; instead of administering a vast system of highways statewide, they tend to manage a few, very well-defined facilities. As a result, they tend to mobilize around specific projects. They concentrate their efforts on advancing the projects within a predictable timeframe because financing terms require that toll revenues become available by a certain date. This can translate into a greater willingness to spend money on environmental measures and community amenities as a way of getting a project approved.

Government in Metropolitan Areas

Federal transportation law requires each metropolitan area with a population greater than 50,000 to have a MPO that serves as a forum for state and local governments to determine transportation needs and to develop transportation improvement programs. This process is required to be continuing, comprehensive, and cooperative and accordingly is sometimes called the "3C planning process." Effective collaboration is at the core of the process. According to a 2009 study by the Government Accountability Office (GAO), there are 381 MPOs across the country, with the majority representing small metropolitan areas (Figure 3.1).

Organizationally, MPOs have a policy body, which makes critical decisions, and a staff, which does data collection and analysis and prepares work products and decision documents. The MPO board's most important responsibility is to approve two documents: the long-range transportation plan and the transportation improvement program.

The MPO board is made up of representatives of local governments, state government, and publicly owned transportation providers such as transit authorities. Local governments are typically represented by both elected officials and executive branch officials. While many board members have a background in the transportation profession, many do not. They come from the diverse professional backgrounds typically found in local government: lawyers, public administrators, educators, and so forth.
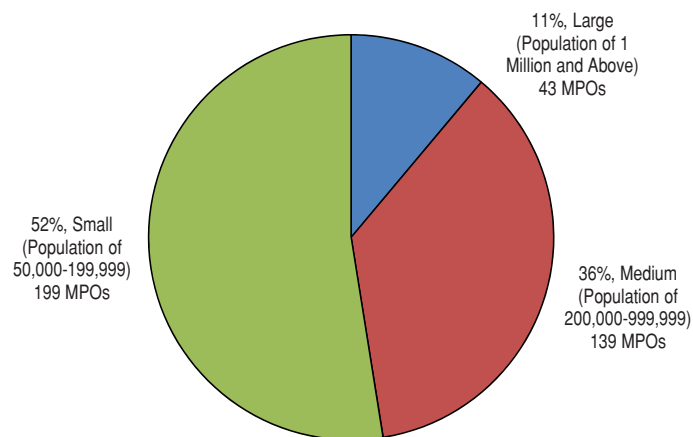
Source: GAO analysis of Census data.

Figure 3.1. Number of MPOs by population represented. (Note: Percentages do not add up to 100% due to rounding.)

MPO staffs can number as few as one or two or more than 100. The staff is usually headed by an executive director who has a background either in transportation planning/engineering or in urban or regional planning.

According to the GAO study, 71% of MPO staffs are organizationally housed within a larger organization, such as a local government or a regional council of governments; 18% are organizationally independent; and 11% have some other arrangement. Besides meeting the basic federal requirements, MPOs often have other responsibilities. For example, 70% have some land use planning responsibilities, 37% implement transportation projects, 32% do environmental planning, and 16% have a role in transit operations.

In addition to the MPOs, collaboration on capacity projects requires the active engagement of the local governments themselves. Several entities must be considered. On the executive side is the local government's chief executive, such as a mayor (in a strong mayor form of government), county executive, and city or county manager. Other executive positions include the directors of the transportation or public works department (typically engineers) and the planning department (typically urban or regional planners). The local governing body (e.g., city or county council) and citizen-appointed planning commissions also can play important roles in transportation capacity projects. These noncareer local officials come from diverse backgrounds, reflecting the range of experiences of the local citizenry.

Nongovernmental Organizations

Nongovernmental organizations (NGOs) can have a substantial role in the development of transportation capacity projects. Most often, NGOs serve as advocates for project outcomes

that conform with their particular mission and vision. This often involves process requests for information and analyses that can influence governmental decisions in a way that is favorable to the particular NGO's goals. Sometimes NGOs form specifically to influence a specific transportation project.

Thousands of diverse NGOs become involved in transportation matters; it is not feasible to provide a list or even a good breakdown of the full array of these organizations. Nevertheless, insights into the NGO world are available through such sources as the Surface Transportation Policy Partnership (STPP), an NGO that serves primarily to focus the NGOs on transportation issues. STPP lists more than 500 organizations, mostly NGOs, as signatories to the Alliance for a New Transportation Charter. These NGOs—many national, but most state or local—subscribe to a charter that endeavors to influence national, state, and local transportation policies in ways that open up the transportation decision-making process to citizens and result in more nontraditional outcomes. The list of Alliance members provides a good snapshot of the NGOs that are interested in transportation matters, but is incomplete in portraying the full range of NGOs. See www.transact.org/ANTC/signers.asp.

Fundraising is one of the constant realities in the NGO world. Revenue sources include member contributions and foundation and governmental grants. For some NGOs, their ability to raise funds works against being too involved in collaborative endeavors with certain entities. They view their role more as arm's-length participants with the ability to provide views early in the process and to mobilize opposition when policies, programs, and projects take a form that is objectionable to the NGO (e.g., Sierra Club local chapters).

Other NGOs, however, rely heavily on strategic partnerships to leverage their effectiveness. The NGOs bring funding and expertise to the table and rely on other partners (e.g., governmental agencies) to bring major financing and complementary skills to the table. These NGOs are often more likely to collaborate with DOTs and other agencies on specific endeavors that help advance the NGO's agenda. They often steer clear of either supporting or opposing projects and other endeavors of the DOTs beyond the specific partnership efforts in which they are engaged. The Nature Conservancy and the Conservation Fund are examples of NGOs that have engaged in partnerships with DOTs.

NGO leadership typically consists of a strong executive presence and an active or less active board. The role of volunteers is a very important influence in some NGOs. Backgrounds of those in the leadership ranks vary, with national

NGOs having a large proportion of attorneys, public policy experts, or professionals with an academic background allied to the core mission of the NGO. NGO boards represent donors and individuals who have recognized technical and program expertise.

Conclusion

The breadth and diversity of the institutions that are engaged in TCAPP are mirrored by the variety of perspectives and backgrounds among their leaders. Understanding the culture and assumptions of these organizations will be critical in crafting TCAPP messages that resonate across this broad leadership landscape. Some of the key observations from this scan of organizational leaders include

- Organizational missions are distinct from each other, and often are seen as in conflict. Further, the specific history of interagency interaction among different agencies varies considerably. While some agencies have productive working relationships, some are entrenched in patterns of poor communication and mistrust. These differences in mission and historic relationships set the context for today's leaders.
- Leaders at different levels of government are engaged hands on in transportation capacity projects to varying degrees. Generally state and regional government/agency leaders are more often directly involved in project development at some level than are their federal counterparts.
- Because top executives of transportation agencies are typically removed from the day-to-day details of project development, the specific institutional barriers and inefficiencies encountered are not necessarily obvious. It, therefore, will take effort to communicate the benefits of changing agency processes to promote collaboration.
- For agency leaders outside the transportation world, transportation issues are rarely their primary issue. Therefore, capturing their initial attention will be a critical hurdle for TCAPP to overcome.
- The direct engagement of an individual leader who champions cooperative approaches can have tremendous influence in changing institutional processes and promoting interagency collaboration.

Articulating the value of TCAPP and engaging leaders in its implementation will require demonstrating to these individuals that TCAPP will directly support them in achieving their personal goals and primary institutional missions.

Market Research Findings

Methodology

As described in Chapter 1, the objective of this project is to identify the ways in which the TCAPP framework can be understood, appreciated, and subsequently championed by the leaders and decision makers of DOTs and their partner agencies. While the foundation of TCAPP is a collaborative framework that enables interest-based problem solving among all of these target agencies, getting the message out to the leaders is complex due to a number of factors, detailed in Chapter 3:

1. The agencies have diverse and disparate missions.
2. The agencies have differing cultures that have a direct bearing on how they operate both internally and with partners.
3. The leaders of these agencies have diverse backgrounds (e.g., education, appointed versus career positions) that have a direct bearing on leadership and management styles. In addition, the tenure of leadership is sometimes brief and is often vulnerable to political shifts that affect the agency.
4. The agencies have varying geographic and organizational structures, and identifying the position that has direct interaction with transportation agencies requires knowledge about these agency distinctions.

With this context in mind, the research team set out to gather data illuminating what issues these agencies and their leaders are facing, in what way collaboration (and TCAPP) can play a role, and the best way to disseminate information about TCAPP and its benefits.

The first phase was a charrette-style meeting with industry leaders. This facilitated conversation provided insights into the issues that agencies are facing, mapped the benefits of TCAPP to various audiences, and provided some initial thoughts about key messages and how they should be presented to reach the intended audience and send the correct message.

In the second phase, the research team fleshed out the preliminary findings from the charrette through a series of interviews with decision makers across agencies, positions, and geographic regions. The interviewees were selected to provide a range of perspectives, from both the transportation agency and resource agency approach. The following types of interviewees were selected:

- Clusters: Three diverse states were chosen as locations for a clustered approach. In each of these states, agency leaders from transportation and resource agencies (natural and cultural/historical) were interviewed. The intent was to see a variety of perspectives on transportation capacity originating within the same statewide or metropolitan contexts.
- Early Advocates: These interviews were conducted with current and past leaders who had been involved with SHRP 2 and the TCAPP development, or otherwise had stated their commitment to collaboration.
- New to TCAPP: These interviewees had limited exposure to TCAPP prior to the interview, and their opinions about collaboration and interest-based problem solving were unknown.

The interviews were conducted using a set of structured questions designed to get input and insight on key aspects of the primary focus areas for this research. The interview guide addressed opinions on leadership and decision making, transportation capacity projects, TCAPP, and preferred media for communication. To allow them to feel free to discuss their perspective openly, the interviewees were told that their statements would not be attributed and that the findings would be summarized rather than published verbatim. Demographic information also was collected. The interview guide is attached in Appendix A.

Figure 4.1 illustrates the states where interviews were conducted, and Tables 4.1 through 4.3 list the agencies at which leaders were interviewed. The names and positions of interviewees are not disclosed because interviews were conducted with a promise of confidentiality.
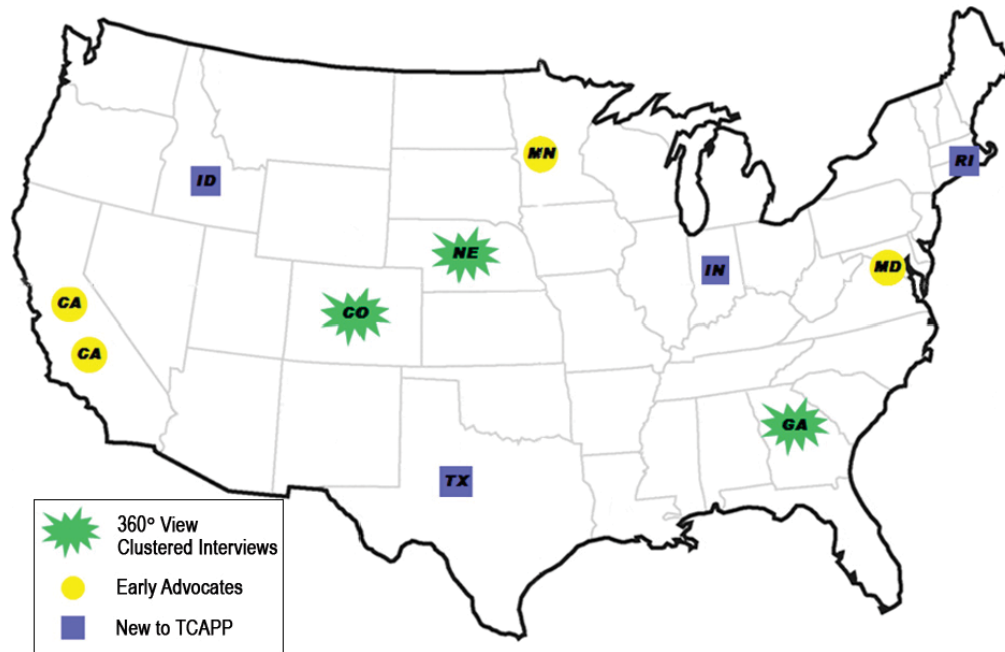
Figure 4.1. Locations and types of interviewees.

Table 4.1. 360° View of Clustered Interview Agencies and Departments

State	Agency	Title
Colorado	Department of Transportation	Engineering
	Department of Transportation	Planning
	Department of Transportation	Environmental
	State Historic Preservation Office	State Historic Preservation Officer
Georgia	Department of Transportation	Engineering
	Department of Transportation	Planning
	Department of Transportation	Engineering and Environmental
	Department of Transportation	Planning
	Department of Transportation	Air Quality
	State Historic Preservation Office	Transportation Projects
	Environmental Protection Agency	NEPA
Nebraska	Department of Transportation	Deputy director, engineering
	Department of Transportation	Division engineer, planning and project development
	Metropolitan Area Planning Agency	Executive director

Table 4.2. Early Advocates

State	Agency	Title
California	Department of Transportation	Retired executive
California	Nature Conservancy (California Chapter)	Executive
Maryland	State Highway Association	Retired executive
Minnesota	Department of Transportation	Executive

The remainder of this section summarizes the market research findings from both the initial charrette conversation, and the follow-on interviews. Chapter 5 uses these findings as a foundation for a set of marketing principles to support current and upcoming marketing of TCAPP to executive leadership of transportation and resource agencies.

Defining the Issues

There is no exact research science to guide the translation from comments made by individuals to an overview of themes and key points. However, special care was taken to quantify and aggregate comments received and to sort them into categories that could be weighted by the number of times the comments were brought up. This methodical approach to interview content allowed themes to be identified and used as input to the marketing principles, potential strategies, messages, and media identified in Chapter 5.

Among themes established at the charrette, and then running clearly through all of the interviews, was the general notion that these are challenging times for agencies involved with transportation. Needs are great, resources are tight, and the issues are complex. The interview findings confirmed that agency leaders recognized that collaboration can be a particularly important (and often necessary) tool in confronting a set of the challenges and conditions that they face daily. The challenges identified include changing approaches to highway capacity, performance management, strategic planning, and partnerships.

Table 4.3. New to TCAPP

State	Agency	Title
Idaho	Department of Transportation	Executive
Idaho	Department of Transportation	Communications
Indiana	Department of Transportation	Executive
Rhode Island	Department of Transportation	Executive
Texas	Department of Transportation	Executive

Rethinking Highway Capacity

The U.S. DOT, state DOTs, MPOs, and the like have recently shifted their focus from a capacity building function to a maintenance, preservation, and operations function. According to interviewees, this adjustment is due to a number of factors, including the completion of the Interstate system, the acknowledgment that additional capacity is not always the remedy for increasing congestion, air quality concerns associated with increased vehicle miles traveled, and, most dramatically, reduced funding. While present definitions of highway capacity have expanded to include a greater range of concerns and solutions, such as operational improvements, the need for additional transportation capacity remains. Many agencies have lengthened their planning horizons to look out beyond present funding shortages. They also have been led to work with new partners.

Interviewees were very interested to hear about TCAPP and its detailed and data-driven approach to transportation decision making. There was general support for a framework to guide agencies in walking through the complex set of decisions to arrive at the best solution based on a range of factors and partnership interests. Agency decision makers with this goal in mind were interested to learn that TCAPP can provide their staff with the tools needed to understand and navigate the new, and complicated, reality.

Performance Management

In an era of constrained financial resources and a refined focus on accountability, interviewees from all agencies stated that they were looking to performance management as an important and necessary strategy to achieve measurable outcomes. Most agencies currently are using some element of outcome-based performance management to manage some aspects of their programs. However, many agencies are interested in applying a coordinated approach across all areas of agency practice and program implementation.

Interviewees were interested to learn that TCAPP's Decision Guide, in addition to many of the related projects, can help transportation and partner agencies integrate elements

of performance management across a range of program areas. There was a general understanding across agency interviewees that these resources can be particularly important as partner agencies strive to find common ground and a united purpose.

Strategic Planning

Many agency interviewees understand the necessity of being focused and strategic in a time of limited budgets, constrained resources, and evolving missions, as they do with performance management. Most agencies have established the basic elements of a strategic plan, such as a mission, vision, and principles. However, the interviewees noted that the most challenging element can be applying the vision and principles to everyday programs, well-established procedures, and general agency practices related to planning, project development, environmental review, and collaboration with others.

When an overview of TCAPP was presented during interviews, there was a general sentiment that TCAPP and its related resources can help agencies work through these challenges. A few key features of TCAPP were highlighted. For example, the Decision Guide was lauded for its ability to provide direction on how agency policies can be integrated into key decisions in core transportation decision-making processes (e.g., long-range transportation planning, programming, corridor planning). The C03 T-PICS tool was of intense interest because it can be used to provide additional data about the probable economic impacts of a particular transportation investment. C06 was appreciated because it provides guidance on the integration of environmental permitting and conservation planning to highway planning. Transportation and resource agency decision makers interviewed understood that tools such as these are what are needed to turn their high-level policy directives into decisions and new approaches at the systems planning and project levels.

Partnerships

Finally, interviewees agreed that strong partnerships are often the most important ingredient of success when trying to advance transportation decisions and construct capacity projects. Whether the partners are other agencies, stakeholders, or the general public, seasoned transportation decision makers understand the inevitable challenges they will face if they do not have strong agreement among interested parties.

Here, the TCAPP Decision Guide and related products and tools were cited as useful in helping to illuminate specific types of partners, how they should be involved, and at what stage in the process their input is relevant. A portion of the agency decision makers interviewed clearly understood that achieving

this goal can be assisted by the collaboration and interest-based problem-solving guidance provided in TCAPP, and products such as the C08 Vision Guide.

Decision Makers and Collaboration

While population and demand for mobility continue to increase, infrastructure maintenance and operation require a greater and greater share of limited budgets, making it more difficult to fund new transportation projects and alleviate transportation problems. With respect to government decisions, public trust has decreased while resistance to change has increased. And these dynamics are occurring in an environment that still judges success by an executive's ability to "get things done," a refrain heard over and over again in one-on-one interviews, and an imperative that is often seen as contrary to collaboration.

In addition to general agreement about a set of shared concerns and challenges, there was general consensus among interviewees that there is a place for collaboration in addressing these challenges. Notions about the way and extent it is best applied varied among interviewees, by agency types and leaders. In addition, the language used to describe planning and project development processes varied. For example, one leader's "collaboration" may be another's "partnerships" (and expressly not collaboration). However, there were three clear key elements to effective interest-based decision making that all agencies and leaders identified.

Relationships Matter

Established personal relationships within agency staff and among agencies were highlighted as the most important ingredient in a successful interest-based problem-solving process. Inherent in these established relationships is the component of trust, without which any process can be bogged down in double-checking, doubting, and muddling through the minutiae.

Goals Must Be Aligned

As described in detail in Chapter 3 and underscored by all interviewees, the greatest challenge for a collaborative process is often the disparate missions of partner agencies. Even if agencies are willing to engage in collaboration, there will be no progress without a well-defined and shared goal. Interviewees understood that identification of a defined goal would inevitably require consensus building and might potentially involve compromise. However, they also understood that if all parties involved could agree on that shared goal as the final outcome, it could serve as the touch point and vision for the process as

it inevitably gets pushed and pulled off course with competing interests and priorities.

Resources Must Be Available

Interviewees were adamant that collaboration requires resources. Collaboration is only successful if there are available resources, both in the form of staff time and expertise at the partner agencies, and in the form of funding for project delivery. This is increasingly important in a time of reduced earmarks. Agencies need to pool their resources in order to make things happen, and this requires focused and efficient collaboration. Finally, money on the table is often the motivator that will bring people together to start talking.

In the interest of expediting transportation capacity projects, DOTs have funded environmental liaison positions at federal and state resource agencies. This focus on providing resources to assist with interagency collaboration has yielded measurable results in time savings.

Interviewees noted that while these themes are common across all agency types, each agency also has a unique mission and role in the transportation planning and project delivery process which influences the perspectives on collaboration. In addition, the culture of each agency and the leadership style, personality, and past experience of agency decision makers have an undeniable, if not measurable, impact. This issue is explored in Chapter 3 in the discussion of backgrounds of agency leaders. The following section provides an aggregated view of the perspectives on collaboration by agency type, based on the interview findings.

Decision Making by Agency

State Departments of Transportation

State DOTs are charged with the provision, operation, and maintenance of the surface transportation network within their boundaries. As the nation's roadway system has been built out, many DOTs have expanded their central focus from capacity projects to maintenance, renewal, and operations. State DOTs also have expanded their considerations to incorporate the responsibilities of the environment, the economy, and community issues, and the agencies' mission statements reflect this shift. For example, Georgia's DOT mission is to "provide a safe, seamless, and sustainable transportation system that supports Georgia's economy and is sensitive to its citizens and environment" (*4*). This movement involves an increased engagement with the partner agencies that oversee these areas of concern, and an inherent need to collaborate. The agency leaders described a varied approach with regards to collaboration, but all acknowledged its importance and necessity. However, what remains central and sets DOTs apart

from their partner agencies is the overarching purpose of delivering transportation projects.

Comments on Collaboration

From the DOT perspective, collaboration is a means to an end: the delivery of projects. Following is a summary of comments heard through the interviews:

- Education about collaboration's benefits matters. Collaboration for its own sake is not effective. When the connection is made between collaboration and productivity, especially the ability to advance projects to construction, industry leaders become evangelists for the process. This connection is essential to building their confidence in the process. It is not automatically made; in fact, executives often believe exactly the opposite, that collaboration slows down and encumbers the process. This is an ingrained belief, supported by industry mythology and mystique, and it implies that education of future transportation leaders is a key tool to be considered when striving for long-term change. The other implication is that collaboration is not a value-neutral word; that is, it has positive connotations to some and negative connotations to many.
- To be effective, messages should be tailored to the specific situation executives are dealing with. Benefits of collaboration will be better received if they are described in terms of project efficiency, and their ability to overcome public resistance, engage stakeholders and thereby potentially increase resources available for projects, and so forth. The messages also must be realistic to be believed. For example, surprises will never be avoided, but they can be reduced through collaboration. The message must fit the particular circumstance or it will not be heard, much less given credence.
- Leaders believe other leaders. The opportunity to hear directly from peers about the challenges they faced and how collaboration worked for them will go further than any other marketing technique to reach and persuade executives. Peer-to-peer exchanges and the use of case studies discussed at conferences and other familiar peer-to-peer settings (rather than published in reports that will sit on many executives' shelves unread) will have the greatest impact on this group.
- Flexibility about the structure of a collaborative process is important. A highly prescribed process (such as TCAPP) can improve the speed of decisions, but engaging partners in creating the structure leads to a feeling of ownership and may improve collaboration. In other situations, establishing very distinct roles and a specific final decision-making process may be the most effective approach.

Barriers to Collaboration

DOT leaders noted a range of challenges that can make collaboration difficult. Any tool that can help to address these issues will provide value to a necessary process.

- One source of tension when working with resource agencies often stems from the fact that the DOT has access to funds that must be spent on a specific timeline, or they risk losing those funds.
- Agency processes are well ingrained, and it can be very difficult to make changes when one has been doing something the same way for a long time.
- When resources are tight, people are only able to be reactive, and not proactive. It can be hard to find time to learn a new process or adopt a new way of thinking.
- There is often a lack of trust among partners.

Resource Agencies

For the purposes of the cluster interviews, resource agencies were limited to those focused on the environment (e.g., state agency or federal EPA) and cultural resources (e.g., State Historic Protection Offices). These agencies have missions of protection and preservation, and thus are involved with transportation capacity and other projects. Their role is to make sure that resources are not compromised as a result of the proposed transportation project. For example, the EPA's mission "is to protect human health and the environment" (*5*). While EPA may understand the need and benefit of a particular project or improvement, the agency must remain true to its mission and the regulations that govern its work, thus ensuring that these resources are affected to the least extent possible. Without a process involving collaboration, the EPA is unable to work with state DOTs, and is only able to approve or deny a particular proposal.

Comments on Collaboration

Resource agency decision makers provided the following perspectives on the collaborative process:

- The only way to influence a DOT (or other partner agency) is by sitting at the table with them.
- A collaborative process instills trust in resource agencies that all voices are being heard, and that the best solution will be chosen. The collaborative process also "buys" credibility with the public, and leads to less confrontational interactions.
- Building relationships takes time, but it does pay off in the long run. It will always make things easier the next time around, and lead to better outcomes.

- A clear understanding of roles is critical.
- Finding common ground sparks conversation, which can lead to the development of workable solutions.
- Collaborative processes need to be homegrown in order to accommodate the distinct characteristics of a state, or the cultures of a set of partner agencies.

Barriers to Collaboration

- Resource agencies want to work with others, but they have to be true to their missions. Sometimes these two motives are at odds.
- There is a perception that historic preservation and environmental protection can be a barrier to transportation project delivery. This reputation needs to change before all partners can have an equal seat at the table.
- An ad hoc collaborative process will not work. Everyone must be comfortable with the process and knowledgeable about the decision milestones.
- Limited resources can make it difficult to participate in the many meetings that are sometimes required by a collaborative process.
- Change is not easy due to organizational culture, inertia, regulatory focus on enforcement, lack of resources, and competing demands.

Overlapping Views on Successful Collaboration

DOTs and natural resource agencies have distinct but overlapping views on the keys to successful collaboration. Figure 4.2 illustrates this, by pulling the key trend perspectives from both agency types and showing how they align and differ. These perspectives are valuable to consider in terms of how TCAPP or other collaborative approaches are presented, as well as to help both resource agencies and DOTs in understanding their partners' interests as they begin to engage in collaboration.

Decision Makers and Messaging

Decision makers of transportation and partner agencies are clear that collaboration is important, and even critical in today's environment. This section details some of the slight differences between two main partner agencies in their perspectives. While the partner agencies may differ slightly on the key elements of a successful collaborative process, they are relatively unified on the messages that they need to hear in order to adopt a particular process, and how they prefer to hear them. Following is a consolidation of central messages
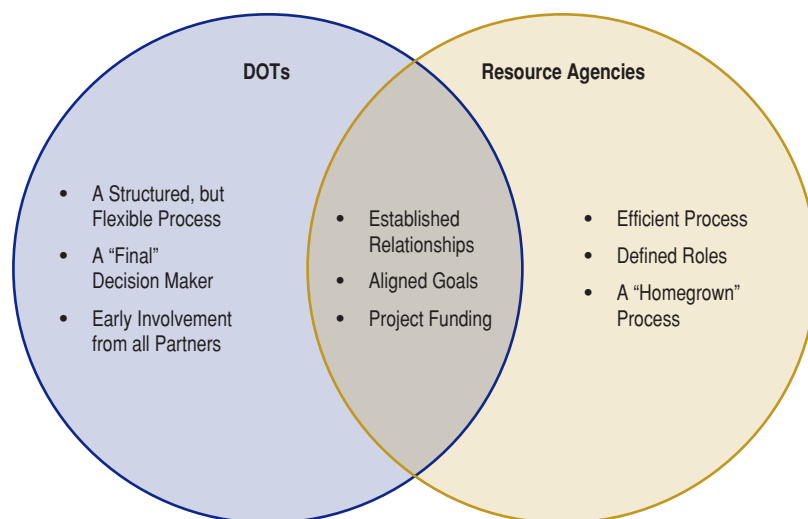
Figure 4.2. Perspectives on effective collaboration.

DOTs
- A Structured, but Flexible Process
- A "Final" Decision Maker
- Early Involvement from all Partners

(overlap)
- Established Relationships
- Aligned Goals
- Project Funding

Resource Agencies
- Efficient Process
- Defined Roles
- A "Homegrown" Process

that was drawn from interviews, listing messages identified as helpful in presenting TCAPP.

Potential Messages

This collaborative or interest-based problem-solving process will

- Save you time;
- Save you money;
- Lead to a better outcome; and
- Lead to better, easier decisions.

An additional set of messages would be best delivered by partner or peer agencies. The messages would be particularly persuasive when used by a peer agency to adopt, or participate in, a collaborative approach.

- We can agree that our current situation is not working, so we must work together to improve the outcome.
- There's a lot at stake, and partner agencies can take legal action to put a stop to a project if they are not involved in the process.
- Here are some quantitative data that show the actual benefits achieved through adoption of this process.
- Do not be the ones holding things up. By staying engaged, you can help make good things happen.

How to Disseminate Information

In an age of increasing use of varied communication methods, determining how to deliver messages to an audience can be as critical as defining that audience and crafting the message. According to interviewees, the message regarding the use of collaboration, and specifically the TCAPP tool, needs to be presented in the context in which the audience will be most receptive. Those interviewed for this effort had surprisingly similar answers. The main conduit for information sharing was workshops and conferences. Hearing about how their peer agencies are conducting business was noted as one of the most effective ways of learning about a new process or procedure. Regional workshops also are an effective way of getting peer states, and their partner agencies, together to share their challenges and solutions, and interviewees suggested this venue for discussion about TCAPP. DOT leaders also noted that there are a few key agencies to which they are particularly attuned, such as AASHTO and TRB. One natural resources agency leader indicated that information about a product such as TCAPP would have to come from her state's DOT, since the tool is transportation-focused. In general, current decision makers appear to be uninterested or unfamiliar with social media mechanisms. This is clearly likely to change as leadership changes hands to those more accustomed to social media as a primary means of communicating.

CHAPTER 5

Marketing Principles, Strategies, Messages, and Media

Introduction

A primary outcome of SHRP 2 C22 is the development of marketing principles, potential strategies, messages, and media that can be considered as a research foundation for strategic marketing of TCAPP to upper-level managers/decision makers within DOTs, transportation agencies, and environmental resource agencies. The objective of these principles and potential action items is to support agency leaders in championing cooperative approaches, changing institutional processes, and promoting interagency collaboration. This section builds upon the interview findings described in Chapter 4 and represents a bridge between research and implementation of TCAPP. The section presents strategic considerations to those who will be charged with implementation, including a set of potential strategies, possible media, and key messages.

Marketing Principles

The marketing principles were derived directly from the findings aggregated from the interviews. One theme heard during interviews revolves around the finding that there exists a range of (and sometimes negative) connotations of the word "collaboration." While it is viewed as inevitable, integral, and critical in today's environment, collaboration also can be understood as bogging down the process, or used by those who are not strong enough to carry a process through on their own. At the same time, executive leaders understand that successfully managing complex transportation capacity projects requires working together with partner agencies. It may be prudent to consider using a new term to invoke a partnership that is based upon a common desire to solve problems.

The marketing principles identified in this work are

- Peer-to-peer marketing is central to success. Executive leaders need to hear about collaborative practices from their peers or partner agencies in the same geographic area.

- Messengers are as important as the message. Slogans without the right speaker are hollow. Messages need to be tiered and tailored to meet geographic and organizational context of each agency audience.
- Geographic and organizational structures dictate marketing approaches. These factors are different for each agency and also vary among state DOTs. It is very important to structure marketing approaches with this diversity as a starting point. Decision makers are found in different positions and different geographies, depending on the agency in question.

For marketing and implementation work to be successful, these principles should underlie current and future efforts to communicate benefits and promote collaborative decision making in a multiagency context.

Potential Marketing Strategies

The development of potential marketing strategies was performed after completion of the market research. Based upon the interview findings, several potential strategies are cited here for consideration by those advancing SHRP 2 work into marketing and implementation. The data collected during the interviews indicated that the promotion of interagency collaboration across transportation partner agencies could be effective if conducted through two concurrent approaches: top down and bottom up.

Top down refers to engaging upper-level managers to influence direct reports and others in their agencies as well as their industry peers to adopt a collaborative approach to projects. With this potential strategy, managers lead by example. Those who already support and practice this process become the voice for promoting the collaborative approach and use their influence to secure opportunities for sharing their success stories and experiences.

Bottom up refers to influencing institutional processes starting with entry-level personnel who will eventually rise

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up into significant management positions within these organizations. With this potential strategy, the concept of a collaborative approach is introduced at the training and university level. These individuals then bring a new vision and renewed sense of excitement that will further help ingrain the idea of interagency cooperation into the culture. This is a secondary market for consideration, but should be factored into the marketing plan for executives and the overall marketing of TCAPP. This group holds the greatest promise for dispelling the myth that "getting things done" means forcing others through a command-and-control project approach.

Potential Top-Down Strategies

Three overarching goals were gleaned from the interviews and are used to encompass potential top-down strategies. They are to (1) address attitudes about decision making, collaboration, and leadership; (2) create spokespeople among those already committed to collaboration and TCAPP; and (3) lay the groundwork for persuading those resistant to change.

Addressing Attitudes about Decision Making, Collaboration, and Leadership

Interviews with top-level leaders at transportation agencies revealed a spectrum of beliefs and attitudes about decision making, collaboration, and leadership. Collaboration is a highly charged word. For those who embrace it, connotations included "it is the only way to move projects forward" and "it is the right thing to do." However, even collaboration's most fervent supporters admit there also are strong negative perceptions of the term, ones that are quickly cited by those who do not value collaboration. "It slows down the process" and "it makes you look like a weak leader" are among the connotations that were most often shared in the interviews. Therefore, one potential strategy to be explored by SHRP 2 C37 and others is the potential rebranding of TCAPP.

Another potential strategy is to describe the value of TCAPP as a flexible resource for achieving both goals and institutional mission.

The interviews conducted affirmed that TCAPP has value to the industry as a support tool. While none of the executives interviewed felt that they personally would have used or benefitted from TCAPP during a particularly difficult project process, many were delighted to learn that TCAPP existed and intended to let their planners and engineers know about it and to encourage its use.

There is, however, a crucial caveat. Industry executives highly supportive of an interest-based decision-making approach stressed the importance of distinguishing between a rubber-stamping process and a process that truly conducts projects in a collaborative spirit. They expressed concern that

the framework and checklists, while extremely useful, were not a guarantee of embedding collaboration into the institutional mission.

With that caution in mind, the research team has identified four key attributes of TCAPP that could potentially be emphasized in marketing materials and communication:

- Systematic Approach: All those interviewed commended the systematic approach presented. They appreciated that it broke the transportation planning and project development process down into manageable components, and organized information around key decision points that everyone could understand.
- Flexibility: While interviewees noted the importance of a systematic approach, they also emphasized the need for the tool to be flexible and meet the needs of a diverse set of processes, conditions, and stakeholders. If leaders understand that it is not a lockstep process that must be adopted in full, they will begin to explore how it can be applied in a range of creative and effective ways.
- Collaborative Tools: Interviewees were very interested to learn that TCAPP provides a number of useful tools, such as the assessments, that enable practitioners to identify their challenges and find the most appropriate information. These tools also help to strengthen partner and stakeholder engagement when used collaboratively.
- Information, Data, and Resources: Interviewees also commended the breadth and depth of resources associated with TCAPP. A wealth of information is provided in the Decision Guide that leads users to other informative areas of TCAPP. Step-by-step instructions and analytic tools allow practitioners to apply research to current problems. The compendium of case studies and links to useful resources also was deemed extremely helpful, especially if kept current.

Creating Spokespeople among Those Already Committed to Collaboration and TCAPP

More than anything else, industry executives stated that they rely on and value peer-to-peer exchanges, particularly those sponsored by AASHTO, TRB, and U.S. DOT (FHWA). This is likely to be the most promising venue for disseminating information about TCAPP and encouraging peers at the top levels to try it. Recommended actions are as follow:

1. Build peer-to-peer exchanges and promote through AASHTO, TRB, U.S. DOT (FHWA), the Association of Metropolitan Planning Organizations (AMPO), and other organizations.

   A number of very effective mechanisms for communicating with top executives in transportation already exist. These include the chief engineers meeting at the AASHTO

general meeting and the regional AASHTO meetings, where the CEO roundtables and chief engineers breakfast create captive audiences. Face-to-face communication could facilitate informative dialogue among DOT and MPO top leadership.

Similar opportunities are present at AASHTO Standing Committee meetings (e.g., Planning, Environment, Design), AMPO, and other organizations, such as FHWA and TRB.

2. Promote editorial pieces for industry publications.

The executives interviewed often stay informed through industry publications. They are a great source for establishing credibility for TCAPP and driving traffic to the website. Several publications were mentioned, including

- *Transportation Weekly;*
- *Engineering News Record;*
- *Transportation Builder;* and
- Environmental resources newsletters.

3. Identify additional individuals within organizations to become TCAPP experts and maintain a clearinghouse of resources.

Lastly, individuals who promote TCAPP within their organizations could be vital to spreading the word and enrolling others in the process. This group could be supported and encouraged through a structured training and reinforcement program that would include a mechanism for sharing lessons learned and tips for spreading TCAPP approaches throughout organizations.

The objective would be to get executives on board, so that they would then share materials and TCAPP approaches with DOT staff at internal meetings and, potentially, revise DOT project development process manuals, if necessary, to reflect TCAPP guidance. Here, top executives remain key to execution and direction setting.

In the resource agencies, the environmental liaisons could be the appropriate people to introduce and educate agency staff about TCAPP resources.

Lay the Groundwork for Persuading Those Resistant to Change

There is another important audience: those individuals who subscribe to traditional practices, are resistant to change, and do not recognize the benefits of collaborative practices. Interviews with members of this group indicated that while many of them acknowledge the importance of partnerships, it is going to take a persistent effort over time to convince this group to actively integrate a new collaborative framework such as TCAPP. From a marketing perspective, this is not a group that holds a high potential for immediate return on investment and therefore this group would not likely be the primary focus of limited marketing resources.

Fortunately, some of the overall strategic recommendations also would potentially influence this group:

1. Translate the value and benefits of collaborative approaches into relatable experiences/activities.

If the TCAPP approach is expressed as the most logical one, given the current climate of limited resources and multiple agency involvement, the principles espoused become less about relinquishing control and more about a practical way to maximize the potential of present circumstances. Even the least supportive interviewees admitted that they sought partnerships in order to be able to get projects funded and completed. This positioning, along with potential rebranding of the concepts in TCAPP, could serve as first steps for engaging this segment as they stated strong negative associations with the term "collaboration" and indicated that they do not want to be identified as using or supporting collaborative styles of leadership.

2. Build peer-to-peer exchanges and promote through AASHTO, U.S. DOT (FHWA), and other organization programs.

As this group also is highly influenced by these organizations and peer-to-peer exchanges, this strategy would be applicable to this segment as well.

3. Promote editorial pieces for industry publications.

This group also is committed to staying informed through industry publications. Therefore, the same strategy and publications could be used to reinforce the messaging to this audience.

Potential Bottom-Up Strategies

The top-down strategies described would address top-level personnel within the organization in the expectation that they would exert a downward positive influence on others. At the same time, inculcating the message with the next generation and training them in collaborative and interest-based decision making would work from the bottom up to breed practitioners entering the profession. The goal gleaned from interviews is to build TCAPP knowledge and methodologies into training of the next generation of transportation professionals.

Build TCAPP Approach Methodology into Training of the Next Generation of Professionals

The wealth of resources within TCAPP could potentially be used as materials to support a curriculum on the "preferred planning process" for transportation. Two strategies are well suited to reaching this group:

1. Reach out to university programs to encourage discussions/classes about the benefits of TCAPP.

Development of curricula and educational materials about TCAPP would encourage dissemination of this methodology to students. Similarly, training programs for professionals in the field, such as the National Highway Institute (NHI), could provide courses.

2. Develop training program for new hires about TCAPP resources available, and so forth.

A training program for new hires could be developed and piloted with organizations before rolling out nationally. This would offer exposure and experience for lower-level employees and build a cadre of support on the practitioner level.

Key Messages: Mapping Benefits to Decision-Maker Audiences

Successful marketing takes products or program characteristics and restates them as benefits. Benefits are best articulated by taking a characteristic and then asking ". . . and that matters because . . . ?" For example, rather than stating the address of a location (the characteristic), real estate marketing usually touts the benefit, such as "steps from the Metro" or "in the prime school district." A marketing approach for TCAPP also could be designed to emphasize benefits, not characteristics of the program being promoted. The interview findings identified a set of potentially relevant messages, relevant for the top-down approach, or the bottom-up approach. Interviewee comments indicated that the meanings behind these messages will resonate. However, the messages could potentially be even more effective if heard in a context of the benefits they will provide. Table 5.1 provides a list of messages created in response to

comments heard, and then translated into a benefit statement. This type of more active statement could be considered in future messaging and marketing materials.

Preferred Media for Communicating the Messages

Based on the interviews conducted and knowledge of marketing, it is believed TCAPP's primary market would likely be those already supportive of a collaborative partnering approach but unfamiliar with the TCAPP tools. TCAPP, as it currently is presented, is an effective resource for showing practitioners how to institutionalize collaboration into the processes they presently follow. Secondarily, it is likely to have some utility as a resource for organizations using a different methodology (e.g., it could be used to find specific and practical recommendations at a specific decision point in the process). TCAPP by itself would not likely be relied on as a tool for persuading those who do not already espouse collaboration to embrace interest-based problem-solving approaches.

While the interviews indicated that there is still resistance to the notion of collaboration, times have changed, and nearly everyone interviewed spoke of the need today to work through partnerships if goals are to be achieved. Comments such as "No one organization owns a complete process" and "Money is so constrained we have to be sure of what we are doing" reflect the current environment and make a strong case for embracing TCAPP. When viewed in that light, promoting TCAPP does not imply any value judgment; rather, it potentially becomes a practical solution to today's constrained, multistakeholder landscape.

Table 5.1. Proposed Key Messages and Related Benefit Statements

Message	Benefit Statement
Top-Down Approach	
No one organization or department owns a project anymore; you have to work cooperatively.	The TCAPP approach finds and leverages common ground among project partners.
In these fiscally constrained times, the TCAPP approach is a defensive way to demonstrate good use of resources.	With the TCAPP approach, you will quickly find out if you are doing the right things and if you are doing things right.
	The TCAPP approach can garner financial support from additional sources.
While sometimes slower on the planning end, project execution is often faster with the TCAPP approach.	The TCAPP approach is faster and cheaper (must be able to prove this point but this could be an eye-opening visual). This expeditious outcome is often related to TCAPP's ability to build long-term trusting relations between agencies and organizations.
The TCAPP approach of problem solving leads to successful project outcomes.	On time. On budget. No surprises. And goodwill to spare.
Bottom-Up Approach	
Teaching the TCAPP approach prepares students for the realities of our interdependent future.	The TCAPP approach builds a staff of successful negotiators and problem solvers.

To determine ways to reach top-level executives with this message, interviews included the following questions:

- What is the best way to get your attention? What is your preferred communication method for industry news and information?
- What sources do you rely on to obtain industry information? (AASHTO, TRB, state, etc.)
- How do you stay informed about tools and techniques that could help advance your organization?
- Do you handle your own e-mail or does your executive assistant handle it?
- Please describe your level of comfort/proficiency with digital communications (social media, Twitter, Facebook, blogs, etc.).

Based on the responses received, media influences and channels that may be effective for different audiences are stated below.

Reaching Decision Makers

Decision makers are notoriously busy, preoccupied with urgent matters and important initiatives. Few of the decision makers interviewed had even heard of TCAPP, much less spent time on the website. Most thought it might be useful for others in their organization; none saw it as useful for themselves.

Based on these interview findings, potentially effective approaches to be considered include

- Addition of TCAPP discussions to national, regional, local, and annual meeting and conference agendas. Development of breakout sessions where case studies and principles are shared.

- Encouragement of peer-to-peer exchange at meetings and conferences. Potential creation of a standing committee or other way to acknowledge the importance of collaborative or interest-based problem-solving approach.
- Development of articles for publication in respected journals, or alternatively, development of short story videos. They are concise and can be a means of communicating peer to peer.

These efforts could focus on using case studies and personal experience to identify the benefits of the TCAPP approach. To help remind decision makers about the TCAPP site, it also could be helpful to distribute some sort of leave-behind with the website name.

Reaching the Next Generation of Professionals

Bringing the TCAPP approach to educational institutions and training programs could begin building a cadre of young professionals already embracing the methodology. This bottom-up strategy could help to spread the practice among organizations. To achieve this, some potential actions to be considered include

- Creation of an advisory committee to oversee this effort, including prominent educators already espousing the TCAPP approach;
- Development of a course curriculum for teaching/training the TCAPP approach; and
- Promotion of the course through TRB and peer-to-peer exchange at national, regional, local, and annual meetings and conferences.

CHAPTER 6

Conclusions

In conclusion, executive leaders of transportation and partner agencies who were interviewed spoke of the complexities of today's challenges and knew that they would increasingly need support tools to frame, support, or augment their decision-making processes to support transportation capacity projects. TCAPP and its associated tools and research can be available to fill this need in a multitude of ways. One challenge for the SHRP 2 implementation team is to make this important tool available to those who will endorse it (executive decision makers), and then hand it off to those who will find value in its support of their daily work (practitioners). This market research has identified strategies and approaches that could potentially accomplish this task by targeting the executive leadership and the next generation of professionals.

The identified strategies are grounded in the frank conversations conducted through this research effort. They should be considered within the context of, and as a companion to, other marketing and outreach efforts currently under way. Given the timing of various efforts, the SHRP 2 C22 research has been relayed early to other researchers and staff, for example, *SHRP 2 Capacity Project C37, Develop a Marketing and Communications Plan for TCAPP.* In addition, these ideas are immediately available to the SHRP 2 implementation community, including MarCom Group. MarCom Group is responsible for the overall marketing and branding of all SHRP 2 research projects.

The following next steps are identified as possible means to facilitate effective integration of the SHRP 2 C22 research into SHRP 2 marketing (SHRP 2 C37) and implementation activities already under way.

Merge SHRP 2 C22 Research Findings with Related Efforts

The ideas outlined in the potential marketing strategies section of Chapter 5 are designed to dovetail with concurrent marketing and implementation efforts. On the basis of research conducted, the section offers potential messages and techniques to reach executive decision makers in a variety of effective ways. It also targets future transportation professionals via a TCAPP-based curriculum and a training program for new staff at DOTs, MPOs, and partner agencies.

As similar research is undertaken to ascertain effective ways to reach all target audiences (currently under way in SHRP 2 C37 and associated implementation planning efforts for other capacity projects), this work is serving as an adjunct.

Use SHRP 2 C22 Research Findings in Marketing Materials

The original work scope of SHRP 2 C22 included the development of marketing materials designed for executive leaders. To better support the other projects under way and to avoid duplication of branding efforts, the scope was instead revised to develop marketing principles, potential marketing strategies, key messages, and media that could be considered during subsequent marketing and implementation activities. The potential strategies identified four key emphasis areas that could be incorporated into any marketing materials that are produced through subsequent efforts. These are

1. Systematic Nature of TCAPP Approach. Interviewees noted tremendous value in TCAPP's systematic way of breaking the transportation capacity process down into manageable components and organizing information around key decision points that everyone could understand.
2. Flexibility. Interviewees also spoke of a corresponding value in the flexibility afforded by TCAPP's modular structure, which can accommodate the needs of a diverse set of processes, conditions, and stakeholders. This flexibility, and the fact that one does not need to adopt TCAPP in its totality, allows agencies to explore how it can be applied in a range of creative and effective ways.

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3. Collaboration Tools. Interviewees appreciated that TCAPP provides a number of useful tools, such as the array of self-assessments, that enable practitioners to identify their challenges and find the most appropriate information. According to comments, these tools also could help to strengthen partner and stakeholder engagement when used collaboratively.

4. Information, Data, and Resources. Interviewees were impressed by the breadth of information provided in the Decision Guide. The breadth and depth of research included timely value to agencies through step-by-step instructions and analytic tools allowing practitioners to apply research to current problems. The compendium of case studies and links to useful resources was cited as extremely helpful, offering peer examples of specific challenges and successes to DOTs and partner agencies. The value of this compendium was deemed to be very high, with the caveat that it must remain current to retain value.

Quickly Implement Messaging into Early TCAPP Marketing

The potential strategies developed through the SHRP 2 C22 research are complementary to activities currently under way, but also have value as stand-alone marketing strategies if deemed applicable to ongoing implementation efforts. The messages and media are immediately available to assist with early efforts to introduce the products of SHRP 2 research. As the SHRP 2 implementation team begins to take ownership, these recommendations could be cherry picked for those that can be seamlessly integrated for some early wins with respect to marketing.

TCAPP and its products represent a substantial effort of research and tool development. This suite of resources comes online at a critical moment, as agencies struggle with issues of increasing complexity in an age of decreasing resources. The SHRP 2 C22 research underscores the growing awareness of agency leaders and their staff of a need to have such a framework to support their decision making. However, the value of TCAPP still needs to be articulated, and its real impact will only truly be known once it has become a household term. The ideas outlined here, aligned with the efforts of SHRP 2 C37, could begin to move TCAPP into the day-to-day awareness of transportation and environmental professionals. Once TCAPP is effectively introduced to executives, it will be up to transportation decision makers and their partners to put into place the cultural and procedural changes that could bring about a new, better, and stronger way of addressing transportation capacity needs within the context of our communities.

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APPENDIX A

Market Research

Decision Makers Interview Guide

1. Background
   a. What is your background?
2. Advancing Transportation Capacity Projects
   a. How is your agency generally involved in transportation capacity projects?
   b. To what degree does your agency partner, coordinate, and/or engage in early communication with project partners such as . . . ?
   c. Now, thinking of a recent capacity project example (can be from planning or project development) . . .
   d. Based on your own experience, how have you encouraged coordination and collaboration among project partners?

3. Testing the TCAPP Concept
   a. In your experience and opinion, what are some reasons to collaborate?
   b. What type of information would help staff to pursue collaboration?
   c. What are your impressions of the TCAPP website?
   d. What is the best way to get your attention for news and information?

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