

INTERMODALISM: THE CHALLENGE AND THE PROMISE

By

Accordingly, I shall first discuss the factors that make intermodalism an ever more important element in transportation. Then I shall turn my attention to the state of the i os8rani81 6s8r the state of ths7075409re im

for new approach to the planning of transportation systems and its further development is inevitable for all countries, regardless of the quality and efficiency of the various modes, because domestic and international pressures are creating a need for such a system.¹

To begin with, it is obvious that the existing infrastructure in the U.S. and in many other countries is being strained to the limit and that it will be no easy matter to expand the existing system. The demand for both passenger and freight transportation continues to grow steadily, placing increasing pressures on

* Dr Joseph S. Szyliowicz is the Founder of the Intermodal Transportation Institute and Professor in the Graduate School of International Studies, University of Denver.

¹ These are discussed by R. Alt, P. Forster, and J. King, "The Great Reversal: Information and Transportation Infrastructure in the Intermodal Vision" in National Conference on Intermodal Transportation Research Framework (Washington, DC: Transportation Research Board, 1997), pp 36ff. Hereafter SITRF.

ports, airports and highways. For example, while the population increased by about 20% between 1977 and 1995, the number of domestic trips increased by 92%, of international trips by 131%, in the same period.² Future projections suggest that this demand will continue and even accelerate. For example, it is estimated that freight traffic will increase by an estimated 21% by 2006.³ Accordingly, policy makers in governmental and corporate organizations are paying renewed attention to rail travel for passengers and to moving freight through truck/rail combinations. Their goal is not to minimize the existing modes but to leverage the enormous investments that have already been made. Integrating the modes and using each to its best advantage is a strategy to optimize the existing resources and to create new capabilities.

A second major driving force is the nature of modern economic systems, which are characterized by increasing pressures to reduce costs by increasing productivity and reducing inefficiencies. In the search for ways to do so, attention naturally becomes focused on the ways in which transportation is integrated with the production process. Hence, such developments as “just in time” production have become commonplace as businesses seek to reduce inventory and other costs. Now suppliers have to meet the needs of their customers in new ways, ways that place new demands on transportation systems. Passenger transportation is also subject to similar pressures, as people demand ever faster and more reliable travel service.

These developments are taking place on a global scale as resources and markets are becoming

rkei2s6.9808 Tm(e)Tj1i s(rkeTrahg c64 -00g1ouese devw0 17 Tm2a9a)To49 c12.35arMCID 7 12 Traderj hareupiso /

emerged. Concomitantly, important technological innovations, such as double stack trains, further spurred the revolution whereby air, ship, rail and truck became intertwined.

On the passenger side, deregulation resulted in an explosive growth in air travel and tourism creating, in the process, well known problems of air traffic congestion and access to airports but modal integration lags well behind developments in the freight sector and stands in sharp contrast to the European scene. The last major new airport built in the U.S., the \$5 billion Denver International Airport, does not have a transit link. The contrast with Europe is striking. Passengers using Charles de Gaulle airport in Paris have access to both a metro station and a high-speed rail station. Similarly, Frankfurt airport is directly connected to the local underground and intercity rail. Many individuals and groups are seeking to create a passenger intermodal system in the U.S. that will be as effective and efficient as the European one. They anticipate that such a system will be based on a high-speed rail network that is linked to other transportation modes through intermodal terminals that provide travelers with easy access to several modes. However formidable barriers will have to be overcome before this goal is achieved.

Social concerns are also influencing the drive towards intermodalism for worries about the environment and with the social costs of existing transportation systems are evident everywhere. Transportation is now widely viewed not merely in traditional economic terms but in terms of its sustainability, in terms of how it impacts environmental and ecological systems as well as the society as a whole. Because of such concerns, it is today practically impossible to envisage, in the U.S., a program to greatly expand the highway system

various actors as well as the barriers and obstacles, which hindered its development. Accordingly, several important conferences and commissions were convened to study and discuss such issues. Some of the most important were:

The National Commission on Intermodal Transportation (1994)

National Conference on Intermodalism:

explicitly the externalities of transportation. It is possible to develop a system that is safe, efficient, flexible, intelligent, international, and inclusive but which does not promote sustainable development for

overlook the need for persons with the requisite skills to deal with the new technologies which has been revealed in a series of studies sponsored by the USDOT to determine the existing level of professional capacity in ITS. These essentially demonstrate that agencies need greater awareness and understanding of ITS and that many professionals do not yet possess the necessary skills.¹⁴

In many respects these are similar to those required by professionals working in intermodalism. Above all the ability to deal with technological innovations is required, for a high rate of technological change continues to sweep intermodalism but most individuals and organizations are not oriented towards technological innovation. In addition to training people to deal with new technology, there is also a need to develop a new culture within transportation organizations, one that is hospitable to innovation.

D. Coordination and Integration

In addition, on both the passenger and freight side, the effective use of the new technologies requires a

This problem is also evident at the state level, particularly in the relationships between the state Departments of Transportation and metropolitan planning organizations. ISTEA increased the power of MPOs but these organizations often possess inadequate staff, tools, and experience to promote intermodalism, even though they usually understand the necessity for such a system in their regions. Hence, they possess a different perspective from that of state DOTs that often remain oriented towards highways so that conflicts often occur over the priorities that should be allocated to various projects. The state DOTs, however, tend to emerge victorious for they control most of the funding for transportation. Creating genuine partnerships between these agencies has proven very difficult because each has its own interests, culture, resources, goals, and political alliances. Nor can one overlook the degree to which cooperative planning efforts are an innovation so that those seeking to work together have limited experiences to draw upon. Moreover, land use and transportation are closely related but different agencies have jurisdiction over the former so that even more actors have to be involved in any meaningful attempt to achieve an integrated system at any level. And, freight issues are commonly slighted because most agencies oriented towards passengers. The need to resolve this complex of issues is widely recognized but recognition has not yet led to resolution.

Aggravating the problem of modal relations are the differing private/public sector perspectives and the public attitudes towards new transportation projects. Not only is the private sector fragmented and competitive, it possesses a different planning perspective from that of the public sector, being oriented towards the short term rather than the long term. Nor can one ignore the position of labor unions, which often view intermodalism negatively because the new arrangements often mean a loss of jobs. Furthermore, many intermodal policies and projects are regional in scope and cover several states or urban areas, which usually involves extensive negotiations between many governmental actors for seldom does a single institution administer the entire area.

The need is obvious -- to move towards cooperative arrangements and partnerships. But this is easier said than done for the different actors must trust each other. Unfortunately trust is in short supply because of the historic conflictual relationship between the private and public sectors and between labor and management and, indeed, between governmental institutions as well. Incentives for cooperation and coordination between various actors and for people to interact intermodally would be very helpful but, at present, there are, at best, only limited rewards for such behavior.

F. Laws and Regulations

Rather than positive incentives, there are numerous regulatory and legal barriers. Despite the great degree of deregulation which has taken place in the U.S. and is underway in many other countries, and which facilitated the emergence of intermodalism, many regulations and laws still hinder the development and implementation of intermodal policies and projects. It is generally acknowledged that there are numerous unnecessary, inconsistent, and complex regulations not only at the Federal level but also at the State and local levels as well.

G. Infrastructure

If a better intermodal system is to be created, serious infrastructure problems will have to be resolved. The most important of these involves eliminating existing bottlenecks and building linkages between modes in the form of the nodes where the modes come together, namely freight and passenger terminals.

The capacity of the existing freight terminals is, in many cases strained and new ones are urgently required. Building such facilities, however, is no easy matter. There are many reasons for this state of affairs (most of which have been discussed above); particularly noteworthy are the many actors (public and private) involved, the tendency by MPOs to favor passenger projects, the public concern with externalities and difficulties in securing the necessary financing.

H. Financing

Obtaining the funds to resolve infrastructure problems has proven to be extremely difficult so that financing is a major impediment to the creation of an intermodal system. Several reasons have been identified for this state of affairs. Many localities confront a shortage of funds and in some cases even highway projects are being neglected, although funding is historically allocated by modal agencies and highways have always been favored. Even when funds are available, these are often limited to specific projects, usually modal ones, so that intermodal projects, which tend to be large and expensive cannot

proprietary information to governmental agencies. Thus there is a lack of reliable information and there is a great need to develop and disseminate reliable and timely data and data bases for passenger movements and for freight planning in such areas as shippers, receivers, and transportation companies, commodity flows, and their economic value. Such information, especially that dealing with freight movements is urgently required for planning purposes and to legitimize needed investments. The freight data situation is especially serious for the kind of information, methodologies and, simulations that are utilized for planning passenger transportation are not available for freight. Specific priority areas include such topics as methodologies to assess proposals requiring government involvement, measuring the r f

Although these are serious obstacles to the development of a true intermodal system in the U.S. – and in many other countries -- important steps have been taken to create such a system. However, it is necessary to build upon what has been accomplished if these efforts are to be successful. In order to do so certain conditions will have to be met. The first and most basic is the issue of trust between the key actors. The time has obviously come to replace the conflictual relationship that has existed between government, industry, and labor for so many decades with a new culture that recognizes the common interests that they share and promotes win-win situations so that all can benefit from intermodalism. Although the situation differs in various countries owing to particular histories and cultures, the issue exists in many places and has obvious international implications. Similarly, the development of appropriate intermodal policies, projects, and structures deserves to be a universal priority.

Achieving these goals will require leadership. The call for leadership is often a substitute for specific recommendations. However, in this case, it should be clear that an elite consensus must be forged on the need for a common intermodal vision and that this consensus must be supplemented by widespread support for the vision among all relevant publics including elected officials, community leaders, the private sector, public interest groups, the media and the public at large. There is an obvious need to educate these and many other actors at all levels to the intermodal vision.

Nor can one overlook the urgent need is to develop organizations that are committed to intermodalism and possess the characteristics and human and financial resources for effective intermodal management and planning. In other words, the present policy making structures with their modal emphases deserve careful scrutiny and, possibly, reorganization. This is certainly true of the U.S. case; many have expressed concern with the modal structure of the USDOT and with weaknesses at the state and local

These cases highlight the complexities involved in planning for intermodalism. To cite but three obvious obstacles: 1) Intermodal projects are usually mega projects with major impacts upon the environment, social, economic, and ecological, so that they often generate widespread public opposition, 2) intermodal projects often involve many, often conflicting, agencies and actors, 3) forecasts are seldom marked by high degrees of accuracy, a phenomenon which raises many issues, including ethical ones.

Under these conditions the traditional “Rational Actor” approach to transportation planning is inappropriate and it is necessary to consider a new paradigm. This approach recognizes that a focus on optimal efficiency is not efficient, that there are numerous advantages to incorporating redundancy, developing prompt and precise feedback mechanisms, maintaining flexibility and creating organizational cultures that emphasize learning and adaptation. While accepting the rational model as a useful organizational framework, it is also essential to appreciate the role of powerful actors and the importance of consensus, of identifying appropriate local project selection criteria and facilitating widespread and productive local participation. Such an approach is particularly relevant not only because of its relevance to specific project decision making but because the future of intermodalism rests, ultimately, upon the emergence of a popular consensus and the only way to create such a consensus is through the development and implementation of planning and policy approaches that permit people to participate in a genuine and meaningful way. Although such considerations may not apply to all countries since decision making procedures and political cultures vary widely, they are certainly relevant to democratic societies and the global trend towards democratization suggests that peoples everywhere are demanding an increasing voice in shaping public policies in all sectors, including transportation.