1991, is to improve mobility, accessibility, and air quality in the nine county metropolitan area.

Although California is a unique in many respects, there are a number of features of the Partnership that can serve as a model for other areas. California has been a national leader in many transportation components including the development of an extensive freeway system, the antifreeway movement, high-occupancy vehicle (HOV) lanes, and air quality concerns. California also influenced the ISTEA, in that a number of influential congressmen were from the state.

The Joint Urban Mobility Program (JUMP) represents one of the initial efforts of the Partnership. This program included a number of "doable" projects focused on improving mobility in the area.

In addition to Jump Start, the Partnership has accomplished a number of important objectives. First, it provides a forum for the dissemination of issues among the various agencies and groups involved. This has greatly enhanced the flow of information among agencies and has helped facilitate innovative approaches to addressing critical transportation problems. Second, the Partnership continues to be instrumental in developing and implementing specific projects and programs aimed at improving mobility in the area.

The benefits from the Partnership did not come immediately, however. One of the lessons from this case study is that building strong working relationships among diverse agencies does not happen overnight. It takes time to build a level of trust and to establish open communication links. It is also important to remember that the Partnership is a voluntary organization and that it has not diminished the responsibilities of the individual agencies and groups.

Funding for transportation in the Bay area has also helped support the Partnership. Local governments are now providing over half of the funding for the transportation system, with the state accounting for only 12 percent. This is a significant change from the historic approach to transportation funding which relied more heavily on federal and state funds.

An interesting approach is also being taken in California to enhance coordination between land use and transportation planning. As more funds are provided by local governments, which are responsible for land use controls, they become more accountable for land use and transportation decisions as they will have been to live with the results.

As noted by the title of this presentation, now is the time for MPOs and state departments of transportation to learn to manage new roles. The ISTEA provides the opportunity to boldly move forward to advance metropolitan transportation planning and operations. I

hope each of you will accept this challenge and help manage change in metropolitan areas throughout the country.

Institutional Barriers to Intermodal Transportation Policies and Planning in Metropolitan Areas

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It is a pleasure to have the opportunity to discuss TCRP Project H-4C, which focuses on the institutional issues related to the intermodal transportation policies and planning activities associated with the ISTEA. Having spent 16 years of my career working at a transit agency, I think I bring an interesting perspective to the project. Although the problem statement for this project is to examine the institutional barriers to intermodal planning and policy making, the study design expands this focus. The project is also considering how intermodal projects can be advanced given existing institutional arrangements, identifying what improvements are needed and what changes will make the biggest difference, developing strategies to overcome the identified barriers, and identifying projects to field test these strategies. An interim report, documenting the barriers, potential improvements to the planning process, and specific strategies has been completed. The final stage of the project will be to field test these strategies at selected MPOs throughout the country.

A number of different activities have been completed as part of the study. First, 33 in-depth interviews were conducted with key stakeholders from MPOs, state departments of transportation, and transit agencies throughout the country. A typology of barriers was developed based on the results of these interviews. A nationwide survey was then conducted of the same three organizations—MPOs, state departments of transportation, and transit agencies—using an analytical tool called Net

Impressions[®]. This technique identifies critical areas for improvements and assigns a leverage score to these areas.

The interviews and surveys provided an excellent overview of the current status of activities around the country and the perspective of participants on the intermodal planning and decision-making process. The interviews and surveys were used to help identify some of the challenges and the opportunities being faced by all groups in adjusting to the changes resulting from the ISTEA. The results of both the interviews and the surveys point to the need to be aware of the model environment, to have a good understanding of the ISTEA, and to be cognizant of organizational behavior and agents of change.

I would like to summarize a few of the results from the interviews with the 33 key stakeholders from throughout the country. These were senior level officials at MPOs, state departments of transportation, and transit agencies. The interviews focused on the five major areas of organizational capabilities, organization structure and culture, institutional and legal framework, financial resources, and overall support of intermodalism.

There were a number of objectives to the interviews. First, the results were used to identify the nationwide receptivity toward intermodalism, as well as the current planning practices. Second, the interviews helped to identify the barriers to intermodalism noted by the different stakeholder groups. As part of this element, we wanted to examine opportunities to help promote intermodalism, as well as the approaches used by different groups to address issues and barriers. The interviews were also used to define Net Impression® arenas, which I will explain in more detail later in my presentation.

A number of common themes emerged from the interviews. First, many respondents indicated that one of the measures of success related to the ISTEA used in their areas was the ability to secure flexible funding. Thus, it appears that less emphasis may be given to ensuring a good planning process in some areas, with more focus on simply gaining additional funding for the various modes. In addition, modal oriented planning—rather than planning focused on mobility needs—seemed to be the common approach in most metropolitan areas. Finally, there still seems to be a good deal of modal bias on the part of representatives from the different agencies.

As other speakers have noted, the interviews also highlighted the lack of coordination between land use and transportation planning in most metropolitan areas. The results further indicate that there is not yet agreement between many MPOs and state departments of transportation on the process and criteria to be used to evaluate different types of transportation projects. Although there are a number of good examples of

coordination at the staff level on the project selection process, problems were noted in explaining these processes and procedures to the agency policy boards. The interview results also seem to highlight that transit agencies in many areas are still not fully involved in the transportation planning and decision making process.

The results from the interviews were used to develop a typology of barriers to intermodalism. Three general categories of barriers focusing on organizational issues, resources, and institutional forces emerged from the interviews. I would like to briefly describe a few potential barriers within each of these categories.

Issues associated with different agency cultures was one of the relevant organizational barriers. It is not surprising that the culture of different agencies tends to reflect their mission and history. The mission statements of most agencies still focus on a single mode or a group of modes. For example, transit authorities are operating agencies and are mainly concerned with ensuring that service is being operated effectively and efficiently. This is a much different perspective than an MPO or a state department of transportation. Few agencies reflect an intermodal perspective or a focus on mobility rather than a specific mode. As a result, the ISTEA, which contains strong emphasis on intermodalism, may be viewed as a threat to some groups.

The lack of adequate funding was noted by representatives from all agencies as a major barrier to intermodalism. All groups were in agreement that the full funding of the ISTEA was needed. This lack of funding and concerns over adequate funding appears to further reinforce the modal bias of each group

A variety of institutional issues were discussed in the interviews. Concerns were raised by many respondents over the involvement of special interest groups in the transportation planning process. It is interesting to note that only a few areas viewed special interest groups as an opportunity to help advanced intermodal goals and objectives.

The interviews and the other research activities conducted in the study highlighted the importance of a project champion in successful intermodal projects. Interview respondents noted that the project champion helped focus the energy of all groups on achieving a particular goal. Further, the project champion was able to overcome many of the identified barriers by redirecting group energies towards achieving the project objectives.

We also used a technique called Force Field Analysis in the study. This technique addresses the factors that contribute to change in a given situation. It examines both the forces that work against change, which are called restraining forces, as well as the factors that contribute to change, which are called driving forces. When the appropriate driving forces are put into action, they overcome or eliminate the barriers that are restricting change. At this point, change can begin.

We used this technique, and Net Impression® Analysis, to identify the driving forces that could be used to advance intermodal planning and decision making. Net impression analysis is a complicated process that uses several algorithms to identify potential areas for improvement given certain situations.

A major component in the process is the identification of arenas, which are major areas of change. In this study areas were elements such as leadership, full funding, and better planning processes. Within each arena a series of intermodal planning factors were identified. The outcome of this process was used to develop a net impression survey that was completed by the stakeholders. All of this information was used in the final step called leverage analysis. This process helps identify the factors that will have the largest impact or leverage on achieving the desired results.

I will use the arena of the transportation planning process to highlight a few of the study findings. Some of the planning factors within this arena include giving equal consideration to transportation alternatives and adopting effective project selection criteria. It was found that these transportation planning factors had the highest satisfaction rating with all the stakeholder groups. Using the net impression analysis, however, we were able to determine that the transportation planning process does not have much leverage on affecting change. It can compliment change, but it is not a driving factor. The results also indicate that governmental coordination is not a driving force.

Gaining internal support for intermodalism emerged as one of the driving forces, along with implementation capabilities and leadership support for intermodalism. Funding support was also important, but did not rate as high as these three driving forces.

A comparison of the responses among the three stakeholder groups identified some interesting results. For example, state departments of transportation appear to have a clear vision of the key factors to enhance intermodalism, as do MPOs. On the other hand, transit agencies did not appear to have as clear a focus of what

would make the biggest improvement toward intermodalism.

The study results indicate that the institutional barriers to intermodal planning can be overcome by the driving forces of leadership support and gaining external support. Organizational barriers can be overcome by government coordination and the planning process. Resource barriers can be overcome with ISTEA funding and enhanced planning and implementation capabilities. These categories are not mutually exclusive. Rather, they overlap in many respects.

A number of findings are outlined in the interim report. First, it appears that external support will have the greatest positive effect on intermodalism. Second, leadership support is critical to achieving intermodal planning and implementation. The full funding of the ISTEA is also important, but it does not appear to be the highest priority.

A few other observations can be made based on the preliminary results. For example, the interview and survey responses indicated that state departments of transportation are still viewed as being primarily highway oriented. The U. S. Department of Transportation was also not viewed as being supportive of intermodalism.

All of the three stakeholder groups were also asked in the survey to identify the top improvements or changes they felt would contribute to intermodalism. Representatives from state departments of transportation indicated that enhancing the intermodal planning process was their first priority. This was followed closely by supporting this planning effort with funding for intermodal projects. The major improvement noted by transit agency representatives was a dedicated source of funding for transit. Finally, MPO representatives identified the need for federal agencies to take more of a facilitator role, rather than a regulator role, as the key improvement.

The next steps in the study are to conduct a two day Implementation Forum in four metropolitan areas. Additional surveys will be conducted before these sessions. A follow up meeting will be scheduled approximately ninety days later to review progress on agreed upon action steps. Additional interviews will also be scheduled with representatives from federal agencies and national organizations.