

2. RESEARCH APPROACH

This research project consisted of the following four distinct stages:

- Stage One: A list of institutional barriers that impede intermodal planning and decision making was compiled through a literature review and interviews with 41 representatives of MPOs, state DOTs, transit agencies, U.S. DOT, and industry associations.
- Stage Two: Respondents to a nationwide mail-back survey of 421 individuals responsible for intermodal planning at the local, regional, and state levels identified the priority opportunities for improving the intermodal planning process.
- Stage Three: Three implementation forums were held in Albuquerque, New Mexico; the Austin-San Antonio Corridor in Texas; and Queens, New York. These 2-day action-planning sessions involved transportation planners at all levels and decision makers from both the private and public sectors. This grass roots approach enabled the research team to learn about the institutional barriers that exist in different regions and to document the strategies the participants had developed for overcoming barriers.
- Stage Four: Strategies were identified that enhance the decision-making context for intermodal planning. Key attributes that improve the local ISTEAs implementation process were summarized.

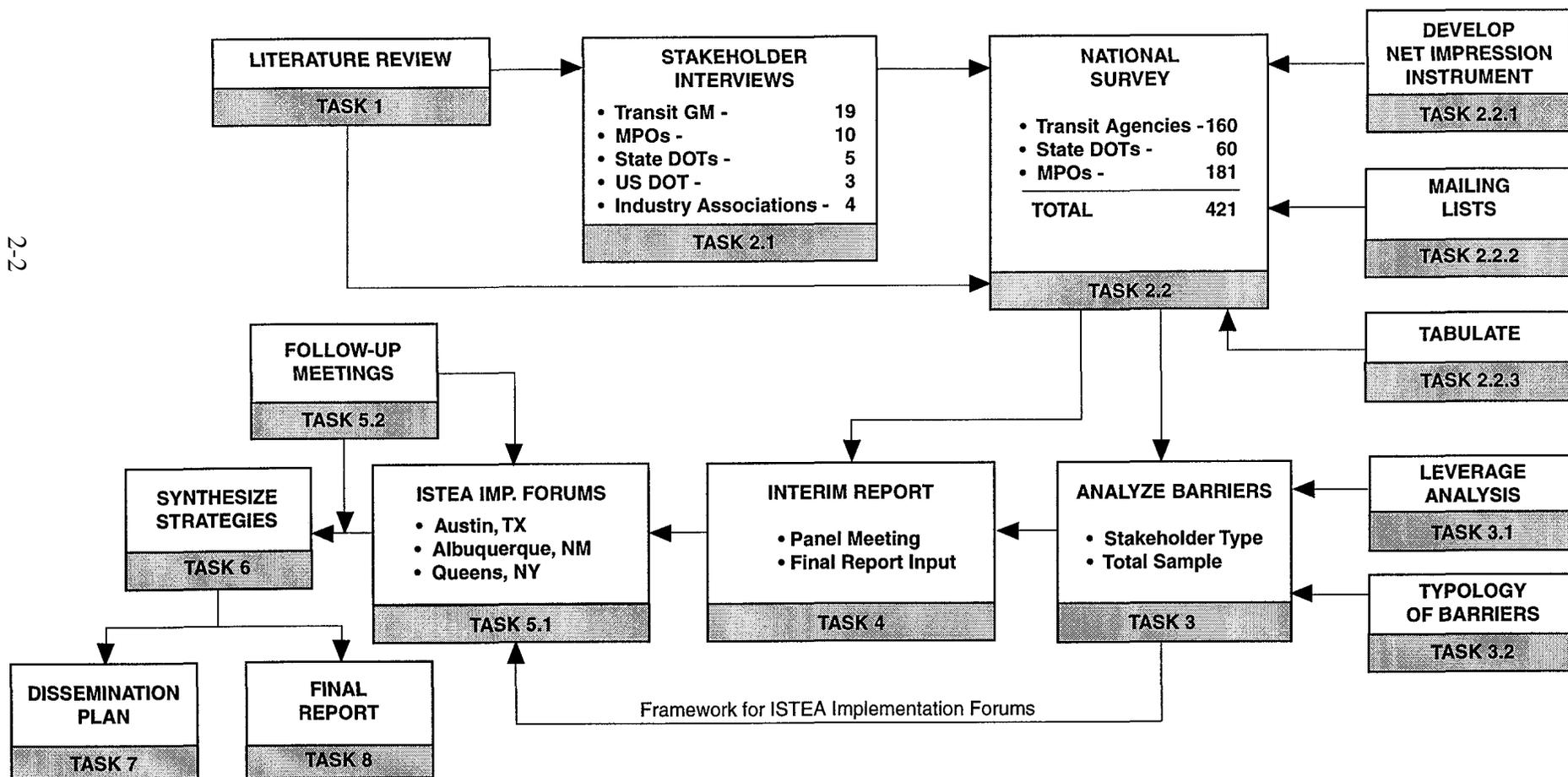
The following discussion highlights the key elements of each stage of the research. An overview of the research is presented in Figure 2-1.

STAGE ONE

Literature Search

Transportation researchers and practitioners have reviewed, analyzed, and provided commentary on the acceptance and practice of ISTEAs policies in several ways. Literature search efforts included studying numerous journal articles that characterize the impacts of ISTEAs on intermodal planning; reviewing several surveys designed to measure industry acceptance and overall effectiveness of the various policies contained in ISTEAs; and reading proceedings from conferences sponsored by federal agencies, transit and highway advocacy associations, and transportation research organizations to address the new institutional relationships that ISTEAs promotes. All of these activities, either in their entirety or partially, focused upon the issue of institutional barriers to the implementation of ISTEAs

FIGURE 2-1
OVERVIEW OF RESEARCH PLAN



intermodal policies and flexible funding provisions. Brief highlights of several relevant literature citations are presented below. A sample synopsis of an important literature citation is presented on the next page. Other literature citations are included in the remaining chapters of this report.

In December 1992, at the request of the U.S. DOT and its modal agencies, the TRB conducted a conference to address ISTEA—*Intermodal Planning Issues: The Concept, The Practice, The Vision*. This conference took a retrospective view of transportation planning, and overlaid the new planning requirements in ISTEA to ascertain the willingness and likelihood that the transportation industry, its planners and decision-makers in particular, would embrace the intermodal concepts and requirements contained in ISTEA. During the course of this conference, numerous institutional barriers believed to affect the implementation of ISTEA and lessen the achievement of its objectives were identified. As part of the conference proceedings, barriers capable of hindering the implementation of ISTEA objectives were defined.

In November and December 1993, U.S. DOT Secretary Federico Peña conducted regional meetings throughout the country to obtain transportation stakeholder views on how ISTEA works in different communities. In the words of Secretary Peña, “this series of ten meetings highlighted the success stories, glitches, snags and failures associated with ISTEA’s implementation.”(3) Throughout the course of these meetings, barriers rooted in planning, funding, and program implementation requirements of ISTEA surfaced. The outcome of these meetings was a seven-point action plan describing Secretary Peña’s strategies for achieving ISTEA goals.

Also, in February 1994, the American Public Transit Association (APTA), under a cooperative agreement with the FTA issued *APTA’s ISTEA Implementation Progress Report #2 Results*.(4) This report conveyed the results of a second round transit industry survey assessing to what extent large and small urbanized areas are implementing ISTEA requirements. The report contained a summary of findings from the questionnaire, brief case studies of several transit systems highlighting ISTEA-related experiences, and a chart depicting the progress each respondent had made in implementing ISTEA requirements. While some transit agencies did succeed in achieving some ISTEA requirements, most agencies indicated limited progress in this regard.

**SAMPLE LITERATURE SYNOPSIS:
MPO CAPACITY: IMPROVING THE MPOs TO HELP IMPLEMENT NATIONAL TRANSPORTATION
POLICIES**

ISTEA created new roles for the nation's 339 officially recognized metropolitan planning organizations (MPOs). MPOs are responsible for the transportation planning required to keep their regions eligible for federal highway, transit, and surface transportation funds. This newfound importance, however, came at a time when many MPOs had fewer capacities than needed to perform their planning functions, and when it was difficult for them to expand. The FHWA asked the U.S. Advisory Commission on Intergovernmental Relations to study MPOs to show how current practices can be brought into closer alignment with ISTEA expectations.

Key Findings

- ISTEA has placed new pressures on MPOs to (1) review and/or change their structure; (2) produce more comprehensive, more thoroughly developed, and more realistic plans; (3) speed up their planning processes; and (4) take on a stronger political decision-making role.
- Many MPOs have responded positively to the new ISTEA requirements, but believe (1) the ISTEA goals will be difficult to achieve in the short run and (2) the expectations are too complex and burdensome.
- Significant gaps exist in the knowledge needed to implement ISTEA effectively, efficiently, and equitably.
- MPOs are not all alike, and they should not be expected to perform alike.
- Most MPOs are not governments and do not exercise clear lines of authority.

Guiding Principles

Efforts to improve MPOs should include the following:

- Informing more than regulating;
- Creating a common understanding among all partners about what ISTEA requires in a practical working sense; and
- Creating a closer, more trusting relationship among all partners in the MPO process.

Key Recommendations

U.S. DOT should do the following:

- Establish a more comprehensive capacity-building program for MPOs.
- Consider reorganizing its training, research, and field units to deliver a more unified, coherent, effective, and efficient capacity-building program.
 - Couple its MPO capacity-building program with a program to reduce regulatory burdens on the MPOs and their partners in the cooperative transportation planning process.
- Support a mediation, conciliation, and peer-review service.

State DOTs should:

- Be active partners with the federal government in helping to strengthen the capacity of MPOs.

MPOs should:

- Cooperate with all their partners to strengthen their own capacities to be respond to the goals of ISTEA.

Source: U.S. Advisory Commission on Intergovernmental Relations, *MPO Capacity: Improving the Capacity of Metropolitan Planning Organizations to Help Implement National Transportation Policies*, A Commission Report, A-130, Washington D.C. (May 1995).

The literature review and researcher expertise provided the framework for 41 in-depth interviews of key executives of transit agencies, MPOs, state DOTs, and industry associations. The objectives of the interviews were to do the following:

1. Shape a nationwide survey regarding barriers and opportunities to improve intermodal planning and decision making;
2. Identify the range of intermodal planning factors that are most important to the stakeholders;
3. Understand the complexity of institutional barriers at the regional and state levels;
4. Solicit suggestions from stakeholders on the most effective strategies to overcome or overpower existing barriers; and
5. Obtain specific examples of changes that would improve the respondent's organizational capability to achieve ISTEA objectives.

A sampling plan was developed to select stakeholders to be interviewed by phone. For the transit agency general manager interview, six general managers from five geographic regions (based on FTA regions) were contacted for an interview. Across all regions, a total of ten small, medium, and large transit agencies were invited to participate in the stakeholder interviews. For medium and large transit agencies, the properties were divided further between air quality attainment and nonattainment areas. The transit agencies were selected randomly from within the categories. Of the 30 transit agencies contacted, 19 agreed to participate in the research effort.

A stakeholder interview guide was sent to all research panel members for review. The interview guide contained the following distinct sections:

1. Organizational capabilities,
2. Organizational structure and culture,
3. Institutional incentive structures and legal regulatory framework,
4. Financial resources, and
5. Support of intermodal planning and decision making.

The research panel's comments were incorporated into a revised interview guide. The final interview guide is included in Appendix A. A total of 19 transit agency general managers, 10 executive directors of MPOs, 5 directors of state DOTs, 3 U.S. DOT stakeholders, and 4 industry associations were interviewed.

The original interview plan also included several committee members of U.S. Congress. A brief interview was held with one congressional aide. The change in congressional leadership that occurred after the November 1994 election and the intensive legislative agenda that followed precluded additional interviews.

The interview team, consisting of senior transportation consultants, was instructed to probe the responses provided. Probing was essential in those instances when stakeholders

responded with routine and sometimes general answers to specific ISTEAs issues. For instance, a question asking each respondent to identify one change that would improve his or her area's organizational capabilities to achieve ISTEAs objectives repeatedly elicited the familiar transportation community response of "full funding of ISTEAs." Although this is certainly a valid response, probing stakeholders elicited responses with considerably greater insight.

As a final step, comments from each stakeholder interview were summarized and analyzed to obtain a contextual understanding of the challenges confronted in pursuing intermodal planning and decision making objectives.

STAGE TWO

The national survey effort included formulating an analytical framework, designing the survey instrument, distributing it, and analyzing the results.

Nationwide Survey Design

Analytical Framework

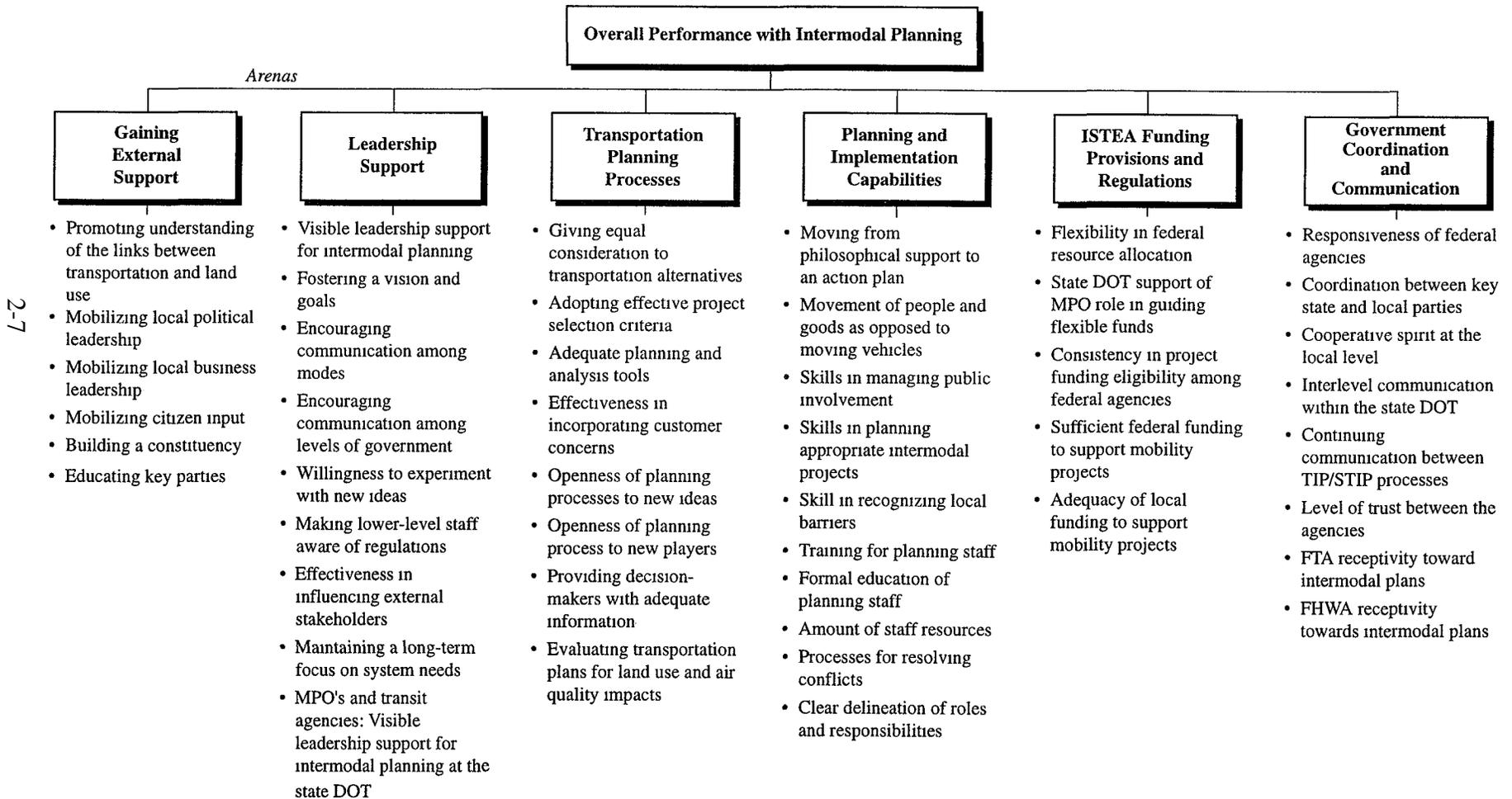
The research team wanted to use an analytical tool that could identify the key opportunities for improving the intermodal planning process. Net Impression^{®1} analysis is a very effective analytical tool that has been successfully applied in both the private and public sectors to improve customer satisfaction and performance in those areas that influence achievement of goals the most. Net Impression[®] begins with qualitative research to define the broad expectations of performance—called *stakeholder arenas*. Figure 2-2 shows six specific stakeholder arenas that were developed based on the literature review, stakeholder interviews, and research team judgement. These six arenas represented the major categories that stakeholders appear to utilize when evaluating the overall performance of intermodal transportation planning.

These arenas convey what stakeholders believe needs to be achieved to enhance intermodal policy and planning. Arenas can range from a fairly specific operational concern, such as *ISTEA Funding Provisions and Regulations*, to something more abstract, such as *Leadership Support for Intermodalism* or *Governmental Coordination and Communication In Support of Intermodalism*.

Within each stakeholder arena, several statements—called intermodal planning factors—provide additional detail on what stakeholders believe constitutes requisite performance within an arena. Each series of intermodal planning factors relates to a specific stakeholder arena. For example, as also shown in Figure 2-2, intermodal planning factors within the *Leadership Support* arena might include "Fostering a vision and goals that encompass intermodalism" and "Encouraging communication among levels of government." The

¹Net Impression[®] is a customer satisfaction measurement model and proprietary software tool developed by Pacific Consulting Group in Palo Alto, California. A complete description of the Net Impression[®] Model is included as Appendix D.

FIGURE 2-2
CUSTOMER SCORECARD FOR INTERMODALISM



research identified 46 intermodal planning factors in the six arenas. This provided the foundation for the survey instrument design.

Survey Instrument Design

For each of the intermodal planning factors, respondents were asked to evaluate how well their organization or jurisdiction performs in terms of fostering intermodal policies and planning for each intermodal planning factor. The 46 intermodal planning factors selected to evaluate in the national survey design were derived from the literature search and stakeholder interviews. For example, the factor, “Adopting effective project selection criteria,” was a prevalent theme in both the literature and discussions with MPO and state DOT representatives. During this phase of the research, the research team reviewed written notes from the stakeholder interviews and literature review in order to best represent the planning factors that determine, from the stakeholders’ perspective, what is good (or bad) performance in a broad category of performance such as *Leadership Support*.

Respondents were asked to note their overall satisfaction with the stakeholder arena in general. A scale of 1 to 7 was used where “1” means “Needs Major Improvement” and “7” means “Excellent.” Each series of intermodal planning factors related to a specific stakeholder arena.

The nationwide survey questionnaire reserved space for stakeholders to make open-ended comments for each of the six improvement arenas. It specifically asked for stakeholder suggestions in improving the intermodal planning process.

A draft of the survey instrument was sent to the research panel for review and comment. Comments were received and incorporated into the final survey instrument, which is included as Appendix B.

Survey Distribution

After reviewing several sampling plan options, the research team decided to conduct a census of MPOs and state DOTs and a modified random sample of transit agencies. The following distribution method was utilized for the national survey of transportation professionals:

- Transit Agencies: To provide a representative sample of urban, suburban, and rural transit agencies, a combination of the APTA directory of public transit agencies and a random list of members provided by Community Transportation Association of America (CTAA) was utilized. The survey was sent to the general manager and the director of planning at these agencies.
- Metropolitan Planning Organizations: All MPOs in a list provided by the FHWA were sent a survey. Separate surveys were sent to executive directors and transportation planning managers.
- State DOTs: A directory provided by AASHTO members was utilized to send the survey to the director/secretary of each agency. If a department or division

of mass transportation was present, it was included in the sample. For the five states with the highest general population, a sample of three regional directors was also included.

SUMMARY OF NET IMPRESSION® TERMINOLOGY

Stakeholder: One who has a share or an interest, as in an enterprise.

Planning Arenas: Broad categories of performance in the intermodal policy and planning process.

Intermodal Planning Factors: Factors that determine, from the stakeholders' perspective, what good (or bad) performance in an arena might mean.

Leverage Analysis: Used to quantify the relative payoff to the intermodal planning process, in terms of stakeholder satisfaction, of making changes among and within arenas.

Leverage Scores: The output of the leverage analysis, expressed in percentage terms. The leverage score indicates a percentage increase in overall satisfaction within an arena resulting from a 50% improvement in an intermodal planning factor. In relative terms, leverage scores suggest an overall direction for change.

A total of 1,666 questionnaires were mailed the week of January 20, 1995 with a due date of February 10, 1995. A follow-up post card was mailed Friday February 3rd, reminding respondents to return the questionnaire. After a lower than expected response, the due date was extended 2 weeks and follow-up phone calls were made to states where a lower than average response rate was received. A total of 421 respondents returned the questionnaire. The results and response rate are summarized in Table 2-1. The table includes state DOTs, MPOs and transit agencies.

**TABLE 2-1
STAKEHOLDER RESPONSE RATES**

Stakeholder Grouping	Questionnaires		Response Rate	States Represented
	Sent	Returned		
State DOT	158	60	38.0%	70%
MPO	682	181	26.5%	86%
Transit Agency	826	160	19.4%	84%
Other*	NA	20		NA
TOTAL	1,666	421	25.3%	100%

* Self reported as city, county, Indian reservation, etc.

The survey responses provide a good overall representation of MPO, state DOT, and transit agency experiences and opinions on intermodal planning and policies. At the 95% confidence level, the maximum margin of error for the entire survey sample would be +/- 5%.

All 50 states and Washington D.C. are represented. Respondents included the following:

- 160 transit agency stakeholders representing 42 states
- 181 MPO stakeholders representing 43 states
- 60 state DOT stakeholders representing 39 states.

A more detailed profile of survey respondents is included as Appendix C.

Respondents provided a great deal of detail in the open-ended questions that solicited suggestions for improving intermodal planning and policies in their areas of jurisdiction. All open-ended questions were transcribed verbatim.

Survey Tabulation and Analysis

A computer model was used to analyze the Net Impression[®] survey responses. The model calculates, relatively speaking, where improvements will have the greatest impact on overall transportation stakeholder satisfaction with the intermodal transportation planning process.

A key output of Net Impression[®] analysis is leverage scores. (A detailed explanation of leverage analysis and leverage scores is provided in Appendix D.) Leverage analysis identifies the greatest opportunities for improvement in intermodal planning and decision making. It provides key relationships between stakeholder perceptions regarding specific intermodal planning factors with the degrees to which stakeholders care about them. Leverage analysis permits the comparison between the relative satisfaction and importance of different arenas and the relative satisfaction and importance of each intermodal planning factor. In general, leverage will be greatest in arenas where stakeholders report relatively lower satisfaction and perceive a particular arena or intermodal planning factor to be important to achieving desired goals and objectives.

The questionnaires were coded and keypunched, and a data file was used to run the Net Impression[®] software. The software identifies priority opportunities for improving intermodal planning practices. Analysis of Variance (ANOVA) was utilized to identify factors that explain variance in the survey respondent. T-Tests were utilized to identify statistically significant differences among the stakeholder groups. The mean satisfaction ratings and leverage scores for all six arenas and 46 intermodal planning factors are presented in a series of figures in Appendix E. Results are presented for stakeholder type: state DOT, MPO, and transit agency respondents.

STAGE THREE

Implementation Forums

The implementation forums were 2-day action-planning sessions; held in three regions of the U.S.; and involved local, regional, and state transportation planners and decision makers relevant to a particular jurisdiction. A key objective of the forums was for the participants to develop several initiatives that would enhance intermodal planning and decision making for their region. The implementation forums helped to achieve the research objectives by observing stakeholders in a real-world context crafting their own strategies to overcome institutional barriers to intermodal planning. The research work plan originally included four implementation forums, with a follow-up session 90 days after the original forum.

In the national survey mailing, an announcement was included on the implementation forums that described the implementation forum concept, the expected benefits, and how four sites would be selected. A total of 26 agencies responded to the survey solicitation. Each respondent was contacted by telephone to discuss the agency's interest in participating as an implementation forum site. A structured interview of five questions was used to guide this follow-up telephone conversation.

Following these telephone interviews, each candidate was reviewed within the context of the selection criteria and assigned to one of four categories. Group A included the four primary sites recommended for implementation forums: (1) Austin, Texas; (2) Chattanooga, Tennessee; (3) Albuquerque, New Mexico; and (4) Queens, New York. Group B consisted of agencies that could serve as satisfactory sites; however, their size and population paired with the perceived range of intermodal opportunities might limit the results and the transferability of strategies identified. Group C sites included interested sites not meeting the first-tier criteria. Group D was composed of those agencies that withdrew their candidacy after learning more about the implementation forum process.

Four candidate implementation forum sites were recommended for consideration by the research panel. The primary criteria used in the selection of the candidate sites by the researchers included:

- Experience and interest of the site in seriously pursuing intermodal objectives as stated in ISTEА,
- Barriers in the site's pursuit of intermodal activities,
- ISTEА-related objectives that the site would like to address and achieve,
- Issues addressed that could have transferable lessons for other transportation and regional planning agencies, and
- Enthusiasm by the host agency to assist in organizing the implementation forum and eliciting participation of appropriate individuals from stakeholder agencies.

The majority of H-4C panel members agreed with research team recommendations, and follow-up letters were sent to the four recommended sites to begin detailed planning of the forums. Participation agreements were reached with Austin, Texas (for the Austin-San Antonio corridor); Albuquerque, New Mexico; and Queens, New York. An agreement on participation by key stakeholder agencies could not be reached with Chattanooga, Tennessee, and they discontinued participation in the project. The research schedule did not allow the substitution of an alternate site.

The three implementation forums sites were selected because they provided representative barriers and priority opportunities for improvement that were identified as top priorities by both the stakeholder interviews and the national survey. For example, in the Austin-San Antonio corridor, the submission from the implementation forum host to the research team indicated poor interjurisdictional communication, an absence of corridor planning leadership, and modal separation. All of these were important barriers identified during the stakeholder interviews and national survey. There was also significant opportunities for improvement that reflected the priority intermodal planning factors, derived from the survey. There was a need to build constituencies, educate key parties about the benefits of intermodal planning, mobilize business leadership—all intermodal planning factors that were ranked in the top five (of 46 evaluated) for improvement opportunities.

Chapter 5 includes a summary of implementation forum outcomes. Appendix F includes a detailed description of implementation forums, relevant background information action plans, and a 90-day progress report. After the initial 2-day action-planning session, a follow-up session was held approximately 90 days later.

STAGE FOUR

Recommended Strategies

The centerpiece of the final stage of the research was the development of the research findings and recommended strategies. Ten specific strategies were developed based on the products of the three previous stages. A key lesson of the implementation forums was that specific action plans need to be developed locally. Chapter 5 suggests several attributes that the researchers believe will enhance intermodal planning at the local level. The recommended strategies in Chapter 6 are designed to enhance the decision-making context at the federal, state, and regional levels.

CHAPTER REFERENCES

3. U.S. Department of Transportation *Regional Roundtable Report and Action Plan, A Progress Report for Our Customers*, Washington, D.C. (March 1994), p. 1.
4. American Public Transit Association, "APTA's ISTEA Implementation Progress Report #2 Results." Washington D.C. (February 1994).

3. INTERMODAL PLANNING AND POLICY BARRIERS

Three major categories of institutional barriers emerged during this research: organizational, interjurisdictional, and resource barriers. The following section describes the nature and complexity of these barriers based on findings from the literature search, stakeholder interviews, and national survey. Figure 3-1 is an overview of these barriers.

ORGANIZATIONAL BARRIERS

The research showed that the organizational legacies, culture, and regulatory processes of many federal, state, regional, and local transportation organizations impede the enactment of an intermodal vision.

Modal Separation

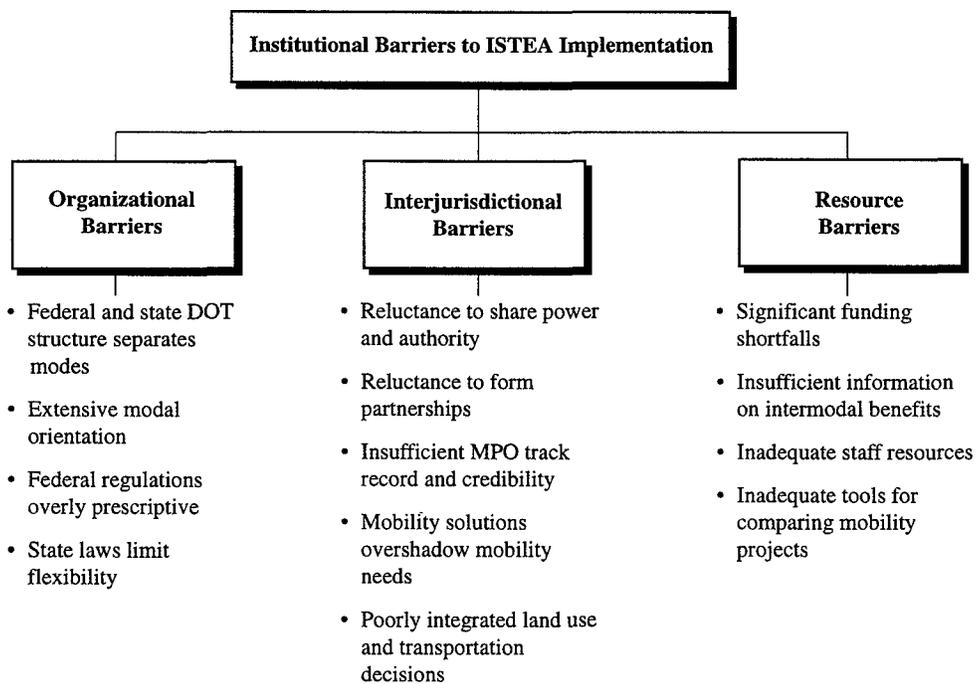
Federal

For the past 30 years, the Federal Transportation Act had a strong modal focus. Accordingly, transportation agencies were organized around mode-specific planning, research, and funding. Funding programs and policies neither required nor encouraged transportation plans or projects to achieve modal integration. The Interstate Substitution Program, which allowed the use of federal highway funds for transit projects, was the one notable exception. Since ISTEA, there has been some movement toward restructuring at the U.S. DOT, but many state DOTs continue to plan and operate modes separately.

In 1995, President Clinton and U.S. DOT Secretary Peña announced intentions to consolidate the surface transportation agencies—highways, transit, and railroads into an Intermodal Transportation Administration. The effectiveness of this reorganization will depend, in part, on ensuring that different modal interests receive due consideration when mobility plans and transportation options are discussed. An executive at the FTA remarked that the challenge is to “ensure that all modal contributions and options continue to be assessed equally.” The separation of modes that still predominates today is reflected in strong sentiments articulated by transportation planners and managers at the local and regional levels regarding transit agency isolation, insufficient intermodal planning guidance, complex regulations, and a prevailing highway preference. The following is a sample of these sentiments:

- “The U.S. DOT needs to truly represent and enforce an intermodal perspective; increase internal communication and coordination; and increase staff support, provide clear guidance, and increase funding flexibility, while reducing oversight and simplifying regulations.”

FIGURE 3-1
OVERVIEW OF INTERMODAL PLANNING & POLICY BARRIERS



- “The U.S. DOT needs to clearly represent an intermodal perspective and enforce ISTEA objectives locally and nationally.”
- “The U.S. DOT needs to improve internal coordination and communication, including possible organizational restructuring.”
- “Our State DOT shows major intermodal commitment; in contrast, evidence of intermodal support by U.S. DOT is not obvious.”
- “Little direction or guidance is provided by federal agencies regarding intermodal opportunities.”

The research found significant variation in how different stakeholders view the impact of modal separation at the federal level. During the stakeholder interviews, several senior federal staff members remarked that the existing U.S. DOT organizational structure does not have a negative impact on intermodal activities. It was also their view that the organizational structure is not impeding the review and approval of intermodal projects.

MODAL INTEGRATION WILL TAKE TIME

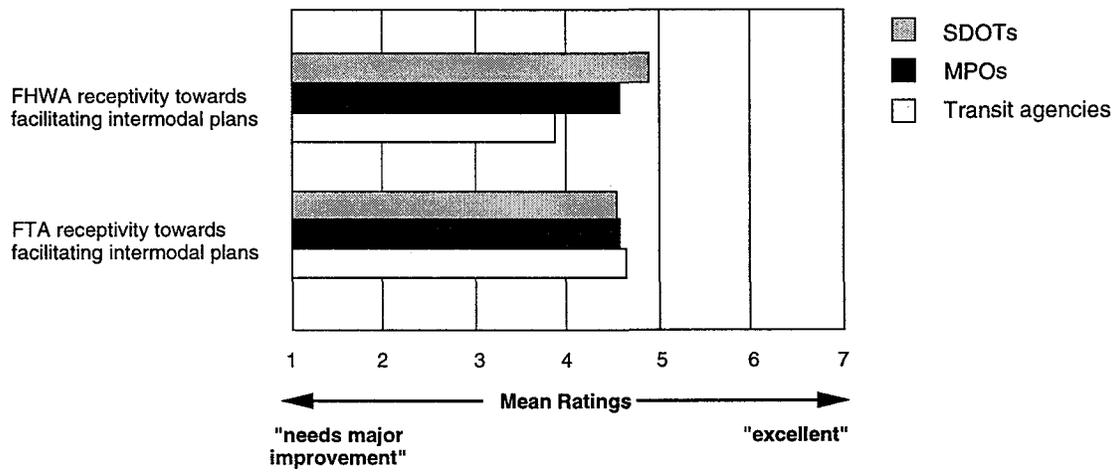
Louis Gambaccini, Chief Operations Officer and General Manager of the Southeastern Pennsylvania Transit Authority, reminds us that organizational responses to ISTEA will take time: “As I seek to maintain patience with the ISTEA process, I continue to remind myself that the highway program has had 75 years to develop its universe and transit now almost 30 years. It will take more than a few years for the barriers between the two of them to fall and for the parties to become convinced that the issue really is mobility, not who gets to provide it.” (5)

Figure 3-2 shows the contrast in transit agency, MPO, and state DOT perspectives on federal agency receptivity toward facilitating intermodal plans. Transit agency respondents believe that the FHWA needs to improve significantly more than do MPO and state DOT respondents. In contrast, there is little stakeholder variance in rating FTA receptivity to intermodal plans.

State

Few organizational arrangements promoting and fostering intermodal transportation planning exist at the state level as well. On the whole, highway agencies are an

FIGURE 3-2
FEDERAL AGENCY RECEPTIVITY TOWARDS FACILITATING
INTERMODAL PLANS



organizational part of state DOTs. They have developed an established and effective relationship. Transit authorities, while linked to regional agencies and state DOTs, are independent agencies.

Many transportation stakeholders felt that state DOTs still adhere to a strong modal preference favoring highways. Remarks such as “Change the highway mentality of DOT officials” and “Revamp state DOTs to make them transportation departments *not* highway departments,” convey this sentiment by those outside the state DOT structure. Overall, respondents remarked that state DOTs need to develop an intermodal perspective and policies, establish better communication, facilitate coordination regarding intermodal planning, and become more flexible in selecting approaches to meeting transportation needs.

Historically, transit authorities have been viewed by state and metropolitan agencies as operators of transit service rather than as members of the transportation planning community. An exception is Maryland where the regional transit agency is an organizational unit of the Maryland DOT along with the State Highway Administration and several additional modal agencies. When transportation planning and capital programming decisions are discussed, transit, highway, rail, airport, and port managers jointly meet to discuss transportation needs and make programming recommendations. This organizational arrangement is unique.

One official at a large western transit agency reflected on the problem: “How can transit be considered in the development of state transportation plans and projects if we aren’t part of the family discussing projects or taking part in making funding decisions?” Although some transit agencies have been invited to participate in local and state transportation planning efforts, significant room for improvement remains—particularly in small urban and rural areas.

Several rural transit and small urban area properties in rural states reported that progress advancing intermodal planning and policies has been very slow since the advent of ISTEA. A typical case is a small transit system in the Rocky Mountain region, where the transit manager feels that transit is still the “orphan stepchild,” but reports small but significant steps towards taking advantage of the ISTEA policies. In this recently designated urbanized area with a population of 55,000, the transit agency chairperson now sits on the MPO policy board. The state has allowed flexibility “grudgingly,” and the transit manager reports numerous barriers that severely limit the actual obligation of flexible funds. The orientation toward highways in this rural state is “unquestionable,” according to the transit manager. The state provides no funding for transit and severely limits local options for raising transit monies.

Organizational Culture and Modal Preference

An organizational culture develops through years of subtle definition and nurturing. Such culture, reinforced by the agency’s mission statement, is continually reinforced by

senior managers and staff alike; the culture is perpetuated during the training of new employees. A modal preference is endemic to most transportation organizations. Highway and transit agencies have historically strengthened their *esprit de corps* by reinforcing the importance of their individual mode and organizational purpose.

In many situations, there is a dichotomy between the organizational mission of transportation agencies and the intermodal objectives of ISTEA. In particular, the mission statements, or implied missions, of highway agencies and transit agencies relate directly to their respective modes. The missions do not reflect a coordinated or comprehensive approach to mobility management. For instance, it is common in a highway agency to encounter a mission statement that reflects the following elements—*maintain a safe, efficient, extensive interstate highway and local road network*, or the mission of a transit agency which states—*provide an efficient, safe, clean, and affordable alternative to the automobile*. Until the mission statements of transportation agencies reflect the need to coordinate and cooperate, the organizational mission will dwarf transportation plans and projects consistent with ISTEA's vision. Recognizing the importance of an intermodal mission, a director of planning for a California MPO remarked, "We need to develop effective partnerships to share information and collaborate. We need consistent goals up-front."

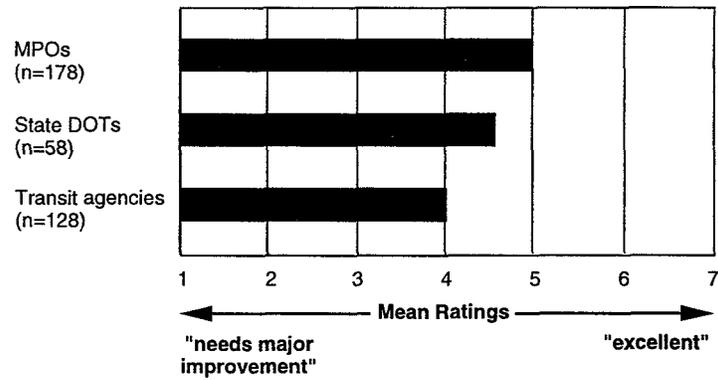
Many agencies have resisted, or even ignored, federal intermodal planning policies and requirements in order to reinforce the traditional modal culture which they understand and to which they adhere. Frustration regarding the effect of organizational culture on the intermodal planning process was addressed by a planning director of a northeastern MPO who said, "break down artificial barriers of mode-based agencies so sound intermodal decisions can be made."

Numerous transit agencies and MPOs singled out insufficient intermodal support by state DOTs. A transit planner in the Southwest succinctly expressed this sentiment: "We need to change the highway mentality of DOT officials." An MPO in the Midwest conveyed that "the state DOT's mindset towards highways became strengthened by competition for the same funding between transit and roads. One-person one-vehicle is the state DOT mentality....(the issue is) highways against transit." A respondent from a transit agency sums up the perspective by stating, "Modal bias is the political reality."

The national survey revealed significant variance among stakeholders in how well their regions and states were considering the full range of transportation alternatives in the planning process. As shown in Figure 3-3, transit agencies generally believe there is more need for improvement than do MPOs or state DOTs. Within the transit industry, this intermodal planning factor had the most variance of all 46 factors evaluated. For transit agencies the mean was 4.0, but the standard deviation was 1.8. Part of the explanation for the variance is whether a region is an air quality attainment area. For transit agencies, presence in an air quality attainment area had a 0.4 rating point positive effect on the consideration of alternatives.

FIGURE 3-3

HOW WELL DOES YOUR PLANNING PROCESS GIVE EQUAL
CONSIDERATION TO THE FULL RANGE OF
TRANSPORTATION ALTERNATIVES?



Source: National Survey of Stakeholders

The incentive structure of public institutions was also identified as a barrier to successful intermodal transportation planning and policies. The reward of a successful business is greater profit; the reward of a public agency's success is better public service. Better public service is intangible and, therefore, a somewhat weaker motivator than profit. It could, however, result in less funding or revenue for a particular mode. For many modal agencies, an internal measure of success is the magnitude (dollars) of their respective capital programs, the size of their transit fleets, or their total miles and lanes of highway. Intermodalism can effectively reduce any of these measures without compensating with new measures of success. Therefore, intermodal projects can represent a threat to management and a work force evaluated on criteria that may conflict with their new objectives or that does not reflect the new (ISTEA) objectives.

Regulatory and Legal Restrictions

Federal

When decision makers pursue an intermodal plan, they face complex federal funding procedures. Many state DOT, MPO, and transit authority officials said the FHWA and FTA are not organized to efficiently process intermodal projects. "The modal-oriented organization of the U.S. DOT does not facilitate the easy pursuit of intermodal project planning approval or funding approval," said a senior official of a southwestern DOT. Several officials gave accounts of having to split project elements along modal lines in order for federal funding requests to be considered. In similar instances, FHWA and FTA often interpreted project eligibility differently. In one case, a state DOT, denied funding by FTA, submitted the same project to FHWA and obtained federal approval.

In general, most stakeholders say ISTEA's implementation regulations are not working well. As summarized by the Secretary of a western state DOT, "Regulations to date are too much, too detailed, overly prescriptive, not realistic, sometimes extending far beyond the intent of the parent legislation..."

Many transportation stakeholders specifically pointed to the planning, conformity, and management systems regulations as cumbersome and an expensive block to the realization of ISTEA's full potential. This issue also repeatedly surfaced at all ten of the U.S. DOT regional roundtable meetings.(6)

In the national survey responses, the extent of federal regulations under ISTEA was frequently criticized by respondents. "Less prescriptive regulations from FHWA to develop state intermodal facilities" and "The feds should move from regulators to facilitators" were comments made by state DOT and MPO officials in two midwestern states. Many transportation stakeholders also referred to the federal regulations governing the implementation of ISTEA as "overkill." As one representative from a transportation agency in a western state remarked, "This excessively broad application of administrative policy clearly constitutes regulatory overkill and is a major obstacle to our efforts to provide efficient and cost-effective transit services."

In late 1995, in response to stakeholder concerns, Congress made ISTEA's management systems requirements voluntary, except for the Congestion Management System in urban areas with a population over 200,000.

State

State and local laws also impede the implementation of intermodal transportation projects. Maryland, Pennsylvania, Oregon, Georgia, and Missouri are some of the states with legislation either prohibiting or limiting the use of state gasoline and automobile-related taxes to highway-related uses. Many of these restrictions stem from pre-ISTEA legislation. Several transportation planners remarked that similar prohibitions have been passed by their state legislatures since ISTEA's passage.

There have been some successful efforts to eliminate or lessen such restrictions on state tax prohibitions. These modifications either have broadened the definition of revenue eligibility by including intermodal projects in the law or by specifying a percentage of the tax fund permitted for non-highway transportation projects. However, many states have not been successful in relaxing the constraints placed on these tax revenue laws. One such state is Georgia. Despite attempts to permit the use of state gas tax funds for transit purposes, the Georgia gas tax remains constitutionally restricted to highway-related projects. In Michigan, the state Constitution limits transit to 10% of the state transportation fund, and according to one survey respondent, "There is no sentiment to increase this percentage."

Interjurisdictional Barriers

Transportation planning requires significant interjurisdictional cooperation among federal, state, and regional agencies as well as with the public and special interest groups. The net effect of ISTEA is that it shifted the focal point of decision making about federal transportation funding from the professionals at the state DOTs to a shared responsibility between the state and the MPOs. These MPOs were charged with "opening up" the process to include all modes, all levels of government, and the public. According to the Surface Transportation Policy Project (STPP), the clearest winners have been those willing to make alliances with new stakeholders who participate actively in the planning process.⁽⁷⁾ For those states that had limited success in achieving this shared responsibility, the following barriers were the most critical.

Different Views About Authority and Responsibility

The national survey found that the intermodal planning factor, "Clear delineation of roles and responsibilities for intermodal projects," had the second lowest satisfaction rating for the *Intermodal Planning and Implementation Capabilities* arena. It is an area of improvement identified by all stakeholder groups.

Over the years, state DOTs have established themselves as cornerstones of transportation policy, programs, and decision making within their transportation community. They have benefited from consistent and predictable levels of federal and state funding and are often the benefactors of substantial support from elected officials, the business community, and a very active and formidable constituency of highway-related special interest groups.

The national research revealed, however, that many MPOs and state DOTs have significantly different interpretations of ISTEA guidelines. In one western state, an MPO described how the state DOT believed it has full discretion to use state-allocated Surface

Transportation Program (STP) monies—even in transportation management areas with significantly more than 200,000 in population—and proceeded with highway projects that other stakeholders oppose. An eastern MPO said the state DOTs did not understand that the MPO should lead project selection because it is also a transportation management area (TMA). The MPO did not want to directly challenge the powerful state agency, so the transition to intermodal planning has been “slow and gradual.”

Reluctance to Form Partnerships

Transportation planning decisions involve many local, regional, state, and federal officials. Because each agency has its own agenda, studies, and processes, decisions often reflect political concerns as well as transportation needs. This issue was discussed at all three implementation forums. In Albuquerque, New Mexico, the City was sponsoring a major evaluation of transportation and land use within city limits and was undertaking a major study of light rail; the County was evaluating a regional transit authority; the MPO was developing a strategic plan to reorganize to better meet the transportation and land use needs of the region; and the State was undertaking a major reconstruction of a freeway interchange and the evaluation of a high-occupancy-vehicle (HOV) lane.

A related problem is that the purposes and responsibilities for intermodal planning and policies are not well defined. In New York, the lead planning agency for the Sunnyside Intermodal Terminal is the Metropolitan Transportation Authority (MTA). In parallel, the MTA, the Port Authority and New Jersey Transit are undertaking a major “Access to the Core” study. Freight interests need to be considered in the Sunnyside Intermodal Terminal, but MTA’s mission is limited to the transportation of people. In the San Antonio-Austin corridor, until recently, different major investment studies were being undertaken with little coordination among the different MPOs, transit agencies, and the Texas state DOT (TxDOT). In all three areas participating in the implementation forums, jurisdictional confusion and inadequate interjurisdictional communication have impeded intermodal planning.

The importance of establishing authority and responsibility early in the planning process is characterized in a simple model of change developed by Michael Meyer (8) through case studies of federal policy adoptions in numerous metropolitan areas. Dr. Meyer contends that resolving issues of authority, responsibilities, and procedures for decision making enables the organizations involved to address issues of substance effectively.

Insufficient Track Record

The challenge of establishing partnerships to promote intermodal planning and policy is exemplified by the effort of MPOs to meet the responsibilities assigned to them by ISTEA. ISTEA established Transportation Management Areas (TMAs) with more authority, responsibilities, and requirements in planning functions for urbanized areas with a population over 200,000. An example of this additional authority is project selection in specific financial programs such as STP-urban funds in consultation with state officials.

The research found that some MPOs, such as the MTC in the San Francisco Bay Area and the Denver Regional Council of Governments, have embraced their new

responsibilities and are effectively guiding a new transportation planning and programming decision process. Other MPOs are just getting started.

Institutional forces and insufficient intermodal skills contribute to the difficulty encountered by many MPOs. Some MPOs do not possess a reputation for the strong leadership required to effectively perform these new responsibilities. A strong, noteworthy performance “track record” has been necessary for the state DOT to trust the MPO. For many MPOs, this has created a situation where the state DOT has not provided the MPO necessary transition time to develop a track record and, consequently, its trust.

When national survey respondents were asked to rate the “Level of trust between agencies involved with transportation planning,” transit agencies had a significantly lower satisfaction rating than both the state DOTs and MPO respondents. One Rocky Mountain state transit agency addressed the insufficient trust between itself and the state DOT in describing a recent rail study. During the Regional Transportation Plan process, the public participation process identified a long-range opportunity for intercity rail service to improve air quality. The public participants worked with the MPO to obtain planning funds, but the state DOT decided to conduct the study on its own. The state DOT is not soliciting local input and expects little to come from study.

Mobility Solutions Overshadow Mobility Needs

Many elected officials view transportation projects as a way to accomplish goals other than mobility, such as economic development. Consequently, attention often focuses on transportation solutions rather than mobility needs. During the research, numerous examples were provided of how a transportation solution or project drove the entire planning process. The mayor who pursues the building of light rail without understanding the prerequisites is as much a barrier to sound intermodal planning as the highway engineer who focuses solely on a highway solution.

Poorly Integrated Land Use and Transportation Policies

The relationships between transportation and land use have long been discussed; observation and common sense confirm that they are related.(9) A key issue for this research is that unrelated governmental entities have decision-making power over transportation and land use decisions. The local city council or county board of supervisors normally has distinct authority over land use decisions. Transportation decisions often involve myriad local, regional, state, and federal officials.

The research provided several examples of how poorly integrated transportation and land use decisions affect transit service delivery decisions. In a midwestern college town, the general manager of a medium-sized transit district that serves several jurisdictions described how the City Council had approved a 3-million square-foot shopping center on the outskirts of town. According to the general manager, “No consideration was given to transit during the land use planning process.” The Transit District Board of Directors subsequently decided not to serve this major auto-trip generator, because it would adversely affect its 30% farebox recovery ratio.

The TCRP is undertaking three research projects that address transit/land use issues: (1) *Transit and Urban Form*; (2) *Strategies for Influencing the Choice of Urban Travel Mode*; and (3) *The Cost of Sprawl—Revisited*.

Resource Barriers

Funding, information, staffing, and analytical tools are essential to the success of ISTEA's objectives. A deficiency in any of these resources was identified as a significant barrier in many jurisdictions.

Significant Funding Shortfalls

To date, ISTEA has not been fully funded. Adequate federal funding is critical to successful intermodal policy implementation according to most stakeholders; transit agency, state DOT, and MPO representatives were united in their dissatisfaction with current federal funding levels. Most state, MPO, and local transportation stakeholders support the need to fund ISTEA fully. It was a major theme in the interviews, national survey responses, and federal DOT roundtables on ISTEA implementation.(10) Facing significant funding shortfalls, an executive director of a California MPO suggested “providing funding at levels adequate to meet a region's intermodal needs, since planning without the ability to implement is meaningless.”

Funding requirements caused by system maintenance needs for highways and transit, paired with the current levels of federal funding, reduces the likelihood that intermodal projects will be implemented and flexible funding decisions can transpire. In January 1993, the FHWA reported that the condition of the nation's highway pavement and mass transit infrastructure had improved over the last 10 to 20 years. In addition, bridge conditions had stabilized. However, even with these improvements, according to the FHWA report, simply maintaining 1991 conditions and performance of the nation's highways, bridges, and mass transit systems through the year 2011 will cost \$55.5 billion annually. An additional \$18.2 billion a year will be needed to improve conditions.(11) A highway official from one state noted that any new money received under ISTEA is not enough to cover the tremendous backlog of projects. As a result, according to this official, even though funds can be used flexibly and there are intermodal projects to implement in his state, highway projects will probably be considered before flexible funds are used for transit or intermodal projects.

A local elected official from a western town conveyed the sentiments shared by many transportation stakeholders that “Flexibility in the use of funds won't occur until the backlog of projects is taken care of. It isn't inequity in the use of money. It's that there isn't enough money.”(12) And an MPO director of planning from a western state framed the issue of inadequate funding levels in this manner: “The funding flexibility has been well received in principle, but not in practice, due to the overwhelming backlog of prior commitments. Added funds are needed to clear out this backlog.”

Surprisingly, transportation stakeholders interviewed and surveyed did not consider intermodal planning to be an opportunity to re-evaluate or define projects that can improve mobility and perhaps yield a more cost-effective and prudent expenditure of available funds. Instead, they indicate that insufficient funds are a barrier to intermodal efforts. It has caused transportation stakeholders to more closely focus on their specific modal needs instead.

Funding enables choices, facilitates partnerships, and yields more support for intermodal projects. Inadequate funding, paired with the funding flexibility allowed in ISTEA, fuels rivalry rather than cooperation—particularly between highways and transit. A director of a rural transit agency in the midwest conveyed this frustration: “Intermodalism is supported as long as transit doesn’t try to access discretionary funds—when pitted against roads, transit loses every time.” A director of a transportation research institution in the northwest summarized, “The fact that ISTEA has not been fully funded in the face of undeniable evidence of the large and growing unfunded needs of the nation’s highway and transit systems is not only a betrayal of ISTEA’s bright promise, but itself poses a significant hurdle to the new intermodal spirit which ISTEA promotes.”

Insufficient Information

A small transit system administrator in the northern Plains summarized the need for better understanding about intermodal issues in many areas around the United States with the comment, “most local officials don’t have a clue as to what intermodal planning means.” In particular, elected officials lack the specific information necessary to understand and implement intermodal plans. The result, according to a very large East Coast transit agency, is that “we have developed intermodal strategic goals on paper, but they are lacking the underpinnings to make them a reality.”

Respondents to the national survey indicated that provision of pertinent information was a key element to improving effectiveness of intermodal planning and decision making. Training was needed specifically for the following:

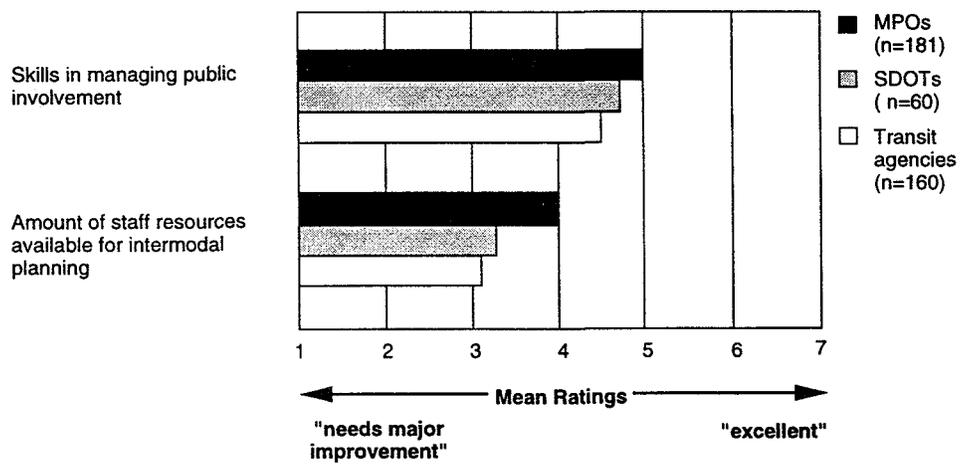
- Elected officials,
- The general public, and
- Planning and transportation commissioners.

Numerous respondents asked for specific examples of intermodal planning practices that could be easily disseminated. A state DOT representative succinctly summarized what is needed: “Provide concrete examples of intermodal planning efforts that are: (1) not cost prohibitive; (2) result in cost beneficial decisions; and (3) lead to implementation.”

Insufficient Staff Resources

Part of the problem is that staff resources are not sufficient to adequately advance intermodal planning. Figure 3-4 shows that most stakeholders are reasonably satisfied with the abilities of staff to facilitate public participation and plan specific intermodal projects, but are significantly less satisfied with the number of personnel available to conduct intermodal planning. Both the APTA and an executive level appointee at U.S. DOT estimate that more than 80% of professional transportation staff time is devoted to routine operational issues, short-term plans, and addressing immediate operational needs specific to the mode in which they are involved. Very little time remains to explore and address intermodal opportunities. ISTEA provides an opportunity for increased participation in the regional transportation planning process, but, faced with cutbacks in their operating budgets, many transit agencies, in particular, are finding that they do not have sufficient staff to participate as actively as they would like.

FIGURE 3-4
GOOD SKILLS, BUT INADEQUATE STAFF RESOURCES



Source: National Survey of Stakeholders

MPOs are similarly frustrated. According to a U.S. Advisory Commission on Intergovernmental Relations study that included extensive investigations of 18 MPOs serving 12 metropolitan areas, “this newfound importance [due to ISTEA], however, came at a time when many MPOs had fewer capacities than needed to perform their planning functions and when it was difficult for them to expand.”(13)

Inadequate Tools for Comparing Mobility Projects

ISTEA emphasizes selecting solutions to transportation needs rather than modes. Choosing projects according to mobility has proven to be difficult for both MPOs and state DOTs. According to the Executive Director of the CTAA, “it is difficult to make transportation decisions predicated upon mobility, when there is no agreed definition of the term. While the poor definition can work to the benefit of some special interests, in their advocacy of a particular project, this absence of definition might be the source of confusion in the decision-making process.”

There is also no common measure of multimodal mobility. This point was made repeatedly during this research and is validated by the recently completed *NCHRP Synthesis of Highway Practice 201: Multimodal Evaluation in Passenger Transportation*. This synthesis concludes, “Clearly, mobility needs to be defined and measured. Mobility defined as highway level of service does not lead to multimodal solutions.”(14)

What is the correct formula? Are the correct weightings given to the decision-making variables? Are the results interpreted correctly? Most importantly, is the process constructed to select the best mobility approaches to transportation needs? Decision makers need tools to measure these and other indicators of success. The research revealed that existing measures often exclude intermodal planning options early in the process.

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4. OPPORTUNITIES FOR IMPROVING INTERMODAL PLANNING: NATIONAL SURVEY FINDINGS

Significant challenges facing intermodal decision makers are what social scientist Kurt Lewin describes as *restraining forces*.⁽¹⁵⁾ Intermodal planning is a dynamic process with factors working to facilitate changes, called *driving forces*. The current effectiveness of intermodal planning in a given region reflects the degree to which driving forces overpower restraining forces. The national survey results helped identify driving forces that have the most leverage for improving the intermodal planning process. This chapter presents the national survey findings on the priority opportunities for improving the intermodal planning process. Chapter 5 then discusses the specific attributes and successful practices that enhance intermodal policies and planning at the local level as synthesized from the national survey, stakeholder interviews, and the implementation forums.

A primary purpose of the national survey was to identify priority opportunities for improving the intermodal planning process. In order to identify priority improvements, a satisfaction measurement model called Net Impression[®] was utilized extensively. The model is discussed in Chapter 2, with a more complete explanation provided in Appendix D.

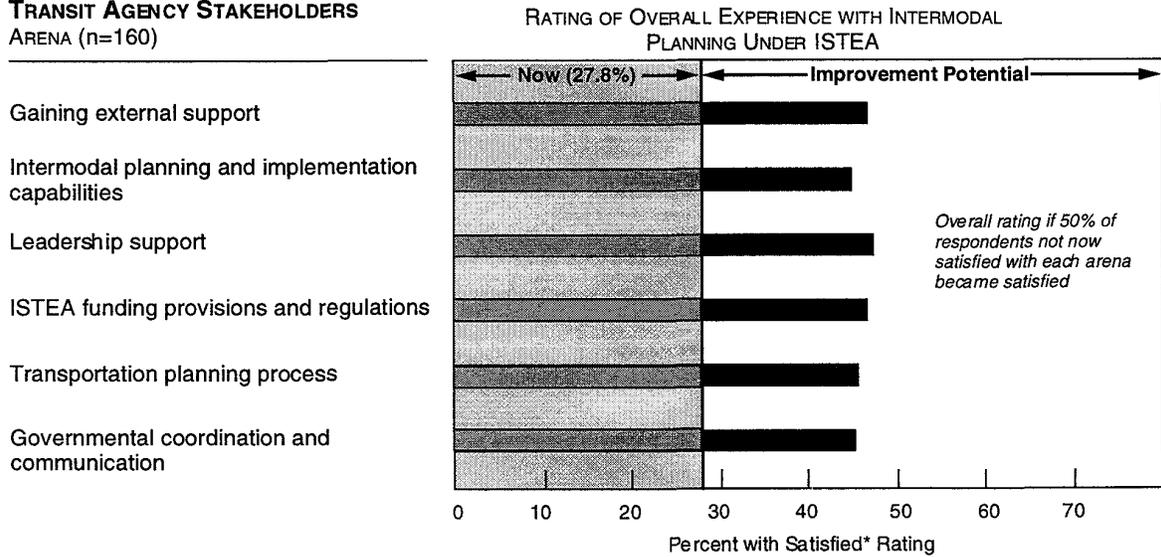
The Net Impression[®] model evaluates two levels of opportunities for improvements. The first level evaluates the impact of improving the satisfaction ratings for broad categories of performance (called *arenas*) on the respondents overall rating of their agency's experience with intermodal planning under ISTEA. Figure 4-1 illustrates the different stakeholder perspectives on the improvement potential for each intermodal planning arena. The figure is referenced several times in the discussion of key findings to highlight different stakeholder perspectives. Within each arena, several factors (referred to as *intermodal planning factors*) determine, from the stakeholders' perspective, what good (or bad) performance in an arena might mean.

The second level of the Net Impression[®] model evaluates how improved satisfaction in 46 intermodal planning factors will influence the respondents overall rating of the six arenas. Figure 4-2 highlights the intermodal planning factors that were ranked in the top ten for each of the three stakeholder groups: transit agencies, MPOs, and state DOTs. The intermodal planning factors that were ranked in the top ten by one or two stakeholder groups, but not by the third, are also noted.

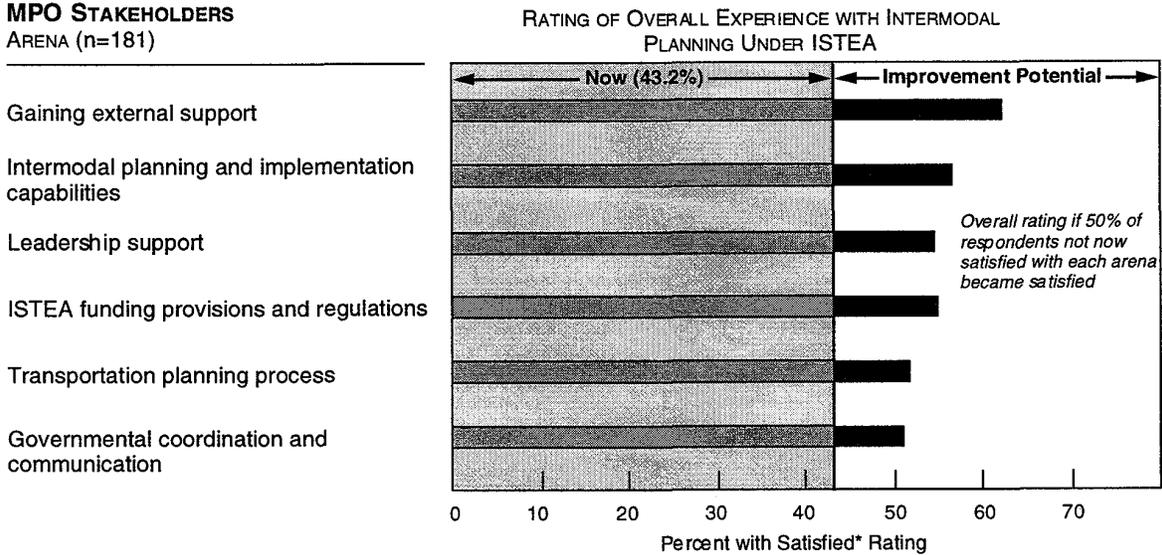
The findings discussed in this chapter are based on the quantitative evaluation of the national survey, a qualitative evaluation of the open-ended questions, and the stakeholder interviews that provided the framework for the survey. For each finding, relevant data from the national survey is utilized to support the finding. As appropriate, examples from the literature review and stakeholder interviews illustrate how different regions or states have addressed the particular finding.

FIGURE 4-1. STAKEHOLDER PERCEPTIONS OF ARENA IMPROVEMENT POTENTIAL

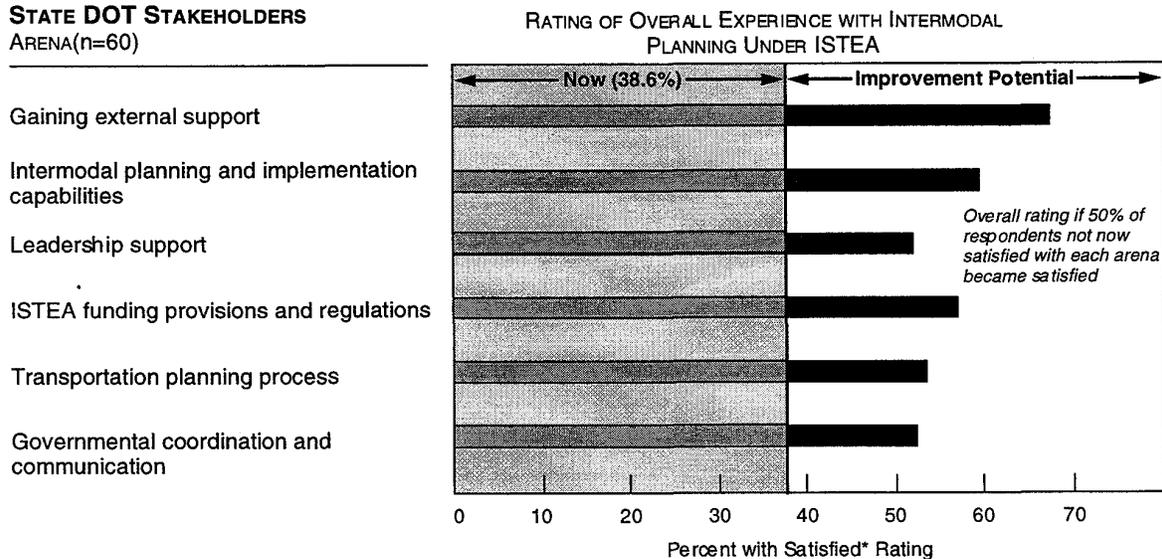
TRANSIT AGENCY STAKEHOLDERS
ARENA (n=160)



MPO STAKEHOLDERS
ARENA (n=181)



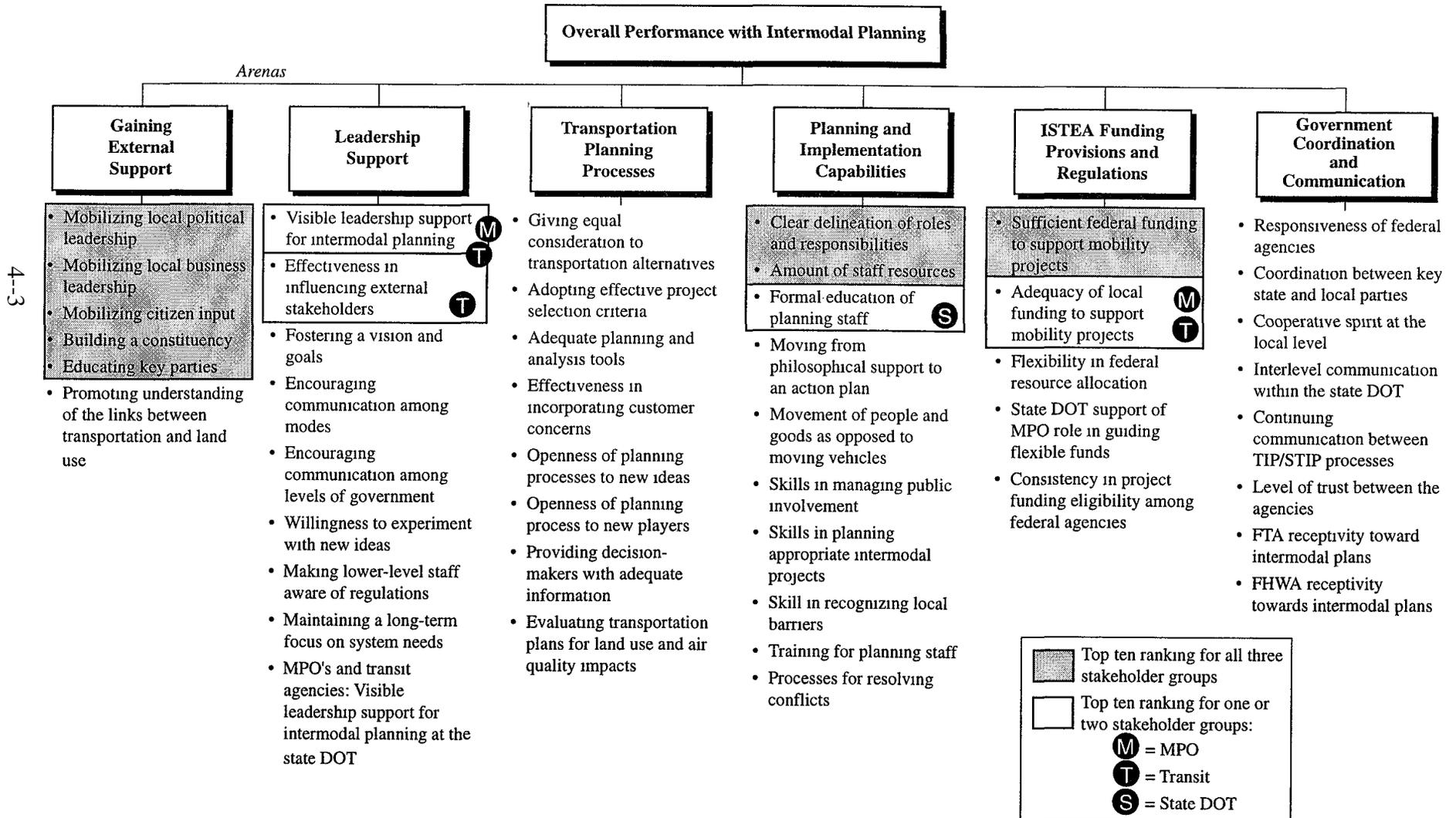
STATE DOT STAKEHOLDERS
ARENA(n=60)



* Satisfied defined as rating of "5" to "7" on a scale of "1" (Needs Major Improvement) to "7" (Excellent)

FIGURE 4-2

TOP TEN INTERMODAL PLANNING FACTORS FOR IMPROVING INTERMODAL PLANNING



FINDING #1: Gaining external support for intermodalism has the greatest potential for improving the intermodal planning process.

Gaining external support for intermodalism is the most critical prerequisite to sound intermodal planning and policies. Respondents in the national survey ranked the arena *Gaining External Support for Intermodalism* as having the greatest potential for improvement, and they pointed to five key intermodal factors within this arena as having the most potential for improving external support for intermodalism: (1) Building a constituency; (2) Mobilizing business leadership; (3) Inviting citizen input; (4) Educating key parties; and (5) Mobilizing political leadership. Each of these intermodal planning factors was among the top priority factors, of all 46 intermodal planning factors evaluated. The sixth intermodal planning factor in this arena, “Promoting understanding of transportation/land use links,” ranked 11th overall and is not highlighted as a top priority for gaining external support for intermodalism.

For the *Gaining External Support* arena, survey respondents were asked to rate their agencies’ effectiveness in generating awareness of the benefits of intermodal planning and mobilizing external support for intermodal objectives for six intermodal planning factors. They were then asked to “rate the overall effectiveness of efforts to mobilize key political officials and other external stakeholders in support of intermodalism.” The survey results show that gaining external support for intermodalism has high priority potential for improvement among all stakeholder groups. The top part of Figure 4-3 illustrates the high leverage potential of transit stakeholders for intermodal planning factors in this arena. Only 23.7% of the transit agency respondents were satisfied with their agency’s overall efforts to mobilize external stakeholders in support of intermodalism. If 50% of the respondents that were not satisfied with the intermodal planning factors “Building a constituency for the intermodal planning concept” and “Educating key parties about the intermodal planning concept” became satisfied, then the overall satisfaction rating of the *Gaining External Support* arena would improve by 32 percentage points.

In order to provide contrast to the high potential for improvement for the *Gaining External Support* arena, the bottom of Figure 4-3 shows relatively lower potential for improvement for many of the intermodal planning factors in the *Governmental Coordination and Communication* arena. For example, if 50% of the transit respondents who were not satisfied with “FTA receptivity towards facilitating intermodal plans” became satisfied, it would only improve the overall rating of the *Governmental Coordination and Communication* arena by 8 percentage points.

Building a Constituency

Respondents to the national survey believe that building a constituency for the intermodal concept will yield the most results in improving the intermodal planning process. It is a primary driving force for achieving intermodal planning objectives. The challenge is to amass external support that does not favor one mode or another, but motivates citizens, business, and elected officials to collectively determine how to most effectively move people and goods.

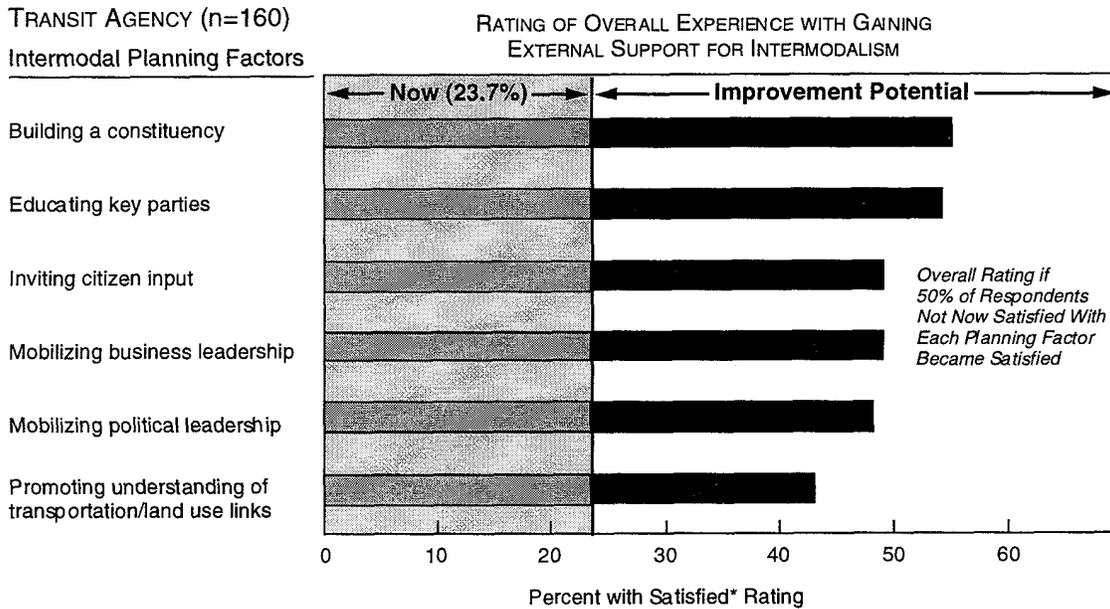
FIGURE 4-3

HIGH IMPROVEMENT POTENTIAL FOR GAINING EXTERNAL SUPPORT

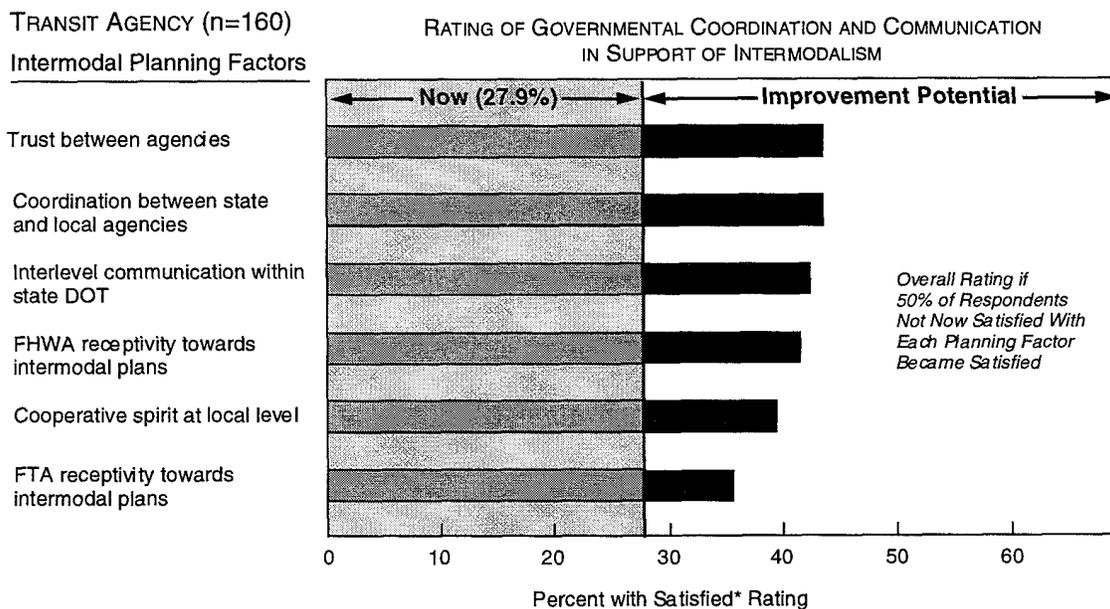
INTERMODAL PLANNING FACTORS

(TRANSIT AGENCY STAKEHOLDERS)

GAINING EXTERNAL SUPPORT = HIGH IMPROVEMENT POTENTIAL



GOVERNMENTAL COORDINATION AND COMMUNICATION = LOW IMPROVEMENT POTENTIAL



* Satisfied defined as rating of "5" to "7" on a scale of "1" (Needs Major Improvement) to "7" (Excellent)

Building a constituency has the greatest potential for improvement from the perspective of the state DOTs and is second to sufficient federal funding from the perspective of transit agency respondents. From the perspective of all stakeholders surveyed, this intermodal planning factor has the greatest opportunity for improvement of all 46 intermodal planning factors evaluated.

Educating Key Parties

Stakeholders felt strongly that educating key parties about the intermodal planning concept was an important factor in improving the intermodal planning process. The potential for improvement from the state and MPO perspective is relatively high, but substantially below the transit agency perspective. Improving the education of citizens and elected officials about intermodal planning was a major theme of the open-ended responses to the national survey and interviews across several different arenas.

A northeastern state DOT representative summarized the sentiments of many respondents, “Intermodalism is still not well understood.” As described by a general manager of a large transit system in the south, his agency’s history has been to operate as an independent operating entity. The ISTEA planning process requires a new mind-set, which they are addressing in a 2020 visioning process led by the local MPO staff. However, intermodal thinking has been hindered by the modal preferences of elected officials. Building a constituency for intermodal planning and decision making through an ongoing education process to gain external constituency support is a major priority of this agency and many others.

Inviting Citizen Input

Inviting citizen input on intermodal planning options is also a priority factor for improving intermodal planning and decision making. A high-ranking official at a midwestern DOT explained that ISTEA had prompted them to include, for the first time, a citizen participation process in their long-range planning efforts. They convened six focus groups of their customers with representatives from freight, transit, and farming interests as well as environmentalists and others. The involvement of citizenry, they felt, provided important input during their long-range planning process. The Secretary of Transportation at a western DOT explained the challenge: “Citizens... need a demonstration of how (intermodalism) can benefit everyone.”

An example of visible state leadership in citizen input was the development of the long-range intermodal transportation plan in Wisconsin, called Translinks 21. During the planning process, the state DOT and their regional partners talked to more than 10,000 customers who “shared their needs priorities and helped WisDOT shape the best plan possible.”(16)

Mobilizing Business Leadership

Mobilizing local business leadership behind intermodal planning is a significant improvement opportunity identified by all stakeholder groups. A high-level Alaskan stakeholder, where intermodalism is a way of life, described the importance of the private

sector to intermodalism: “What really drives modal decision making is the private sector. Market-based dynamics drive investment decisions... Market factors rather than government leadership are the real driving forces behind modal choices.”

“Mobilizing local business leadership” was the only intermodal planning factor in the *Gaining External Support* arena that the MPO stakeholders assigned greater priority than the state DOT and transit stakeholders. Addressing this issue is high on the agenda for many of the MPO stakeholders surveyed and interviewed.

Most of the identified opportunities for improvement in involving the business community in intermodal planning were goods movement. The Secretary of Transportation of a large western state felt that one of most important impacts of ISTEA was to include goods movement as a key element in the state’s long-range planning efforts. This state is struggling to include the private sector and other stakeholders, for example, in freight railroad questions. Policy issues, such as whether “highway dollars” should be used to give a private company a potential competitive advantage, are important. He cited a corridor in the San Francisco Bay Area where a \$1 billion investment in freight railroads could significantly relieve congestion along a 22-mile-long corridor. The importance of including private sector trucking and rail interests in the transportation planning process was a major finding of the Regional Roundtable Report.(17)

The Intermodalism Conference recently held in New Orleans provided a forum for increased national interaction of key stakeholders. The national survey identified a significant opportunity for increased interaction with business interests at the regional level.

Transit agencies attribute significant importance to mobilizing private sector interests to encourage intermodalism. Comments from transit agencies included involvement of employers in transit service development strategies.

Mobilizing Political Leadership

Mobilizing political leadership behind intermodal policies and planning was identified as an important improvement potential by all stakeholder groups. The Secretary of Transportation at a western state DOT pointed out that “key political officials aren’t convinced that intermodalism is to their benefit. They are focused more on the short-term improvements they can gain for their constituents.” State DOT respondents assigned more importance to this intermodal planning factor than did transit and MPO stakeholders, rating it third overall behind building a constituency and inviting citizen input. A midwestern DOT summarized one of the key challenges of intermodal planning: “the benefits of intermodal planning and decision-making must continually be discussed with local decision-makers.”

Stakeholder Suggestions for Gaining External Support

Survey respondents provided several suggestions for gaining external support for intermodal planning and decision making. Table 4-1 indicates that providing opportunities to inform and educate the general public, elected officials, and commissioners on intermodal planning had the most responses. A midwestern state DOT official characterized the need

**TABLE 4-1
GAINING EXTERNAL SUPPORT FOR INTERMODALISM
STAKEHOLDER SUGGESTIONS**

What suggestions do you have for improving effectiveness in mobilizing support for intermodal planning and decision making?

1. Provide opportunities to inform and educate the general public, elected officials, and commissioners on intermodal planning. Provide concrete examples of benefits. (40 mentions)
 - The key is to involve all the major intermodal players (e.g. railroads, ports, etc.) in the planning process. (Southern MPO)
 - MPOs should allocate more funding to public education and awareness to build support for intermodalism. (Southeastern MPO)
 - Transit agency presentations to local jurisdictions on the importance of transit are significant in promoting intermodalism. (Midwestern medium-sized transit agency)
 - The benefits of intermodal planning and decision-making must continually be discussed with local decision-makers. (Midwestern state DOT).
 - Our development of 3 projects using CMAQ funds has been effective tool to begin a dialogue, as communities become engaged around a specific project. (Small northeastern transit agency)

2. Obtain participation and support from the private sector for intermodalism. (10 mentions)
 - A key element is to keep the employers involved in transit development for their employees.
 - Conduct business seminars about the viability of non-SOV modes and what it can mean to their business.

3. Provide additional funding to permit viable, serious consideration of intermodalism as a real option. (8 mentions)
 - Focus should be on a coalition of interests that work for the common goal of more dollars for transportation, including intermodal projects and cooperative intermodal planning. (Large eastern transit agency)

4. Have a clear leader for the advocacy of intermodalism. (5 mentions)
 - Our state agency needs to take the lead in making intermodal opportunities available. (Large western transit agency)
 - State DOT will have to be re-educated to be in a position to provide leadership before gains can be made towards intermodalism. (Southern MPO)

for continuing education: “The benefits of intermodal planning and decision-making must continually be discussed with local decision-makers.”

Many transit and MPO stakeholders were frustrated with the insufficient available intermodal planning “success stories” to use as examples in educating and attracting external support. Significant work in this area remains. The high leverage attributed to education

confirms Secretary of Transportation Federico Peña’s action plan, “to expand education and outreach efforts at the federal level.”(18)

FINDING #2: Improved federal funding for mobility projects is a priority concern shared by all stakeholders, but it is not the highest priority for improving the overall intermodal planning process.

At the ten regional meetings sponsored by the U.S. DOT, full funding of ISTEA was clearly the highest priority expressed by state and local officials.(19) The national survey quantified the pervasiveness of strong stakeholder feelings about full funding of ISTEA. The survey analysis revealed that improved federal funding for mobility projects will have the greatest impact from the transit agency perspective, but, across all stakeholders, it is the third highest priority factor for improving the intermodal transportation planning process. Collectively, however, the stakeholders believe that building a constituency for the intermodal planning concept will have the greatest results.

Figure 4-1 shows that, overall, the *ISTEA Funding Provisions and Regulations* arena does not have the most improvement potential for improving the stakeholders’ overall experience with intermodal planning under ISTEA. Both MPO and state DOT stakeholders assigned significantly lower improvement potential to the *ISTEA Funding Provisions* arena than the *Gaining External Support* arena. For transit agency stakeholders, there was little significant difference between the arenas.

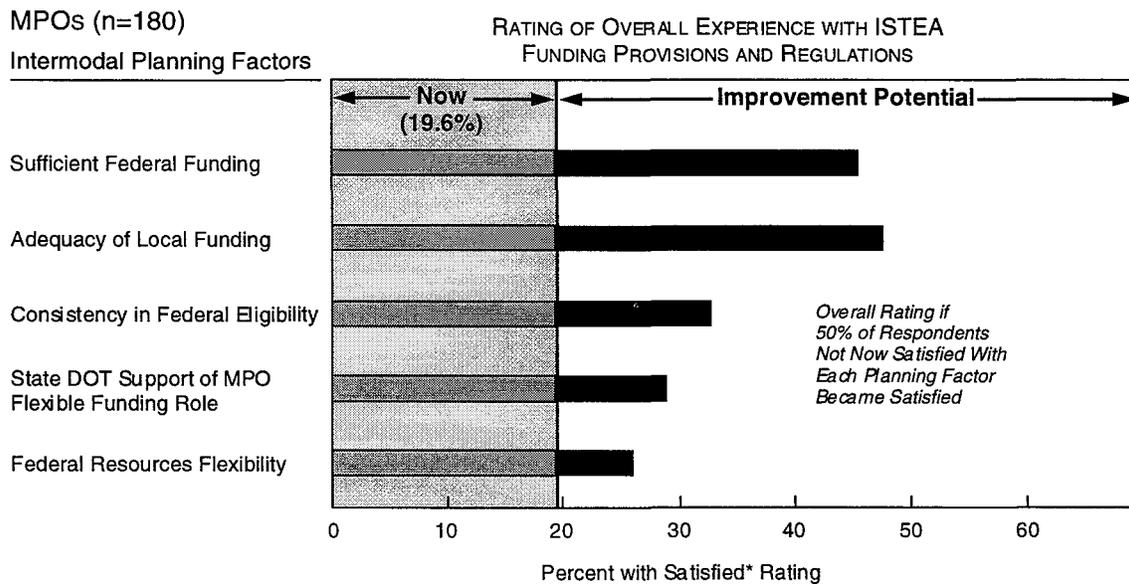
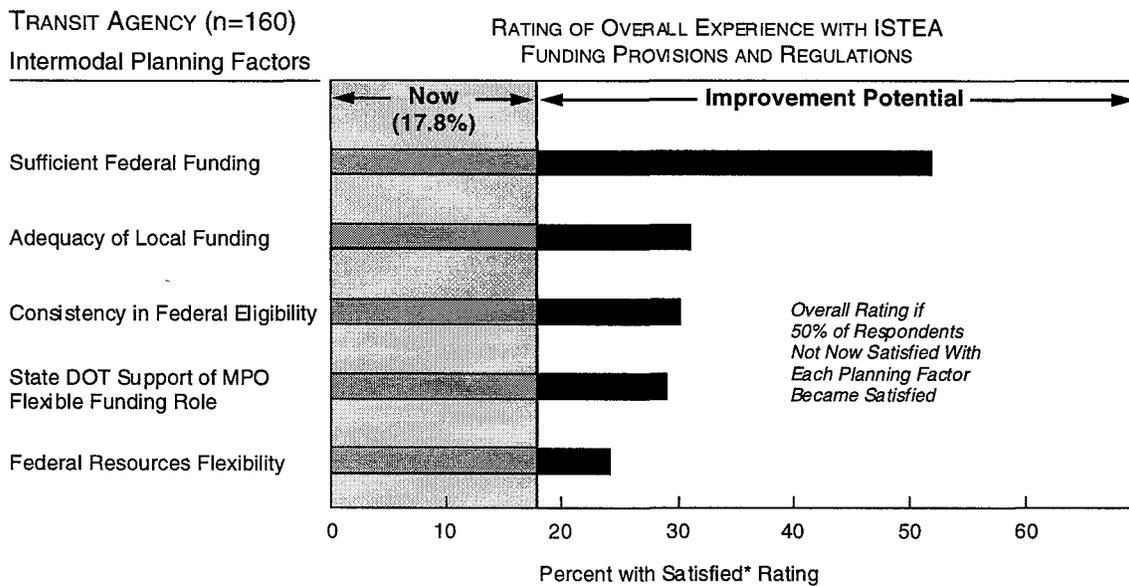
Figure 4-4 illustrates the relative improvement potential that both federal funding and local funding for mobility projects would have on stakeholders’ overall experience with ISTEA funding provisions. Transit agency respondents felt there was a significant opportunity in federal funding resources but felt that the improvement potential for local funding was much lower, about 21 percentage points on the satisfaction rating scale. There is a sharp contrast in MPO respondent perspectives. MPOs felt there was significantly greater improvement in local funding for mobility projects, slightly more than improved federal funding for mobility projects.

The inadequate funding is clearly a restraining force to many transportation stakeholders and it is a subject of much debate each year in Congress. A midwest mediumsized transit agency adeptly summarized the viewpoint of many, “...when resources are scarce, intermodalism takes a back seat to survival.” A common refrain heard during both the stakeholder interviews and review of the open-ended survey responses was that lower-than-anticipated funding levels have hampered the ability of transit agencies to utilize flexible funds offered by ISTEA. When respondents were asked to name one change that would improve intermodal planning and decision making, efforts to increase funding level was mentioned 77 times (about 30% of the respondents) to this open-ended question. Table 4-2 is a summary of stakeholder suggestions for improving ISTEA funding and regulatory provisions.

FINDING #3: The importance of leadership was a pervasive theme and driving force towards achieving intermodal objectives; effective leadership provides the motivation

FIGURE 4-4

IMPROVEMENT POTENTIAL FOR ISTEA FUNDING PROVISIONS CONTRAST BETWEEN TRANSIT AGENCY AND MPO STAKEHOLDERS



* Satisfied defined as rating of "5" to "7" on a scale of "1" (Needs Major Improvement) to "7" (Excellent)

and energy to focus stakeholders away from barriers and towards achievement of defined objectives.

Many stakeholders who have implemented or are implementing intermodal projects conveyed that successful efforts are often situation-specific and feature the “key players” using their position and authority to achieve objectives. The intermodal rail station project underway in St. Louis; the joint Amtrak station, intra- and inter-city bus terminal and the people-mover stop in downtown Jacksonville; and the bus-rail interface at the Hartford train station are the products of intermodal leadership efforts.

Historically, much of the success that state DOTs have enjoyed in securing funding for highway-related purposes, implementing highway projects, and maintaining strong external support, results from strong leadership. It is not surprising, therefore, that in the “leadership support for intermodalism” arena shown in Figure 4-1 (on page 4-2), state DOT stakeholders exhibited very high satisfaction with leadership support and considered this arena to have relatively little potential for intermodal improvement.

In an example of leadership effectiveness, the Washington DOT has taken a very visible leadership role in aggressively implementing ISTEA provisions. In a state that already had an integrated approach to intermodal planning for a while, they were able to develop a public participation brochure and facilitate several changes in a relatively short period.(20) According to a high-ranking state official, the greatest impact to date has been the suballocation of STP funds to “38-RTPOs and 9-MPOs, even though most jurisdictions are less than 200,000 in population.”

Transit agency stakeholders were the least satisfied with their leadership abilities to foster support for intermodal planning and decision making. Consequently, for transit agencies, leadership support exhibits one of the top opportunities for improvement among all arenas by transit agencies. The national survey found that among transit agency stakeholders, the five factors with the most potential for improving the leadership arena were as follows:

1. Visible leadership support for intermodal planning and decision making,
2. Effectiveness in influencing external stakeholders,
3. Fostering a vision and goals that encompass intermodalism,
4. Willingness to experiment with new ideas and ways of thinking, and
5. Maintaining a long-term focus on transportation system needs.

Overall, only 32.1% of transit agency stakeholders were satisfied with the *Leadership Support* arena. Anyone of the above intermodal planning factors would make a significant difference in improving leadership support. For example, if 50% of the respondents not now satisfied with the factor “Visible leadership support for intermodal planning” became satisfied, it would improve the rating of overall experience with leadership support for intermodal planning from 32.1% to 57.5%.

TABLE 4-2
ISTEA FUNDING AND REGULATIONS
STAKEHOLDER SUGGESTIONS

What suggestions do you have for improving effectiveness in mobilizing support for intermodal planning and decision making?

1. Full funding to ISTEA authorization levels. (27 mentions)
 - Full funding of ISTEA is a necessity if intermodalism is to become a reality. (Mid-America state DOT)
 - Fund ISTEA at full authorization levels. (Small West Coast transit agency)
2. Improve flexible funding provisions. (23 mentions)
 - More flexibility is needed to apply federal dollars towards transit operations (Large west coast transit agency)
 - Capital flexibility for transit is just one piece. Lack of operating money is key. (Western MPO)
 - ISTEA only allows funding shifts between highway and transit. Aviation, navigation, and freight rail assistance is needed. (Southern SDOT)
 - Set up formula funding by mode—not just surface/air/water. (Southwest MPO)
3. Additional funds to clear backlog. (16 mentions)
 - Additional funds are needed to clear out the backlog of prior commitments. (Mid-America MPO)
 - There needs to be more funding for intermodal projects. (Mid-Atlantic MPO)
4. Streamline the approval and monitoring process. (16 mentions)
 - Mobility projects are still step-children. Their priority needs to be strengthened in the various federal programs. (Medium southeastern transit agency)
 - Reduce regulatory burden. (Large eastern transit agency)
 - Make processes less bureaucratic, especially for smaller projects... a \$20,000 grant can take as much time as a \$200,000 grant.
5. Improve consistency between FTA and FHWA policies. (11 mentions)
 - Minimize red tape and inconsistencies between FTA & FHWA. Minimize delay with plan review conducted by FHWA. (Eastern MPO)
 - The regs are not always clear as to what projects can be funded. (Large midwestern transit agency)
6. Permit block grant funding. (5 mentions)
 - All federal monies should come to state/MPO in block grant style. (Northeastern MPO)

Leadership does not necessarily need to emanate from a person—it can be provided by a goal, mission statement, or vision. For example, in a small urbanized area along the front range of Colorado, the MPO adopted a strategic goal of reducing single occupant vehicles by 10%. Local elected officials have been very supportive of alternative transportation approaches as a result of this specific goal.

FINDING #4: A clearer delineation of roles and responsibilities in the planning process, sufficient staff resources, and formal education in intermodal planning will yield significant results in improving the intermodal planning and implementation capabilities of transportation agencies.

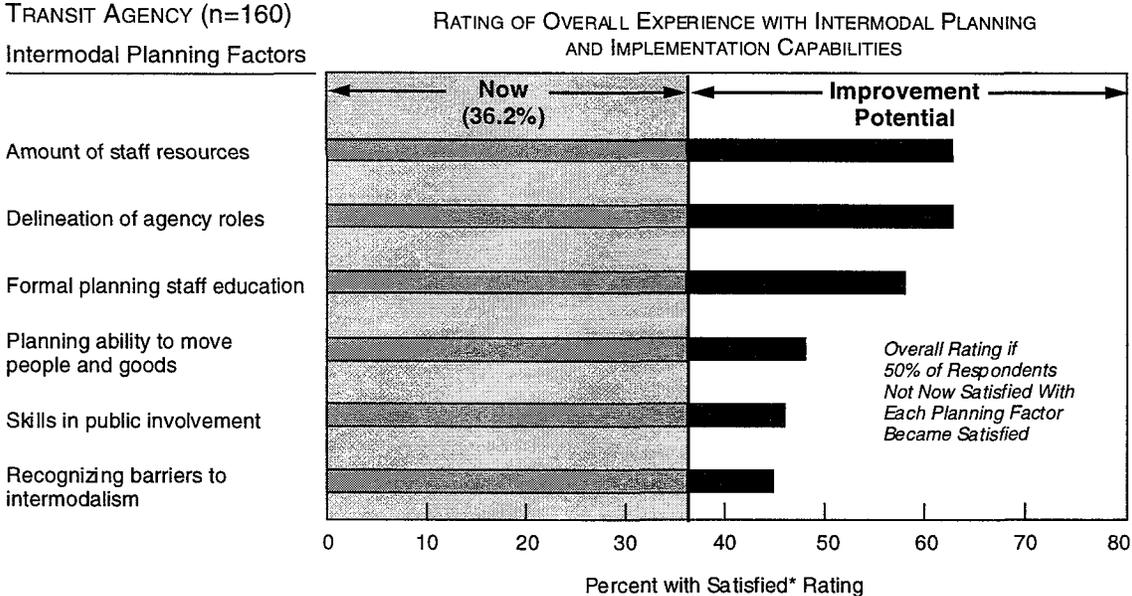
In general, stakeholders are satisfied with their skills and abilities at intermodal planning, but feel that a clearer delineation of roles and responsibilities in the planning process, sufficient staff resources, and formal education in intermodal planning will result in the greatest dividends for improving their agency’s capabilities in the planning process. This finding was consistent among all the three stakeholder groups. Figure 4-5 illustrates the difference in improvement potential for transit agency respondents. The figure compares the top three intermodal planning factors with the three factors that have the least potential in the *Planning and Implementation Capability* arena.

In Chapter 3, interjurisdictional issues such as conflicts about authority and responsibility and reluctance to form partnerships were summarized. The national survey confirmed that improving the delineation of roles and responsibilities is a priority for improvement of the intermodal planning process. Several stakeholder interviewees and survey respondents described the use of statewide MPO advisory groups that helped to clarify new roles and responsibilities. A specific example is the quarterly meetings of MPO executive directors in California. Intergovernmental advisory councils have helped to clarify implementation responsibilities in Los Angeles.

Improving the formal education of planning staff on intermodal planning opportunities is a high priority to state DOT and transit agency staffs, but is a lower priority for MPOs. For example, a midwestern state DOT Director of Planning told the research team that the planning division had no planning school graduates prior to ISTEA. They now have three trained planners on staff to handle freight-, bicycle-pedestrian-, and research-related functions. At the district level, they now have urban planners who work directly with MPOs in the state’s two largest cities.

Not surprisingly, improving the number of personnel available to conduct intermodal planning would provide significant improvement to intermodal planning and implementation capabilities. Several stakeholder interviews revealed that existing personnel are “overloaded with ISTEA regulatory requirements.” One western MPO Executive Director is planning to add a transportation planner to “deal with” the ISTEA management systems. Caltrans in California has added a Deputy Director position responsible for all non-highway modes, including transit, rail, and aeronautics. In general, however, most agencies are not adding staff but realigning responsibilities to handle intermodal duties. Typical of this change is Florida, which made changes to the Rail Office to become the Rail & Intermodal Office.

FIGURE 4-5
**IMPROVEMENT POTENTIAL FOR INTERMODAL PLANNING AND
 IMPLEMENTATION CAPABILITIES
 (TRANSIT AGENCY STAKEHOLDERS)**



* Satisfied defined as rating of "5" to "7" on a scale of "1" (Needs Major Improvement) to "7" (Excellent)

Duties were aligned to reflect an intermodal policy perspective and ensure that intermodal planning was given consideration throughout the organization for transportation improvements.

FINDING #5: Efforts to improve traditional interagency coordination and transportation planning processes offer the least opportunity for improving the intermodal planning and decision-making process.

Transit agencies, MPOs, and state DOTs attached significantly greater importance to external support in the acceptance and practice of intermodal planning and decision making than intra- and interagency coordination and communication at all levels of government. Of all six opportunity arenas, the *Governmental Coordination and Communication in Support of Intermodalism* arena had the least opportunity for improvement from the transit and MPO stakeholder perspective and second to the last for state DOT stakeholders. Respondents are relatively satisfied and feel there is little sensitivity to change in the responsiveness, communication, and receptivity towards intermodal planning among government agencies. Stakeholders are cognizant, however, of the need to improve the level of trust between agencies involved with transportation planning. This intermodal planning factor was ranked as one of the top three factors in this arena for all stakeholder groups and ranked first by transit agencies.

The *Transportation Planning Processes* arena includes the processes necessary to implement intermodal policies under ISTEA, such as adopting project selection criteria, planning and analysis tools, openness of process to new ideas and players, and evaluating transportation plans for land use and air quality impacts. All stakeholders were relatively satisfied with their current transportation planning process. In fact, this arena had the highest mean satisfaction rating of all six arenas. Because this arena has a relatively high satisfaction and relatively little sensitivity to change, it is considered as having a low priority for improvement to intermodal practices. Nevertheless, “better tools to objectively assess costs, impacts, and benefits of various projects” and programs to “more equitably compare projects which are intermodal in composition” were stated needs to improve intermodal planning and decision making.

BEST EXAMPLES OF INTERMODAL PLANNING

Survey respondents were asked to provide examples of successful intermodal planning. As shown in Table 4-3, development of intermodal transfer facilities and long-range plans were the top response categories.

TABLE 4-3
BEST EXAMPLES OF INTERMODAL PLANNING

Describe the best example of intermodal planning in your area. What in your opinion are the reasons for its success?

1. Development of an intermodal transfer facility. (83 mentions)
 - Development of an intermodal transit center in the CBD. Project was planned and programmed 3 years in advance, submitted for public input early in the process, and local funding, including business participation, was secured. (Small southwestern DOT)
 - Intermodal Amtrak station had strong local and Congressional support. (Southern MPO)
2. Development of a long-range regional transportation plan. (28 mentions)
 - Long-range, statewide, intermodal transportation plan was successful because of early and continued involvement of the private sector and other public agencies. (Southern state DOT)
 - Development of a Statewide Intermodal Transportation Plan. This resulted in coordination and cooperation among modes of transportation that normally do not deal with each other. (Mid-America state DOT)
3. Provision of intermodal services. (23 mentions)
 - Electric shuttles in the downtown area—these shuttles facilitate rail-transit-pedestrian traffic and allow motorists to park in remote lots and shuttle to business/tourist areas. (Medium-sized West Coast transit agency)
 - Commuter connection bus service to and from railroad stations. (Large northeastern transit agency)
4. Planning a specific transportation corridor. (21 mentions)
 - Development of 100-mile high-occupancy-vehicle system led by transit authority with significant interface and coordination with state highway dept. (Large southwest transit agency)
 - MIS Study in an urban freeway corridor. (Southwest DOT)
5. TIP Process. (16 mentions)
 - During TIP process, we asked the people what they wanted through a visual preference survey and designed our evaluation criteria to reflect those preferences. (Southern MPO)

Source: National Survey

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