study process. But that is not true. We have gone out of our way to avoid doing that.

In fact, I have a copy, the only existing copy, of the *Major Investment Study Desk Reference*. I make the point about it being a "desk reference" because, until a week and a half ago, it was the reference manual. We dropped the word manual. We are so concerned about this, in an attempt to avoid the one-size-fits-all notion, that we are trying to make sure that we do not imply, by any stretch of the imagination, that there is a "manual."

So we have a desk reference. It will be available soon. In fact, the reason it is the only existing copy is that it is that close to publication.

The point of the matter is that we are trying very hard to allow to you create a decision process that meets your needs most effectively.

From my point of view, the most compelling reason for justifying an MIS is that it meets your needs, not that it meets anybody at the Federal level's needs. If a major investment study can help you make decisions more effectively, if it serves your purposes more effectively, if it helps you make the difficult choices that you all face more effectively, then those are the most compelling reasons for a major investment study.

We have tried to identify some basic principles to help you do these studies. They are tied to problem-solving and consideration of alternatives early in the planning process. They are built around collaboration. They are tied to integrating planning and environmental analysis early. They encourage proactive public involvement and are built around the principle of "No one size fits all."

MIS Successes and Challenges

Donald J. Emerson, Chief of Analysis Division, Federal Transit Administration

Introduction

This conference comes at an opportune time. The major investment study (MIS) requirement of the FTA/FHWA metropolitan planning regulations has been in place for just over two years, and the time has come to share experiences and assess the impact. This is also a good time to consider the direction of future Federal, State, and local activities.

My remarks will provide an overview of the national MIS experience to date. I will indicate how well the goals of MIS are being achieved and identify six challenges that remain. I will conclude with a summary of ongoing FTA/FHWA activities.

Success stories

The previous speaker, Sheldon Edner, identified several goals that FHWA and FTA had in mind when the MIS requirement was written into the regulation. Four predominant goals are:

- consideration of multimodal alternatives to solve transportation problems;
- collaboration between Federal, State, and regional agencies;
- use of a broad array of evaluation criteria to support decision-making; and
- public involvement.

As FTA and FHWA observe the state of the practice across the country, we see good progress toward these goals. FTA and FHWA have prepared a portfolio of MIS case studies to document some of the most noteworthy success stories.

The Miami East–West Corridor MIS, now nearing completion, is a good example of multimodal problem-solving. The study corridor included suburban development west of Miami, the Miami airport, downtown Miami, the seaport, and Miami Beach. Among the alternatives the MIS has considered are highway widening, HOV lanes, several heavy rail alternatives, a light rail line, bus service improvements, an intermodal terminal adjacent to the airport (with TriRail commuter rail service and possibly high-speed rail), and an airport people mover. Virtually every agency in the U.S. DOT has been involved, along with their State and local counterparts, with Florida DOT as the lead agency.

Two other examples of multimodal MISs are the Route 78 study outside Atlanta and the Route 301 MIS in Maryland. Both of these looked at public policy options such as land use, in addition to alternative highway facilities, transit facilities, and multimodal packages.

An excellent example of interagency collaboration can be found in Denver, where three separate MISs are evaluating highway and transit alternatives. Each study is being managed by a different agency—Colorado DOT is managing the southeast corridor MIS, the Regional Transit District is managing the west corridor MIS, and the Denver Regional Council of Governments is managing the east corridor MIS. An MIS coordinating committee, composed of representatives of the agencies and their consultants, meets monthly to keep each agency involved in each study. A technical procedures manual has been developed for use in all three studies to help ensure that local officials are presented with comparable cost, benefit, and impact data at the end of the studies.

The Woodrow Wilson Bridge study in the Washington, D.C., metropolitan area is one of several good examples of effective public involvement in an MIS. A multi-jurisdictional coordination committee of elected officials and senior government executives is directing the study. The public involvement program included the hiring of a facilitator, creation of citizen working groups, town hall meetings, and establishment of a Study and Design Center for information exchange and workshops.

In each of these cases, the MIS requirement has changed the planning process, and the State and local planners we talk to are happy with the result. We find that the planning process now has a far greater impact on decision-making and the selection of the transportation investments and strategies to be pursued. Decision-making at the planning stage now pays more attention to alternatives, their impacts, and their costs—which traditionally have been assessed only in project development. Highway and transit solutions are now being planned and developed together, which should lead to more integrated metropolitan transportation systems. With greater public involvement and interagency collaboration, there is every reason to expect that the decisions emanating from an MIS will find greater support and be implemented more quickly and with less controversy.

At least two other signs of progress are worth noting. First, when the National Transit Institute's three-day MIS training course was first offered just over a year ago, many class participants arrived with questions on the procedural aspects of MIS. The early courses were dominated by "who," "what," "where," "when," and "why" questions. Now, class participants arrive with a much better understanding of the MIS concept and procedures. Participants ask technical questions and are interested in hearing about good examples from other parts of the country.

Second, the General Accounting Office recently completed a review of the MIS process. GAO found growing acceptance of the MIS concept and concluded that better decisions will result.

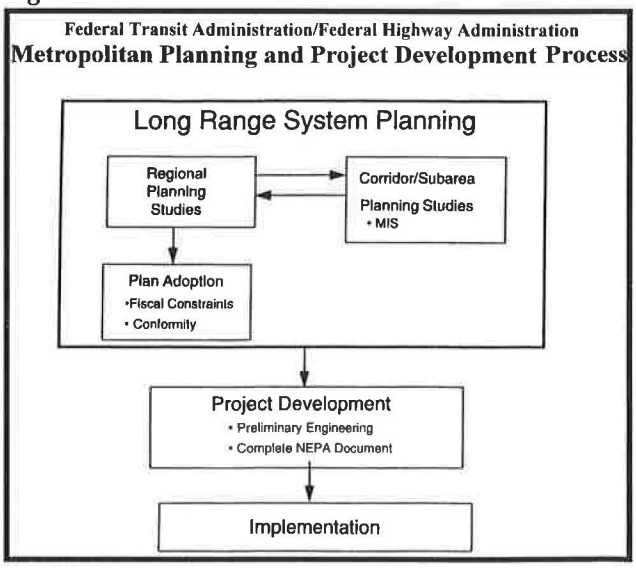
Six challenges

Although these signs are encouraging, I would like to identify six challenges that remain, in the hope that you will address them during the conference. By grappling with these challenges, we can further integrate MIS into planning and project development, creating a single, seamless process.

Challenge 1: Broadening the understanding of the MIS process

FTA and FHWA designed MIS as an integral part of the planning process, with the intent to help bring about better decisions on what major facilities and supporting strategies to include in a metropolitan transportation plan. MIS is similar in many ways to corridor, subarea, or feasibility studies that many agencies have performed in the past, but MIS is perhaps more comprehensive in terms of the alternatives and evaluation criteria considered. MIS should be done before decisions as project concept and scope are made. Despite extensive training and guidance, however, MIS is still perceived by some to be an added step that follows planning and precedes project development. That was not our intent at all. (See Figure 1.)

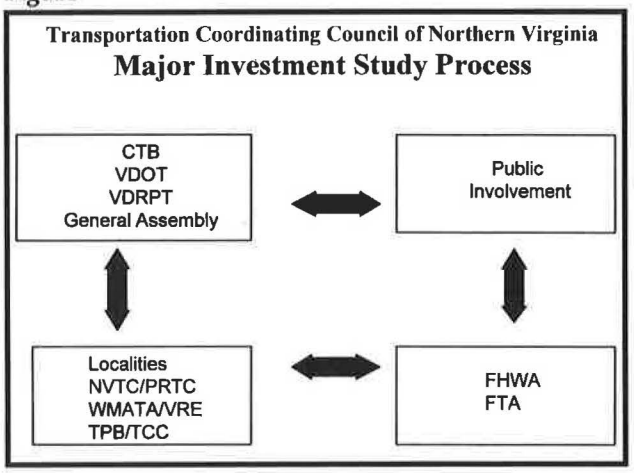
Figure 1



Some have taken the view that MIS is redundant with the NEPA process. We do not see it that way. With

MIS, FTA and FHWA have tried to integrate the planning and NEPA processes in a way that leads to better investment decisions and streamlines the overall planning and project development process. If the MIS process is done well, decisions made in planning should not need to be revisited in project development.

Figure 2



Some planners and local officials are still struggling to understand what MIS is.

Figure 2 above shows how the MIS process is perceived by State and local officials in northern Virginia. The chart portrays a collaborative process, but a process in which decisions never get made and no one is in charge. Not long ago I spoke to a member of Virginia's Commonwealth Transportation Board (CTB). The CTB makes transportation policy decisions within Virginia, and this particular CTB member chairs the policy committee for one MIS and is involved in several others. I asked his opinion of the MIS process, and if he thought MIS would lead to better decisions by policy makers like himself. He responded that he had not thought about MIS in that way. He saw MIS as one more Federal requirement and had been so involved in the details of the studies that he never understood that they were intended to be for his benefit.

Challenge 2: Adjusting to new institutional relationships

MIS not only changes planning and project development procedures, it also changes long-standing relationships among and within agencies. Decisions on the concept and scope of a project now involve not only the implementing agency but also the MPO, transportation agencies concerned with other modes, and organizations interested in other issues like the environment, housing, and urban development. Some implementing agencies are still uncomfortable with this sharing of decision-making responsibility.

Within state DOTs, the planning and environmental staffs are often located in separate units. Bringing environmental considerations into the planning phase means that these units need to work together more effectively than ever before. Planners need to learn about NEPA and Section 4(f). Environmental specialists need to get involved with MPOs.

Figure 3

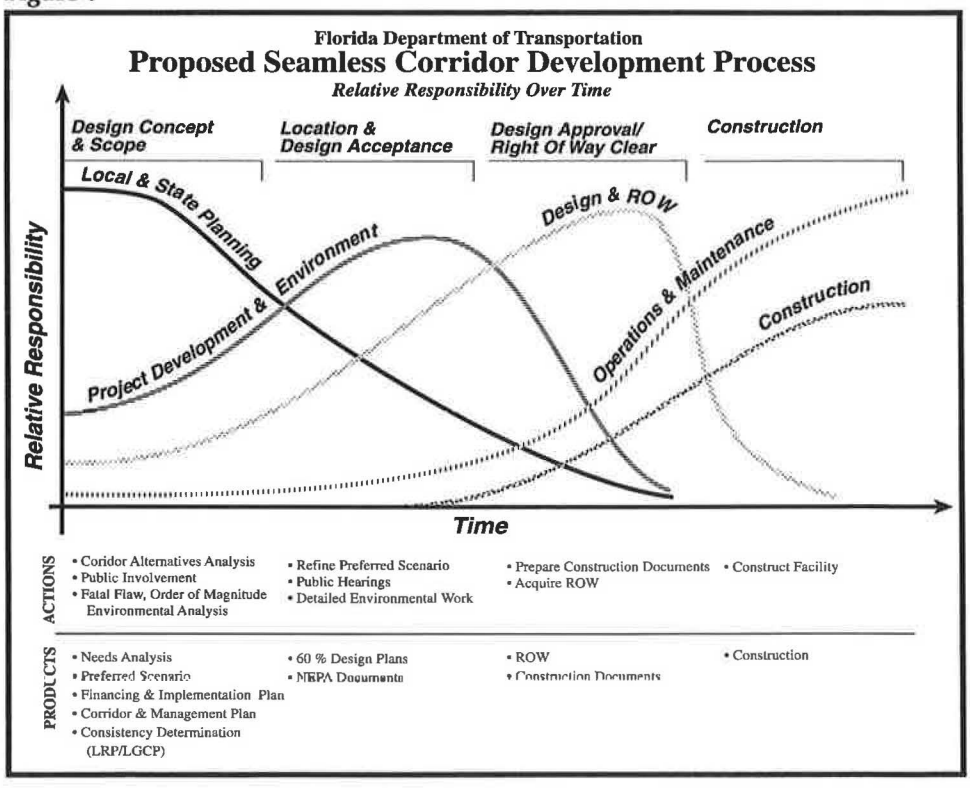


Figure 3 shows how planning, environmental, and engineering staff can be involved at different stages. At the planning stage, planners assume the lead responsibility, but project development and environmental specialists become increasingly involved. Design and right-of-way personnel also play a role. As a project emerges from planning, the project development and environmental staffs take over the lead responsibility, but the planners also take part. Design and right-of-way start to play a larger role, and operations and maintenance personnel also become involved. A similar sharing of responsibility continues through design, right-of-way acquisition, and construction.

When NTI's MIS course was first presented, it quickly became apparent that people from different backgrounds use the same words to mean different things. To a planner, the word "corridor" tends to suggest a rather large geographic area, containing both trip origins and destinations. Project development and design specialists tended to view a corridor narrowly—perhaps as an area no wider than the right-of-way and no longer than a construction contract. To someone with a highway background, preliminary engineering meant the development of engineering drawings during project development. To a transit person, PE referred to a particular stage that follows planning and that includes engineering, environmental, and financial studies. We found we had to define these words early in the course to make sure that participants could understand each other. Similar definitional differences undoubtedly hinder collaboration among and within agencies.

One term that people continue to stumble over is the word "project." We define a "project" as something that has emerged from the planning process. Prior to the decisions that occur in planning, there is no "project" but only a problem or a series of alternatives or options. It has been hard for some to get used to this notion.

Challenge 3: Involving resource agencies

Environmental resource agencies need to be involved in MIS to help ensure that environmental factors are adequately considered in planning and that planning-level decisions are not overturned on environmental grounds during project development. Unfortunately, transportation agencies have had difficulty bringing environmental agencies to the table. When invited to become involved in planning, environmental agencies often respond that they lack the staff time to become engaged that early. They may choose to wait until there is more detailed information available in project development. This is unfortunate for both the environmental and the transportation agencies. Historically, resource agencies have been advocates for a broader look at transportation alternatives. MIS gives them the opportunity they have been seeking. If environmental agencies wait until project development to suggest new alternatives, they may find that the best opportunity to consider new options has passed them by.

Florida DOT overcame this problem in the I–4 Corridor MIS in Orlando by establishing an Environmental Advisory Group. The advisory group included the Florida Department of Environmental Protection, the Corps of Engineers, several water management districts, the Florida Game and Fish Department, and interested park rangers. The group looked for fatal flaws in the alternatives, helped develop measures of effectiveness to be used in selection of a preferred concept and scope, and identified issues needing further attention in the subsequent project development phase. According to Florida DOT, the group tended to initially focus on detailed alignment issues but eventually adjusted to a broader planning level of detail. Florida DOT credits the 1000 Friends of Florida, an environmental advocacy organization, with getting the Environmental Advisory Group involved and making sure the process worked. The group met four times officially but became so interested in the exercise that it also met informally on its own.

Challenge 4: Determining the appropriate level of detail

One of the principal advantages of the MIS process is that it allows modal and capacity decisions to be made in planning, based on a level of information suitable to the planning stage. Project development can then focus on design options within the project concept selected in planning. This permits a broader look at alternatives while streamlining the overall planning and project development process.

FHWA and FTA have urged transportation planners engaged in MIS to consider the kinds of information needed to reach a decision on project concept and scope. We have explained that, in most cases, the project development level of detail is not needed for the decisions that flow out of MIS.

Nevertheless, we find that many MISs are being done at the project development or preliminary engineering level of detail. Agencies seem to be accustomed to looking at alternatives in the traditional level of detail, but now they are adding more alternatives. As a result, we are

hearing a concern that MIS is costing too much and taking too long. There seems to be room to gain efficiency by reducing the level of detail.

Challenge 5: Developing better methods for evaluating multimodal alternatives

Highway agencies have traditionally used measures of vehicle congestion to evaluate highway alternatives. This has typically led to selection of an alternative that meets some level of service standard or that does the most to relieve vehicular congestion without undue adverse impact. Transit agencies have tended to evaluate alternatives on the basis of transit measures such as increases in transit ridership. Neither the highway nor the transit approach works well for evaluating alternatives across modes or for evaluating multimodal packages of strategies.

FHWA and FTA are starting to see progress toward the use of broader, multimodal mobility and accessibility measures to evaluate alternatives. Travel time savings, for example, is one transportation measure that is being more widely used. Non-transportation measures such as environmental impacts and land use are often addressed. FHWA and FTA are looking for good examples to share with the industry.

Challenge 6: Relating MIS to the regional context

One of the fundamental principles underlying MIS is that concept and scope decisions must emerge from a corridor-level analysis of transportation problems and the options for solving them. Region-wide planning can identify problems and set overall policy. But there are simply too many alternatives, including possible combinations and permutations available at the regional scale to make informed choices on the number of highway lanes to be provided on a particular facility or the optimal transit technology for a specific application.

Nevertheless, if the transportation system is to perform satisfactorily as a whole, decisions on individual corridors should not be made in isolation from the regional context. At some point, corridor-level studies need to be brought back to the regional level and decisions made in the best overall interests of the region. Corridor-level decisions must also fit within the fiscal and air-quality constraints that apply to the region as a whole. Without an overall regional decision-making strategy, the first MIS completed may lay claim to all available resources, regardless of whether that is the best outcome for the region.

During the conference, I hope there will be some discussion on such issues as:

- How have metropolitan areas developed regional decision-making strategies that incorporate the results of MIS into the regional plan? What are the elements of these strategies?
- In a region with overlapping corridors, how are the corridor boundaries delineated? If a corridor is oriented east–west, how should an MIS in the corridor deal with north–south travel passing through or within the study area?
- If simultaneous MISs are underway in corridors A and B, what network should be assumed in corridor A for the MIS in corridor B?
- If different MIS procedures are used in different corridors of a region, will the public and/or decision-makers become confused or suspicious, making it more difficult to achieve consensus?

Current FHWA and FTA activities

Before closing, let me list for you some of the activities FTA and FHWA have undertaken to help State and local agencies understand and carry out the MIS process. We would be interested to hear your reaction to these and suggestions for what FTA and FHWA should do next. Activities to date include:

- A "question and answer" paper distributed in August 1994.
- A National Transit Institute training course. Fourteen three-day sessions have been held, and eight more are planned before the end of June 1996.
- A national teleconference held in May 1995.
- A series of one-day briefings and seminars.
- The portfolio of success stories referenced earlier.
- Publication of an MIS Desk Reference with information on best professional practice in various technical areas. A draft of the desk reference is now available, and we would welcome comments before the final reference is published next June.

- Expanded technical assistance will be available in 1996.

- A series of detailed case studies is being initiated to assess the impact of MIS on planning and decision-making.

- A test and evaluation of alternative procedures will be performed during 1996 and 1997, starting in Federal Region 9.

- The FHWA/FTA environmental regulation (23 CFR 771) is being revised. A Notice of Proposed Rule-making should appear during the spring of 1996.

Closing

FHWA and FTA recognize many changes that need to occur for major investment studies to become a routine part of planning and project development, and that change is difficult and takes time. But we believe that the changes inherent in MIS will prove worthwhile. MIS will lead to better decisions because decision-makers will be presented with more choices and will have a better understanding of the implications of those choices. MIS should lead to more supportable, better-supported decisions, because alternatives will have been evaluated in a public process with broad agency involvement. MIS should also streamline the planning and project development process, because planning-level decisions will occur in planning, based on planning level of detail.

This conference gives you an opportunity to share experiences with your counterparts from around the country. There are lots of good stories—both the successes and examples that were less than successful—that need to be told and given widespread exposure so all can learn how to improve the process.

I have identified six challenges. Let us hear the issues from your perspective, and how you think they can be addressed. How is the process working? Where is there a need for additional training? technical assistance? guidance? research? Together through this conference, we can develop an action agenda to address the highest priority needs.