I HAVE BEEN ASKED to discuss the context of the recently passed Clean Air Act Amendments of 1990 (CAAA) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). There is little question in my mind that both acts herald a new and different era in transportation planning and reflect trends that are found in many other facets of society. I have entitled my discussion Planning: The Challenge of Being the Glue for many reasons. First, I strongly believe that planning is the most important component of program and project development. It is that part of the intellectual process of understanding the future context of today’s decisions that allows society to piece together some concept of appropriate and reasonable investment in the future. Transportation planning and the agencies and organizations that are involved in this “piecing together” need to coordinate the many different activities and policies that individually could foster, or in some cases hinder, the achievement of a region’s vision. To do this in a highly visible and often controversial environment is a challenge. In addition, with today’s policy emphasis on transportation investment as a means of achieving other societal objectives (e.g., air quality, economic development, and mobility for the disadvantaged) transportation planning becomes even more important as the glue that binds everything together.
This paper is organized into five sections. In each section an aspect of the challenge that faces the transportation planning profession will be addressed. Discussed in the first section is the changing environment of transportation planning and how emphasis is once again on a planning-based decision-making process. The second section covers how planning must meet the challenge. In the third section, the following equation is discussed:

\[(\text{LRP} + \text{TSM} + \text{TDM}) + (\text{TSM} + \text{TDM}) \times (\%\text{TCM}) = \text{TIP}\]

where

- \(\text{LRP} = \) long-range plan,
- \(\text{TSM} = \) transportation system management,
- \(\text{TDM} = \) transportation demand management,
- \(\text{TCM} = \) transportation control measures, and
- \(\text{TIP} = \) transportation improvement program.

The equation is intended to convey the numerous items that planners and decision makers are now required to develop. It highlights the interrelationships among the many different planning activities that now must occur and the critical significance of TIPs, into which many of the planning documents must feed. The trend toward performance-based planning is discussed in the fourth section. The fifth section is focused on the institutional arrangements and capabilities necessary for successful planning to occur.

**CHANGING ENVIRONMENT: THE PENDULUM SWINGS BACK**

Every so often, Congress passes legislation that can be considered a milestone in a particular public policy area. Future historians will undoubtedly regard the recently enacted ISTEA and CAAA in such a light. Not only did ISTEA mark the end of the Interstate highway program, which began in 1956, but it greatly loosened the institutional, financial, and thus political framework within which decisions on transportation investment had been made during the past 35 years. More than $150 billion was provided by Congress to carry on the important work of building, operating, and maintaining the transportation infrastructure so critical to the U.S. economy and the quality of
American life. Of this sum, significant amounts were allocated to support mass transit, fund actions to improve air quality and enhance the environment surrounding transportation facilities, and provide seed money for research and demonstration of advanced technology applications to transportation. More important, however, ISTEA established a new program structure for investment of transportation dollars.

Federal funds once had to be spent only on projects that were eligible in specific program categories, but now many of the funds can be used for any transportation project. The federal program was once designed to provide uniformity of transportation investment from one state to the next, a necessity for a program such as the Interstate highway system; ISTEA now encourages states and localities to seek solutions to transportation problems appropriate to their needs and desires. The federal program historically emphasized transportation investment as an end in itself; ISTEA provides transportation funds to meet other societal goals, thus viewing transportation as a means of achieving some greater aim. The federal program separated the funds for highway and transit investment; ISTEA encourages that transportation decisions be made from a multimodal perspective (known as flexibility). The federal program once emphasized the construction of new facilities; ISTEA encourages better management and operational improvements of existing facilities with incident management programs, application of advanced technologies, and the like.

CAAA also provides a strong basis for a changing transportation planning focus in metropolitan areas in which air quality goals are not being attained. A long history of linkage exists between transportation planning and decision making and air quality planning. However, Congress has never before made the linkage stronger. Certainly, the transportation portions of CAAA will greatly influence the focus and scope of many transportation decisions during the next decade. With a stringent schedule of anticipated emission reductions from stationary and mobile source controls, decision makers in a significant number of areas will have to consider, and possibly implement, TCMs to demonstrate attainment. In addition, because of concerns about both attainment and maintenance, Congress has supplemented or reinforced the state implementation plan (SIP) revision process with specific requirements for nonattainment areas to periodically assess and mitigate on a continuing basis increases in vehicle miles traveled (VMT), congestion, and vehicle trips.
CAAAs reflects Congress's concern with past and anticipated growth in VMT and congestion as primary causes of nonattainment. Congress viewed past failures to accurately predict and monitor these travel indicators as a main reason for overly optimistic attainment demonstrations following the Clean Air Act Amendments of 1970 and 1977. Regular determinations that transportation plans, programs, and projects conform to SIPs could be the greatest cause of change to how transportation agencies conduct their business.

The federal legislative context for transportation planning is important. However, the general environmental context of such planning was changing anyway, and ISTEA and CAAA are really a reflection of this change. In particular, five trends, which are discussed next, have characterized the transportation planning process in most metropolitan areas.

Transportation as a Means

A primary purpose of planning is to provide information to those responsible for making decisions regarding infrastructure and service provision. Whether professional planners and engineers like it or not, these decisions are often viewed by local officials as a means of accomplishing goals other than mobility enhancement or congestion relief. They are usually focused on enhancing a region's competitive advantage, reducing air pollution, or encouraging economic development and creating jobs. The implication of this trend is that transportation professionals must understand the linkage between transportation and these other objectives and be in a position to provide answers to questions on how to best achieve these objectives with alternative transportation investment scenarios.

Externalities

Similar to the first trend, the increasing importance in local decision making of the externalities of changes to the transportation system is a defining characteristic of transportation planning at all levels of application. Improvements in transportation do indeed have positive benefits for some. Increasingly, however, transportation planners, particularly those involved in evaluation, are being called on to better define likely im-
pacts and who will be affected. The simple benefit-cost analysis of plan evaluation in the early 1960s has given way to more complex cost-effectiveness frameworks in the 1990s. Many of the provisions of ISTEA and CAAA provide additional entree into the transportation planning process for groups that have not traditionally been involved. These groups will probably expand even further concern about the externalities associated with transportation investments.

### Capacity Versus Performance

The traditional emphasis of transportation planning has been on the provision of the necessary infrastructure to accommodate expected demand. Enhancing the capacity of the transportation system was the primary motive of many planning processes. A general trend in many planning disciplines has been toward maintaining performance of a particular facility or system by means other than capacity expansion. In transportation, this means that minimum levels of system performance can be established as target values and a multitude of actions considered to maintain this performance level. TDM, for example, is one nonconstruction means of maintaining a certain level of performance while still providing mobility. Performance concerns are central to both ISTEA and CAAA. ISTEA, in its requirement for several management systems, is tied into a performance-based approach. Certainly, CAAA defines acceptable performance as the degree to which air quality attainment is achieved, with the surrogate variable of VMT used to measure progress. The major implication to planners of a performance perspective to planning is the need for a comprehensive system monitoring and data analysis capability. This will be discussed in more detail later.

### Think Globally, Act Locally

As we head into a world economic structure in which the success of metropolitan economies depends on their ties to international markets, the role of an efficient transportation system becomes of paramount concern. In particular, intermodal linkages, which can provide a strong competitive advantage if done efficiently or create serious problems if done inefficiently, become an important focus of transportation. It is
not insignificant that the "I" in ISTEA stands for intermodal. One of the implications of this trend is that goods movement in and through metropolitan areas will likely become an even more important concern in the planning process.

Transportation and Planning Technology

There has been growing interest in the application of advanced technologies to transportation systems. The likely impact of these technologies on travel behavior, patterns, and perhaps even urban form is still unclear. However, with the funding and policy commitment of ISTEA, it appears likely that during the next decade decision makers in more metropolitan areas will examine the possible applications of such technologies to their transportation systems.

In the area of planning tools, the history of transportation planning can be illustrative in understanding the likely evolution of the technical process. The early technical planning process was dominated by cumbersome, non-user-friendly computer models. As modelers were continually asked to provide information on more localized, environmentally sensitive issues, it quickly became evident that the models available to the profession were inadequate. Then the microcomputer revolution occurred. I strongly believe that the advent of microcomputer use in transportation planning saved the transportation profession from itself. The ease of use and relative simplicity of such approaches provided powerful tools to planners (and nonplanners) for addressing transportation problems facing communities. The next step in the evolution of planning will probably be the application of geographic information systems (GIS). Such systems provide an even more powerful approach for analyzing the data in a way that decision makers can understand. The increases in planning funds found in ISTEA will most likely be used in some metropolitan areas to update the data base and develop more sophisticated modeling approaches. Many of these developments will be based on GIS.

MEETING THE CHALLENGE

What impact could ISTEA and CAAA have on states and metropolitan areas? The best answer to this question is the impact that state, re-
gional, and local transportation officials want it to have. ISTEA clearly provides the opportunity to make major strides in transportation policy; CAAA clearly provides many metropolitan areas with the motivation to take such strides. In many ways, however, these opportunities require a different way of doing business and will likely run into the usual problems of institutional inertia and a conservative approach to change. However, states and metropolitan areas that exert leadership and take advantage of the opportunities presented by the new legislation can make considerable progress toward putting in place a 21st century transportation system.

Substantial opportunities exist in the five areas examined next.

Institutionalizing Flexibility

It has been estimated that if state and local officials choose to do so, $103 billion of the $151 billion provided by ISTEA could be spent on transit. How will the decision of how to spend federal dollars be made in metropolitan areas? What criteria will be used to determine the trade-offs among different transportation alternatives? New partnerships among the state, metropolitan planning organization (MPO), local officials, transit officials, and other major participants must be developed to examine the most effective way of institutionalizing this new flexibility.

Multimodal Transportation Planning

ISTEA requires that state departments of transportation (DOTs) develop statewide multimodal transportation plans. These plans are not simply to be documents in which highway, transit, rail, aviation, and port issues are examined separately, but rather a process and a plan in which transportation is viewed as an integrated system that is related to multiple societal goals and in which efficient and productive transfer of people and goods from one mode to another is emphasized. This requirement will be a particular challenge to states in which highway planning has traditionally been emphasized at the expense of other modes. This multimodal planning approach could, and probably should, characterize planning at other levels of application. In my opinion, congestion management systems, for example, should be developed on a true multimodal basis where appropriate.
System Management

ISTEA requires state DOTs to develop management systems in six areas: congestion, pavements, bridges, safety, intermodal activities, and public transit. It is too soon to say what many of these systems will be like. However, Congress is clearly telling transportation officials to develop the capability to better manage the transportation facilities and systems that currently exist. For congestion management systems, this will likely entail the consideration and implementation of regional incident management programs, coordinated traffic signal control systems, preferential lanes or other incentives for multi-occupant vehicles, and the like. Many highway agencies that have reputations for high-quality freeway construction will be challenged to become leaders in managing the road system that they have so effectively constructed.

Advanced Technologies

One of the likely growth areas in the economy and the transportation sector is the use of advanced technologies in vehicles and for transportation system control. States and metropolitan areas that use state-of-the-art technologies in transportation will not only improve the movement of people and goods in their region, and thus enhance their competitive advantage, but they also could become magnets for new industries and economic opportunity. ISTEA provides funds for research and demonstration of these technologies.

Transportation Finance

For years, one of the major barriers to a true national transportation policy was the way transportation funds were allocated for highways or transit, with little opportunity for substitution. ISTEA has changed all of that, and CAAA implicitly requires that a different approach to funding decisions be made in nonattainment areas. However, for states and metropolitan areas to take advantage of this new flexibility, they must also have similar financial flexibility for using their own funds. This suggests that the major means of state transportation finance should not be dedicated highway trust funds, but a transportation trust
fund that offers the same flexibility with state funds as that offered by ISTEA with federal funds.

College courses on transportation planning often begin with a discussion of the 3C (continuing, comprehensive, and cooperative) planning process. Perhaps we are now facing a 7C planning process, one that is continuing, comprehensive, cooperative, coordinated, conforming, consistent, and results in cost-effective programs and projects (for Florida, add an eighth C—concurrency).

**EQUATION OF INTERRELATIONSHIPS**

The planning guidance and regulations that will likely result from ISTEA and CAAA will increase the number and breadth of planning products (see equation in first section of this paper). Certainly, for nonattainment areas, CAAA stipulates that transportation planning and air quality planning must be clearly linked. TIPs are identified in CAAA as key indicators of serious attention to mobile air quality concerns in nonattainment areas. ISTEA and CAAA take the next step in the evolution toward making TIPs the type of document they were always intended to be—true program management documents that outline responsibilities, priorities, and funding streams. It is this impact on TIPs that most likely will be one of the lasting consequences of ISTEA and CAAA.

CAAA, in particular, uses TIPs to hold state and local decision makers accountable for the strategies that have been adopted to meet air quality targets. Transportation projects that are listed in the SIPs as measures to achieve these targets must also be listed in TIPs. In addition, progress toward their implementation must be shown for the transportation program to be in compliance. Such accountability will discourage metropolitan areas from listing measures that look good on paper, but really have little chance of being implemented.

A new concept of TIP is shown in Figure 1. As shown, the existing types of projects that are required to be in a TIP (e.g., capital investments using federal monies and transit operating funds) are still present. However, TIPs also include operational funds that are to be used for highway improvements, projects that satisfy air quality requirements, and even local projects. With such a structure, a metropolitan area is able to outline in one document the transportation strategy that it will use to deal with the problems it faces.
PERFORMANCE-BASED PLANNING

As noted previously, a distinguishable trend has occurred during the past several years toward performance-based planning and system management in many professional disciplines. The author of *Reinventing Government* argues that many of the most innovative and successful examples of good government in the United States are cases in which the final product of government service is performance, not units of production. In transportation, several examples of performance-based planning have occurred in the general area of site impact analyses or impact fee determinations. In such cases, the community determines that a certain level of service is desired on the area’s road network and that permission to develop new land with the resulting increase in traffic demand must be contingent on steps being taken to maintain this level of performance.

Taking this concept to a systemwide level is challenging. The first step is to measure performance. Some work has been done on this topic in the area of systemwide congestion indices. Assuming that performance measures can be identified (and agreed to by local governments), the next major challenge is developing a system-monitoring program that collects and analyzes system performance data that can be fed back into the planning and decision-making process to allow steps to be taken that will correct deficiencies. Such a process, of course, will likely be expensive and time-consuming.

ISTEA and CAAA provide an impetus for state and metropolitan agencies to establish more systematic approaches to managing system performance. The management systems that are required by ISTEA represent a performance-based approach to decision making. One
possible approach to developing a congestion management system is shown in Figures 2 and 3. Note in each the need for determining performance standards, the targeted systems, and system-monitoring capabilities. The VMT estimations that are required by CAAA are another indicator of system utilization that acts as a surrogate variable for air quality performance measures.

A key issue for MPOs and state transportation agencies during the next several years will be the development of comprehensive strategies for the collection and analysis of system performance data.

FIGURE 2  Example of congestion management system.
INSTITUTIONAL CAPABILITY

Several years ago, I conducted numerous case studies of metropolitan area responses to the TSM policy of the U.S. DOT. Through this work, I learned that the institutional response to such policy changes as TSM involves three steps. The first is the resolution of issues of turf (i.e., the organizational and political negotiations that empower one group or another to develop a strategy in response to the initiative). The next step is to address issues of process. Once the process of response is determined, the involved groups can deal with the third step and true intent of the initiative: issues of substance. Although simplistic in its approach, this simple model of change can be used to explain why some actions have succeeded, whereas others have failed. If turf issues are not resolved, it is unlikely that participants in the process will reach a discussion of process. If the process of change is not agreed to, it is unlikely that participants will ever reach substance.
Both ISTEA and CAAA suggest that the institutional structure for transportation planning and decision making will have to be changed for local officials to respond to the requirements. It is not business as usual. One example is the requirement for MPO boundaries to correspond to nonattainment boundaries (unless the governor recommends otherwise). Having been a participant in an MPO process and being aware of the often delicate balancing of interests that is reflected in their governing bodies, I think that in many metropolitan areas of nonattainment around the country the attention of decision makers during the next year will be focused on the reasonable and equitable expansion of MPO policy boards. Using the three-step model just described, it is unlikely that the planning process can really be institutionalized and that project and program decisions can be made until these issues of turf are resolved. Other institutional issues that will be important in some metropolitan areas include the following:

- Incorporation of operations and implementation of agencies into the MPO structure;
- Implementation of the flexibility of funding transportation projects;
- Relationship between air quality agencies and constituencies and transportation agencies;
- Role of state DOTs, especially in multimodal planning and IVHS implementation;
- Role for private entrepreneurs with transportation ambitions;
- Intermodalism;
- Implementation of often controversial TCMs; and
- Development of the management systems required by ISTEA.

CONCLUSIONS

One measure of good public policy is the degree to which it responds to opportunities and challenges. In the transportation area, we are truly at a crossroads. The decisions made in response to ISTEA and CAAA could set the foundation for transportation decisions that will be made during the next several decades, just as decisions 35 years ago in response to the Interstate Highway and Defense System Act resulted in the Interstate highway system. However, this time, the federal government is not providing a strong focus for state activity (i.e., building Interstate highways). It is up to state, regional, and local officials to do this for themselves. Strong leadership and partnership among the many
groups now involved in transportation are necessary for the success of the transportation programs of states and metropolitan areas. In some cases, such leadership will be required to provide a fundamental re-examination of the role of transportation in the metropolitan area. This is the major challenge for transportation officials as we prepare for the 21st century.

SARAH C. CAMPBELL. The Surface Transportation Policy Project is a broad-based organization of the “watchers.” We are the groups that have traditionally been outside the process, and now I strongly believe that the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) has given us the right to come in and to sit at the table.

It is odd for me to feel that I am a watcher because I have worked at the state, federal, and local transportation levels for more than 16 years, but many people inside these agencies play the role of watcher.

It is time for us to look forward to the quality of performance and the outcomes. We must recognize that ISTEA will be different from past laws because it is not just a reiteration of the 3C (continuing, cooperative, and comprehensive) urban transportation planning process. A number of specific provisions require a more open approach.

I would like to reflect on the comments of Jack Kinstlinger. As he pointed out, many good resolves came out of previous conferences, but somehow our products did not change.

ISTEA provides a new mandate and specific requirements as well as some general requirements and choices. The specific requirements have forever opened up this process. One of the things that improves governance and will improve the outcome of our transportation processes and, ultimately, our products, is openness. This is no longer a closed union shop.

The Surface Transportation Policy Project and the American Institute of Architects recently held a conference on New Perspectives, New Players, New Programs. We did not want to use the word “products,” and we were looking for another “P” instead of a “C.” I would like to point out a few of those perspectives and a couple of the issues that came up in describing new players and old players. They are complementary to this conference and to some of Michael Meyer’s remarks about the new aspects of the process and the way we have to look at things.

One of the speakers made an important point that should not be forgotten as we think about our vision for the future: the importance of
the collective effect of our policies. The collective effect of past policies should tell us that we do not want to do that again. We do not want to go there again. We do not want to create the kind of divisiveness within our communities that resulted from many past transportation policies.

Certainly there are plenty of other factors, but any time you try to do something in isolation from the rest of the population, the rest of the population will still be affected. I think we are living with the results of some of those decisions in a way that we don’t like.

If one examines transportation statistics before the Interstate system in terms of the number of people who walked to work, or used transit, or lived close to their jobs, both land use and transportation were different. The automobile and the rush to accommodate it so completely have truly changed society. Transportation planners should examine the collective effect of the past 35 years to be able to determine where to go in the future.

Second, a number of speakers at the conference said that it is time to link clean air objectives with transportation plans. “Conformity” may be a new word in the process, but it is an important one. Another perspective that was voiced at our conference was the determination to fund the current pipeline of products. This is kind of a flip side of the other perspective.

This determination is quite understandable. If you have been living with projects for a long time, there are a lot of vested political, financial, institutional resources in those projects. An important question that must be addressed, however, is whether those projects serve the new vision and new mandates.

Another topic addressed at the conference was the need to finally figure out how to make the transportation and land use relationship work. Here we go again, but this time we really do need to figure it out.

Other participants believed that the project selection process should not be changed. There was a fair amount of hostility about that on both sides because others wanted to assert their new power now and did not want to wait through some type of logical transition phase.

In short, there were calls for change, and there were plans to go slow. I think that by the time we get through this conference we will be able to bring those different perspectives together. I think our conference served to highlight those issues, to put them on the table. Now I hope that we can use this opportunity of having a diverse group of people together to try to resolve these issues and bring these perspectives together in a constructive way.
Because one of the themes of the conference was new partners, the objective was to try to bring diverse groups together to talk creatively without hostility. By the conclusion of the 2-day conference, however, it became clear that, no matter who was speaking, only one group believed they were the old players’ group.

There should have been several of these groups. For example, metropolitan planning organizations (MPOs) had been written into the law for at least 20 years, but they believed they had been locked out of the process, coopted, bought off, or strangled by greater forces.

Transit operators said that they had been dealing from a position of financial weakness and were not sure how much had really changed with the law. They were the skeptics in the crowd.

The business community also has had a role in this process for a number of years, but were not sure what this meant. They did not know whether they were old players or not.

Although some public interest groups have been involved in the past, by and large they did not have a formal role. There was nothing that they could assert in terms of the law, with the exception of project-specific issues, particularly around environmental impact statements.

That is the group that I have represented. Some of the others (e.g., local officials) were surprised to learn that they should have been old players. They did not realize that MPOs were supposed to be composed of local officials and not be independent bureaucracies. This was news to quite a few people, who consequently thought of themselves as new players.

We have been hearing a lot from state legislators who, in fact, are quite interested. The question for all of us is whether state legislators are players or just the sugar daddies who come up with the dollars for the pork.

Another set of players is governors. The law is clear in speaking to the role of the governors, yet already we have talked about the delegation of that authority. Is that really what the Act intended? Are the governors themselves supposed to be players? State and local agencies are important constituencies. If transportation planners are to take a serious cut at the 15 considerations for metropolitan planning and the 20 or 21 for state planning, departments of natural resources, air boards, energy officials, historic preservation officers, and others will have to be involved. They have been interested in the process for a long time, but have never been able to figure out the code.
I would like to respond to Meyer's point about the need for better transportation and land use models. Frankly, current models are inadequate. Congress did not arbitrarily put a lot more money into planning and management. Let's use some of that money for models.

I know some people will not hold this view, but putting the planning money aside and using the increase in research money for intelligent vehicle-highway systems is a travesty, given that we have not yet been able to reach some other basic considerations because we do not have even basic data.

For example, in the region that I am from, traffic cordon counts every year used to be done. In 1982, the counts were changed to every 2 years. Now they are conducted every 3 years. After 3 years, important information is being missed. It is that basic.

I also think that the U.S. Department of Transportation (DOT) ought to put some fast money into appropriate models for financial planning. The new requirements are specific for both states and metropolitan areas in identifying financial resources and financial feasibility. U.S. DOT officials should also examine the administrative mechanisms that keep the playing field among the modes uneven. I am not just talking about transit versus highways; obviously, there is a long list.

Neal Pedersen from the state of Maryland told participants at our conference that one of the most difficult tasks in his job (as Maryland DOT Planning Director) is to try to have an honest multimodal plan for a corridor, given that two completely different sets of requirements and funds must be reconciled in that type of planning.

The new law provides some basis for change, but the changes should come with the administration of those programs from the Federal Transit Administration and Federal Highway Administration.

I don't think we can expect states and localities to do all of these things unless they get cooperation and support from federal administrative agencies.

We should take advantage of the fact that we have been assembled together as a diverse group and try to flesh out this vision.

It is hard to know how to get somewhere if you do not know where you are going. I think for the last 35 years there has been a clear vision, a single vision, a unitary vision by and large, that this program has followed. The new law, and I think a lot of your own interests, and certainly the interests of the speakers before me this morning, have indicated that this flexibility also means adoption and introduction of some of the diversity that we all represent.
The law gives us the opportunity. It is time for us as transportation professionals and as leaders in fields related to transportation to flesh out alternative visions for the transportation system to serve in the future.

JAMES Q. DUANE  Today, as we start on this new course, we must take a close look at the possible effects of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and not rush, as we did 35 years ago, into what will possibly be another cultural revolution.

We are asking and placing emphasis on metropolitan planning organizations (MPOs) to carry out a cultural revolution. I have a couple of questions to ask. Those of you who have transit boards, how many of your transit board members ride together to the meetings? How many of you in state departments of transportation (DOTs), MPOs, and transit authorities, and how many of your employees ride share, car pool, and ride transit?

There are 55 employees in our office. Two of them ride share. Everybody else drives alone. We are looking at a new office facility, and the primary concern of the staff is parking.

That will perpetuate what we are trying to do, in trying to reduce the number of vehicle miles traveled (VMT), and that is the overall intent, by the way. We talk a lot about all of this, but we must reduce VMT if we are to meet the goals of the Clean Air Act and ISTEA.

Let me tell you a little bit about where I am from. I am from the Ohio-Kentucky-Indiana Regional Council of Governments, to my knowledge the only tristate MPO in the nation. If you want to talk about the difficulties of trying to bring about regional economy, you should try to work in three states. I was really struck by the governance issue; we will get nothing done in transportation unless we solve the governance issue. Let me give you an example.

We meet as an MPO. The three states and their cities and counties cooperate well on transportation issues. However, the Kentucky legislature recently passed a new economic development incentive act that completely tore apart our region because it looked like it was going to attract jobs out of Cincinnati into northern Kentucky, which is the urban area. There is now a lot of animosity in the region on an issue that was generated by a state legislature. In fact, the region in the three states operates as one economic unit. It is a region. It operates as an economic unit, and it will continue to operate as that kind of unit. We must solve this governance problem or we can forget transportation. If the gover-
A third issue is concurrency. I was executive director of a regional planning council in Florida and was struck by the 7C planning process mentioned by Michael Meyer. If you want to have a real exciting life in Florida, deal with the eighth C—concurrency. MPOs will have to deal with concurrency in some form. Transportation planners will have to examine the doctrine of when levels of services get delivered to citizens relative to when new projects come in to meet them (e.g., shopping malls).

There are some old elements in the new MPO plans—land use and others. New elements include energy and socioeconomic considerations. Let me provide some concepts for new MPO plans.

They must be balanced. They must be balanced among the modes, which will be extremely difficult. They must be balanced with land use, development, and transportation considerations, and they must be balanced with social, economic, environment, and energy considerations. All those balancing acts will have to take place, and it is going to be difficult to do.

MPO plans must also be internally consistent. One transportation policy cannot negate or affect another policy within the region. Transportation planners must ensure that no element, policy, or direction negates or significantly changes another policy.

The plans must be conformed to fiscal constraints and Clean Air Act constraints.

The plans must be balanced. That is new to us. They must be internally consistent. That is completely new to MPOs. They must meet the requirements of, or conform to, ISTEA and the Clean Air Act.

I came to an MPO in which local officials did not know they were players in the transportation planning process. They have now learned their role and are attempting to open up the process.

MPOs are where all of this is going to happen. I have heard a lot of talk about MPOs, but as Sarah Campbell mentioned, few MPOs were represented at the Surface Transportation Policy Project meeting.

MPOs have been left out in the past, and they continue to be left out. The biggest issue facing MPOs today is that they are the new partner, the most active partner, the partner that will integrate all the requirements of the Clean Air Act and ISTEA, yet the states and federal agencies have not let us in as that new partner. If they do not let us in, we are not going to get this job done.
MPOs are the new partner. They are going to have to be allowed. The big bureaucracy is going to have to flex a little bit and let them exercise some of the experimentation that is necessary to perform this process. They must be given some freedom to do this. Don’t constantly beat them to death with rules and regulations or it won’t happen again.

The Ohio, Kentucky, and Indiana DOTs all come together through the overall work program of the regional council of governments. Recently we worked on the program under the context of ISTEA, and the turf protection that was going on around that table was incredible. I had been told that would happen under ISTEA: all the players in the game were jockeying for position. We cannot afford that. The region is a nonattainment region that must meet air quality requirements. If we play these games, we will not meet the standards.

MPOs are old players, but they are also the new player. The MPO boards will all require new representation. Virtually all of them are not properly constituted to perform the job. Most of them will have to be taken apart and put back together.

MPOs must work with new players and special interests that they have never dealt with before. For most MPOs, that will be a difficult chore.

Another problem for MPOs is whether local elected officials will, as MPO members, make the necessary regional decisions. It is extremely tough when local elected officials have to make regional decisions, and in some cases, those regional decisions will go against their own local jurisdictions. It will certainly make for exciting board meetings.

The down side of this is that if MPOs do not carry out this responsibility—and I am talking about governance issues—they will be replaced. I truly believe that if we fail to step up to the plate, we fail to have the representation, and we fail to make the decisions, then certainly the federal and state governments will exercise their option and find a new player who will.

MPOs must reconstitute themselves, get new representation, and deal with the new players at the table, or they will be left behind. MPOs received the opportunity to influence decisions through this act. I hope we don’t mess it up.

I believe that we can do the job. I have great faith in MPOs and regional councils of governments, but the only way it will work is if we are accepted and respected by the federal and the state governments, those who traditionally have given lip service to MPOs as being the
strong partner and the key element but have not allowed them to play that way. If we are allowed to be that partner, we can carry it out.

GLORIA J. JEFF As a representative of the Michigan Department of Transportation (DOT), I am excited about the opportunity for new inclusions in the planning process.

One thing that participants at this conference have agreed on is that transportation planning under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) is no longer "business as usual." How do we begin to not get hung up on the old business, but get into the new business, the new opportunities and challenges?

The Clean Air Act Amendments (CAAA) of 1990 and ISTEA are the most significant pieces of social engineering to occur in the last 200 years. They will cause people to modify their behavior in such a way that they will begin to do the "right" things even though they don't want to. There are tremendous challenges for state DOTs and for all involved in the process.

A part of me wonders about the formats that have been used as we have talked about ISTEA. The "new kids on the block" have given their perspective, as have metropolitan planning organizations (MPOs) and state DOTs. Have we not begun to perpetuate business as usual? We could be focusing on how to integrate the processes and how to work better together.

We should begin within the context of talking about statewide transportation plans that provide a vision of a transportation network that is not modally constrained. How do we go about moving people and goods? How do we move from being wonderful caretakers of transportation systems to managers of transportation systems? How do we go about the process of identifying where we want to end up? What is the vision? How does transportation fit into that vision of what the state or the region or the city is going to be?

It is not a question of whether we have protected the natural environment, the fish, the fauna, the birds, and the endangered butterflies but of how that all works together with the social and economic environment of humans.

Plans for bicycle pathways are unimportant if they are not part of a connected vision. We can have all the bike paths in the world, but the fundamental issues of what happens to people in urban areas may not have been addressed.
Recent examples show what happens when transportation professionals ignore the fundamental problems of what happens in urban America and instead focus on getting a bus out on the street, pouring concrete, and protecting their roles in the planning process in the MPO.

We forgot, and it is indicative of our narrow focus, that one group that is not on this panel is the customers. We have talked about those who must implement the process and those who are concerned with the impact on the natural environment, but we have not discussed or included the customers in the deliberation. We have not included those who are dependent on the quality of our transportation system to move goods and transport them to work, play, and medical and other essential services. It is fascinating. In the midst of the discussion today, no one has talked about one of the critical aspects of ISTEA—the new requirements for public involvement.

It is not enough for those of us in the planning and transportation industry to sit around and talk candidly among ourselves. Now we must go out and ask members of the public what they want, or, better still, involve them in project development. We must include not only elected officials, but also representatives of community organizations that deal with the fundamental problem of transporting people from the city to jobs in the suburbs. We must include representatives of community organizations who have become frustrated with the bureaucracy and have bought half a dozen vans to transport people back and forth because the transportation profession has let them down. Meanwhile, transportation professionals have spent volumes of time on who does what, what is the appropriate role for this player, and who is going to watch for what.

State DOTs must establish a strategic leadership role by pulling together the people who should be involved in establishing a vision for transportation in the state. We must do it by facilitating a forum in which everyone who is involved in the process examines not just the technical aspects of identifying data and conducting the analyses, but also customer desires (not our perception of the customers’ needs).

If customers have not been included before that point in establishment of the vision, transportation professionals may well be collecting data and performing analyses that have nothing to do with what the system must deliver. The private sector must be included in this process.

Michael Meyer hit on it well when he talked about institutional capabilities in the context of issues of turf, process, and substance. I suspect that the issue of substance has arisen in almost every area of
expertise. Unfortunately, integration of these various areas of expertise has not been discussed.

In listening to the comments today, I am challenged that we recognize the tremendous opportunities that we have, and I am uplifted that we have already begun to limit ourselves to those things that are feasible.

Instead of discussing seven management systems, we have talked about the six that are in the law. There is a seventh one that is critical, which addresses how we integrate the other six management systems and the long-range plans. Do we simply have expert systems that address pavement, managing safety, or bridges?

We need to move past the profession of transportation and become active in the issue of how transportation fits into society as a whole.

My challenge to you as we examine the issues at this conference is to not get hung up on what we as technical experts, providers, and implementers of the transportation policy have to do, but recognize that there are customers that must be served, whose needs must be determined and addressed.