

Investing in America's Future

The Need for an Enlightened
Transportation Policy

ITI

University of Denver
Intermodal Transportation Institute

September 2004

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ITI, the Intermodal Transportation Institute at the University of Denver, is an interdisciplinary unit whose vision is to be recognized internationally as the leading academic institute on intermodal transportation systems through educational programs, research projects, and outreach activities.

ITI combines the substantial faculty expertise and administrative support of the University of Denver with a strong and effective Board of Directors that consists of the leaders and the pioneers in the intermodal transportation industry, passenger and freight.

ITI, partnering with industry, government, and the public, is committed to education, research, and outreach programs that promote the development of a seamless, 21st century, North American transportation system for both passengers and freight.

ITI offers a graduate degree program in intermodal transportation management that focuses on preparing the next generation of passenger and freight transportation leaders who will have a positive influence on the business of intermodalism.

ITI acquired the 60,000-volume historical collection of the Interstate Commerce Commission Library and the 3,500-volume US Railway Association Collection and collaborates with the National Freight Transportation Library, Inc. (NFTL), to preserve the personal and corporate collections of the freight and passenger transportation industries. The Stanton P. Sender Collection of Transportation Legislative History is an example of the collaboration of NFTL and ITI and this special personal collection is located in Penrose Library at the University of Denver.

ITI initiated its Intermodal Founding Fathers Oral History Program at the Intermodal Founding Fathers of North America Conference on 27-29 July 1999. This historic conference provided the backdrop for more than 40 industry pioneers to be interviewed as a part of this important oral history program. This program will preserve the rich history of the intermodal freight transportation industry for posterity, research, and educational purposes. The conference presentations were published in the *Transportation Law Journal* (28:3).

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PRELUDE

COMMISSIONING TRANSPORTATION TROUBLE

Although airline passengers seem to read a lot of bestsellers, I have not seen one fellow traveler with a 9/11 Commission Report. Purportedly the nation's number #1 best-selling, nonfiction paperback, the report is probably not a relaxing read at 35,000 feet.

But it is very interesting reading. And, while I do not seek to minimize the threat of terrorism to our nation – nor the impact of 9/11 tragedy – I was struck by the potential for another commission, in several years, to write many of the same findings about the transportation network in our country.

“The 9/11 attacks were a shock, but they should not have come as a surprise.”

We can make a similar claim if we find our transportation system in gridlock several years from now. Today, the warning light is flashing red in most transportation modes. The USDOT Federal Highway Administration predicts that highway traffic will increase by 24 percent in the next decade and by 53 percent over the next two decades. Congestion peaks during rush-hour travel times have also surged during the past two decades. It is unclear how ports will handle the envisioned tripling of international trade in the near future. Airports are increasingly saturated and railroads are struggling to handle business growth.

“The most important failure was one of imagination. We do not believe leaders understood the gravity of the threat. The terrorist danger from Bin Laden and al Qaeda was not a major topic for policy debate among the public, the media, or in Congress. Indeed it barely came up during the 2000 presidential campaign.”

Today, transportation usually enters the public's mind only when something goes wrong. When the USDOT Federal Aviation Administration shut down the commercial airline industry for three days after 9/11, tens of thousands of passengers were stranded across the country. This event revealed how dependent America is on commercial aviation. When US West Coast ports were closed for ten days in October 2002, the economic impact – up to \$2 billion a day – was immediate and widespread. This event highlighted the increasingly significant role of international trade and transportation in our economy. Both events exposed a system lacking in redundancy.

“Before 9/11, the United States tried to solve the al Qaeda problem with the capabilities it had used in the last stages of the Cold War and its immediate aftermath. These capabilities were insufficient. Little was done to expand or reform them.”

The traditional solution to transportation problems has been to simply build more. However, it is unlikely that we can continue to add infrastructure at an unfettered pace. Not only is adding capacity increasingly expensive, but it also provides only a short-lived benefit. Demand increases to fill new capacity, recreating demand for yet another cycle of infrastructure investment. ISTEA put forth a vision of intermodal transportation in 1991, which, to date, remains unfulfilled.

“The missed opportunities to thwart the 9/11 plot were also symptoms of a broader inability to adapt the way government manages problems to the new challenges of the twenty-first century.”

The past two decades of transportation success obscure a once-in-our-nation’s-lifetime windfall. Prior to deregulation, carriers had protected business segments in exchange for maintaining excess capacity, which could be called upon in times of national emergency. Steady traffic growth since 1980 consumed this buffer – which could no longer be supported in a deregulated free market. The capacity absorption, and the resulting asset rationalization, has brought supply and demand into equilibrium. Our transportation network no longer enjoys the luxury of overcapacity.

“The intelligence community struggled throughout the 1990s and up to 9/11 to collect intelligence on and analyze the phenomenon of transnational terrorism. The combination of an overwhelming number of priorities, flat budget, an outmoded structure, and bureaucratic rivalries resulted in an inefficient response to this new challenge.”

Transportation is an asset-based, network-operating business. Rather than optimize the total network, though, government policy – managed through a series of individual modal silos – results in system sub-optimization in a piecemeal basis. Not only are modes administered individually, but passenger and freight are treated distinctly. A splintering of executive and legislative oversight among national, state, regional, and local entities exacerbates the disunity.

“The U.S. government has access to a vast amount of information, but it has a weak system for processing and using what it has.”

The current “state-of-the-art” in transportation data compilation is a Commodity Flow Survey, conducted every five years by the USDOT Bureau of Transportation Statistics (BTS). This exercise – available for use years after the fact – poorly traces shipments across modes and largely ignores international movement as well as the impact of transportation outsourcing and cargo rehandling between point of origin and ultimate destination.

“[We call for] unifying the many participants in the counterterrorism effort and their knowledge in a network-based information sharing system that transcends traditional governmental boundaries.”

Many industry experts have despaired of getting the USDOT to address its shortcomings because BTS seems intent on preserving the *status quo*. If we are to develop meaningful information, we might consider doing so through the Department of Homeland Security, which has shown an ability to address complex transportation data reporting requirements in a very short period of time.

“The legislative branch adjusted little and did not restructure itself to address changing threats. Its attention to terrorism was episodic and splintered across several committees.”

The report classified congressional oversight as “dysfunctional.” A combined, joint committee or a single committee in each house was proposed. Such a radical exercise might also well resolve the Gordian knot that hamstring transportation oversight. While addressing this problem, it would be useful to also consider the nexus of energy and environmental issues related to transportation. The disjointed methods used to create today’s transportation policy by mode are not always logical, as transportation and energy policy are formed in separate vacuums.

“Since 9/11, about 90% of the nation’s \$5 billion annual investment in transportation security has gone to aviation, to fight the last war.”

Permeable borders and immigration controls were specifically identified as shortcomings, and the report recommended that the government “develop strategies for neglected parts of the transportation security system.” Although bemoaning the small number of containers inspected at ports of discharge has become a popular sound bite, nobody has rationally balanced the conflicting challenges of port security and infrastructure. For that matter, the government has failed to identify (and guarantee) funding for these new requirements.

“Base federal funding for emergency preparedness solely on risks and vulnerabilities, putting New York City and Washington, D.C. at the top of the current list. Such assistance should not remain a program for general revenue sharing or pork-barrel spending.”

When ISTEA was passed, the “E” stood for “efficiency.” Six years later, the “E” stood for “equity” – states were guaranteed to receive close to what they had paid into the trust fund. Highway-funding legislation has long been associated with pork-barrel funding. Pending legislation may be no exception. While traffic congestion may be widespread, it is often relative. Certain areas of our transportation network have become critical bottlenecks that must be recognized as a national priority – even if it means certain states receive a disproportionate amount of funding. It only complicates matters that many of these states (California, New York, New Jersey, Illinois, and Washington) factor in as “blue” in today’s political calculus.

“What should Americans expect from their government?”

In responding to the 9/11 findings, government leaders have taken the position that the day’s events were not predictable – and that had they been predicted, the government would have taken the necessary precautions. In his recent book, *Heads Up*, Kenneth McGee identifies 9/11 as a surprise event – catastrophes that occur because information is not monitored, captured, or analyzed.

I doubt whether a subsequent transportation crisis could be considered such a surprise. In July 2004, a key Federal Reserve survey on economic conditions cited transportation problems as possible economic inhibitors. Rail bottlenecks, trucking capacity shortfalls, and transfer of rising energy costs to shippers are just some of the problems cited.

In response to the 9/11 Commission Report, Congress has rushed to consider the recommendations. Possible improvements have also become an issue in the presidential race. The commission members have not been bashful in pressing for enactment of their recommendations. James R. Thompson, the former Republican governor of Illinois, warned sharply of the practical and political consequences of inaction. “If I were in the Congress of the United States, I would want to make sure that I was protected from the accusation that oversight funding authorization and appropriations were not adequate.”

“Everyone was caught unawares by Sept. 11,” Thompson added, “the President, the Congress, the American people, law enforcement agencies. Blame, if there’s blame, has to be spread all across the board, because the American people never demanded more or better. But now we’ve been warned, specifically warned. And now we’ve been told by everyone, from the President of the United States on down, it’s going to happen again. And if it happens, and we haven’t moved, then the American people are entitled to make very fundamental judgments about that.”

Thompson’s words are in stark contrast to surface transportation legislation. On 15 July 2004, Congress passed – and the president subsequently signed – the fifth extension of the current federal surface transportation programs through the end of September 2004. This simply extends the

status quo and does nothing to recognize the pressing issues that threaten to cripple our economy. It hardly seems the action of a concerned government focused on critical transportation problems. We can only hope that future costs are not catastrophic to our nation.

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I. AN EFFICIENT TRANSPORTATION SYSTEM IS ESSENTIAL FOR ECONOMIC GROWTH

The transportation industry is among the most important foundations for the US economy. It brings producers and consumers together, creates new markets, stimulates innovation and productivity, and enhances regional and national employment and prosperity. A nation's transportation industry also provides basic mobility for its citizens, enabling them to enjoy a wider array of employment, cultural, and social opportunities. For these reasons, nations worldwide have invested significant public and private resources in the transportation sector.

The United States has enjoyed its longest sustained periods of economic growth during market expansions made possible by the building of transportation infrastructure. The US economy grew robustly during the late 19th and early 20th centuries as the canal and railroad networks were dug, laid, and expanded. Highway and airport construction dominated the last half of the 20th century, enabling the US to enjoy its largest – and longest – prosperity boom. The Interstate Highway System, among the most expensive public works projects ever undertaken, served as a dramatic catalyst for economic growth.

II. GLOBAL TRADE AND PROSPERITY IS AN INTERMODAL SUCCESS STORY

The advent of transporting cargo in containers, which was introduced in 1956, made global trade a reality. Most of the world has been transformed by containerization. The fulfillment of Moore's Law (predicting the microprocessor revolution) has delivered constantly improving technology that is significantly cheaper than its predecessors. Still, engineering is one thing, and manufacturing and delivery are something else.

Early electronics manufacturers first wanted to locate in the Caribbean, but the "Yankee Go Home" attitude, prevalent at the time of the Vietnam War, persuaded them to opt for Asia – considered at the time to be more receptive to American business. The subsequent computer revolution could only have been accomplished by a reliable and cost effective transportation solution. Containerization and intermodal services were key components of the subsequent Asian economic miracle.

The development of the doublestack train (DST) in the early 1980s represented another significant innovation that provided faster transit with reduced transportation expense, and it served as an important force in the import boom that started as the US economy emerged from the early 1980s recession.

III. THE INFRASTRUCTURE CHALLENGE HAS BEEN OBSCURED BY PAST WINDFALLS

Transportation was a catalyst as the United States evolved from a 19th century agricultural economy, through a 20th century industrial economy, and into a 21st century service and global economy. However, America's long and successful ride to prosperity is threatened by a transportation infrastructure incapable of meeting future requirements. The interdependent network of roads, bridges, and terminals is growing increasingly antiquated, congested, and disconnected,

and, therefore, incapable of providing the productivity and prosperity support upon which the nation has depended for the last century and a half.

Unfortunately, most citizens fail to recognize that the past two decades represent a once-in-a-lifetime windfall. Prior to deregulation, overcapacity was a specific public goal. Carriers had protected business segments in exchange for maintaining excess capacity, which would be called upon in times of national emergency.

Since the early 1990s, steady traffic growth was accommodated by this buffer – which could no longer be supported in a deregulated free market. This capacity absorption, accompanied by asset rationalization, has brought supply and demand into equilibrium. However, the network no longer enjoys the luxury of overcapacity. The excess capacity is now consumed.

IV. CONGESTION JEOPARDIZES ECONOMIC GROWTH AND DEPRIVES A NATION OF WEALTH

Congestion creates delay; delay creates waste. Congestion assaults a nation's wealth by:

- Corroding private-sector productivity;
- Increasing fuel consumption and environmental pollution;
- Creating insatiable demands for public investment; and,
- Contributing to additional death and injury on the roadways.

Congestion reduces transportation productivity. Whether on highways, in rail yards, at seaports, in airspace, or at airports, congestion slows the delivery of goods to market, resulting in economic waste. For passengers, the waste is just as extensive. Since 1970, the US population has increased by 38 percent; but highway travel, during the same time period, increased 148 percent.

The US Federal Highway Administration predicts that the number of vehicle-miles traveled on public roads will increase by 24 percent over the next decade and by 53 percent over the next two. The average driver already spends nearly 40 hours a year mired in traffic – with extremes many times that figure. According to a report by the Texas Transportation Institute, rush-hour travel times have tripled in the past two decades.

Congestion costs Americans annually between \$70-78 billion in wasted fuel and 3.5 billion hours in lost productivity. Congestion slows the movement of workers to jobs, wasting time, diluting productivity, creating frustration, and denigrating the quality of life. For most Americans, the automobile is the second most expensive investment they will ever make; yet, its utility is circumscribed by congestion.

V. Transportation, Energy, and Environmental Issues Are Interrelated

Transportation relies on a fuel source that is highly pollutive and expensive, originating in a part of the world that appears chronically unstable. The US transportation industry is the largest in the world – consuming almost 20 percent of the world's oil production. The annual movement of 5-

trillion passenger miles and 4-trillion ton-miles consumes almost 70 percent of the US petroleum supplies. Transportation is 96 percent dependent on petroleum. In addition, most petroleum consumed comes in the form of high-end refined products.

Congestion delays increase fuel consumption annually by 5.7 billion gallons along with increased environmental degradation. America's addiction to fossil fuels has been the largest contributor to the US balance-of-payments outflow since the 1970s, having a corrosive impact on US wealth and the value of the dollar.

The nexus of energy and environmental issues confront all Americans. Transportation – and our mobile economy – run on energy and impact our environment. And they are key components of our nation's economic success. The disjointed methods used today to create transportation policy – primarily by mode – are exacerbated because transportation and energy policy are formed in separate vacuums.

VI. A FRAGMENTED MODAL SYSTEM INCREASES CONGESTION

Transportation is an asset-based, network-operating business. However, rather than optimize the total network, it is sub-optimized on a piecemeal basis in a series of individual modal silos. Modes are administered individually while passenger and freight are treated distinctly. Executive and legislative oversight is splintered among national, state, and local entities.

Goods and people in movement are like water in motion. Gravity pulls water through whatever opening it can find. But the problem of a fragmented modal system is that movements among modes are like clogged drains. Where they exist, the intermodal connectors are few and often poorly designed to facilitate flow.

A seamless transportation system will facilitate passenger and freight flows between and among modes and into whatever mode will get them to destination most efficiently and economically. The deprivation of choice mandated by modal segregation enhances congestion, decreases productivity, increases resource consumption, and exacerbates pollution.

VII. MODAL FRAGMENTATION JEOPARDIZES NATIONAL SECURITY

In the last several years, the US military has deployed troops and materials to Afghanistan and Iraq – in addition to its myriad responsibilities. These military movements were not always so smooth. During World War I, railroad cars were backed up 400 miles, from Bayonne to Buffalo, as the nation strove rapidly to deploy the US Army to France. Our military leaders are currently refining their vision of what our armed forces will look like now and into the future. Whatever the outcome, rapid deployment of personnel and supplies will be paramount. Suddenly a question arises about whether or not adequate transportation infrastructure exists to manage this movement.

As the venue for the congregation of people and goods in large numbers, transportation hubs and bottlenecks are also vulnerable to assaults by the enemies of the US, determined to murder and terrorize Americans and cripple their economy. Thus, in addition to efficiency and productivity, safety and security are essential.

VIII. PEOPLE BECOME AWARE OF TRANSPORTATION WHEN THINGS GO WRONG

Like bad officiating, transportation usually enters the public's mind when something goes wrong. On a daily basis that can be drive-time congestion. However, twice in the recent past, major events have demonstrated transportation's leading role in our nation.

After the tragic events of 9/11 in 2001, the US Federal Aviation Administration shut down the commercial airline industry for three days, leaving tens of thousands of passengers stranded across the country. They could not get home nor could they fulfill their travel plans. Those three days revealed how dependent America is on commercial aviation for intercity transportation, how little modal redundancy there is for moving passengers between cities, and how disconnected most airports are from any transportation alternative but the automobile.

In October 2002, the US West Coast ports were closed for ten days due to an employer lockout in a labor dispute. The economic impact was immediate and widespread. The daily cost to the economy was estimated at upwards of \$2 billion from lost sales and manufacturing shutdowns. Once the ports returned to work, it took months for the transportation system to return to normalcy.

If the United States is to continue to be a leader in the 21st century global economy, it needs a robust, integrated, transportation system to move passengers and freight throughout the nation (and the planet) quickly and efficiently. Such a system needs to be resilient in the face of possible disruption(s).

IX. WHY HAS US TRANSPORTATION POLICY FALLEN BEHIND?

Congress promulgated its first national transportation policy in the Transportation Act of 1940, which called upon the Interstate Commerce Commission, the major transportation agency of that era, to preserve and promote the inherent advantages of alternative modes of transportation. Yet the inherent advantages of each mode in terms of speed, efficiency, cost, and reliability cannot be enjoyed unless shippers and passengers have convenient access to them.

It took half a century to get there, but the policy objectives of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and its successor, the Transportation Equity Act for the 21st Century of 1998 (TEA-21), were commendable. Their mandate was to replace the fragmented modal systems into a single, integrated, seamless, intermodal transportation system. More than 200 sections of the US Code, and the most important provisions in congressionally-expressed transportation policy, emphasize intermodalism as an important means of reducing congestion and pollution, of enhancing efficiency and productivity, and of reducing waste in public transportation expenditures. Unfortunately, these policies have been largely ignored.

In part, their failure is due to traditionalism. Although most state highway departments have changed their names to state "transportation" departments, they are still dominated by bridge and asphalt engineers. The US Department of Transportation (USDOT) itself is organized along modal lines – in administrations for highway, railroad, transit, and aviation, for example, as are congressional committees by and large. Though federal funds are theoretically "flexible," in fact, most funding is both earmarked for modal spending and oversubscribed.

X. WE CANNOT BUILD OUR WAY OUT OF THE PROBLEM

It is unlikely that we can continue to add infrastructure at an unfettered pace. Although congestion creates demands for investment, traditional ways of investing public dollars provide only marginal improvements in capacity. Adding lanes to congested Interstate Highways in urban corridors or adding terminals and runways at congested urban airports is enormously expensive. Ultimately, it may prove a short-lived benefit as demand increases to fill new capacity, recreating demand for yet another cycle of infrastructure investment.

Unlimited funds would not solve the problem. We are running out of suitable places to build. Many existing facilities are constrained from further expansion by adjacent development and land use. Environmental concerns and reviews are much more extensive, and the growth of “NIMBYism” (not in my back yard) has become a frequent obstacle to transportation construction.

Beginning with ISTEA in 1991, Congress called upon federal and state transportation agencies to establish an intermodal system to replace the antiquated and fragmented modal systems. Unfortunately, more than a decade after ISTEA’s promulgation and despite being largely reaffirmed in TEA-21 in 1998, this enlightened policy of enhancing integration of, and connectivity among, modes has remained an unfulfilled dream.

XI. WHAT SHOULD CONGRESS DO TO REMEDY THESE PROBLEMS?

If expressions of public policy could improve the US transportation system, ISTEA and TEA-21 would have done that, for no better transportation policies have been articulated for these times. Yet very little of the \$373 billion they authorized for transportation infrastructure was spent implementing the intermodal policies they espoused.

Intermodalism should be recognized in the forthcoming transportation authorization bill as an important, if not essential, ingredient to solve the nation’s transportation needs and remedy the problems of congestion, pollution, and security vulnerability. But the forthcoming highway reauthorization bill must go beyond the mere recitation of policies to mandate specific action.

As the gateways to an increasingly global market, transportation corridors are the arteries through which everyone and everything everyone consumes flow. Transportation stimulates trillions of dollars in trade, commerce, and tourism, far in excess of its own facial value. In a global economy, transportation enables specialization in the production of goods and services which, under the law of comparative advantage, stimulates broader economic growth.

As a fundamental component of the infrastructure upon which economic growth is built – the veins and arteries of commerce, communications, and national defense – a healthy transportation system serving the public’s need for ubiquitous service at reasonable prices is vitally important to the region and the nation it serves. It is for this reason that governments the world over have promoted, encouraged, and facilitated its provision by providing essential infrastructure, research and development, protective regulation, subsidies, and investment.

In a weak economy, investment in transportation infrastructure can be one of the most prudent investments a nation can make. The US House Transportation and Infrastructure Committee

predicts that for every \$1 billion spent on federal highway and transit infrastructure, 47,500 jobs are created. Beyond the immediate gains, public infrastructure can be used by private citizens and common carriers for years to come, thereby stimulating private-sector investment. For example, the Interstate Highway System continues to stimulate employment in a variety of manufacturing, wholesale, and retail trades decades long after it was created.

1. Examine spending priorities. Federal funding should be examined so that it encourages integration of modes into a single, seamless transportation system. The goal needs to be maximizing total transportation throughout – rather than increasing the flow within individual modes. This must be done in the context of recognizing that this nation’s transportation system is a combination of public and private entities.

We must improve the robustness and reliability of the transportation network. This may include the addition of redundancy in certain cases. We must recognize the role of international trade and the unique bottlenecks posed by this sector of the network. Furthermore, whenever possible, we need to address the common issues of freight and passenger transportation. This may require the review of existing subsidy programs for the opportunity to create incentives for freight and passengers to move by alternative methods.

2. Establish new planning mandates. Project planning needs to evaluate the network impact of projects. Government-funded projects should not be built unless they explicitly demonstrate, in the planning process, that their proponents considered the need to facilitate modal connectivity and, where appropriate, allocate resources to enhance seamlessness in freight and passenger transfers between and among modes. It is not the intent to make the planning process longer – just better. To that extent, the review process needs to be thorough – yet predictable and realistic. There is very likely extensive – but as yet unfound – common ground between intermodalism and environmental protection.

3. Seek true network solutions. Since transportation is an asset-based, network operating industry, proposed projects should also be subject to evaluation in two other criteria. First, if the project’s impact is to eliminate network constraints, it should identify what governing constraints will result. In many cases, congestion is not being eliminated – just relocated.

Project review also needs to consider the risk of economic obsolescence. Traditionally, physical assets were assumed to have a physical life longer than their economic life. This may not always be true and must be prudently considered to avoid construction of white elephants. The transportation and logistics worlds are changing rapidly, and past success may not be a guarantee of future benefits.

To achieve these goals, there must be a true quantitative understanding of transportation flows. In an increasingly sophisticated logistics world, data collection shortcomings are compounded. Transportation outsourcing (and related intermediation) may result in an intact load being handled by more than one “carrier” – each of who counts the load as a unit of volume. “Loads” may also be disaggregated and reconsolidated between point of origin and ultimate destination.

Today, the measurement of traffic volume is effectively precluded by modal focus, carrier handoffs, and product intermediation. The USDOT Bureau of Transportation Statistics needs to live up to its mandate from ISTEA and provide meaningful network information in a timely and comprehensive fashion.

4. Understand what works best. The term “best practices” defines the processes, practices, and systems identified in public and private organizations that perform exceptionally well and are widely recognized as improving an organization's performance and efficiency in specific areas. The term, however, can be misleading. While "best practices" seems to imply success, they may have nothing to do with the actual success of the company. Regardless, successfully identifying and applying best practices can reduce business expenses and improve organizational efficiency.

While best practices have evolved in engineering matters (i.e., pavement design and bridge construction), there are few – if any – codified best practices for transportation planning, review, and implementation. In fact, there is little in the way of a census of intermodal projects. It would be very useful to compile these projects and their results with the intention of identifying best practices for future use.

5. Reform the federal role. Discussions for creating a federal Department of Transportation began as early as 1940. But it was not until the 1960s that the new agency became a reality. Among the fundamental missions of the USDOT was to coordinate the various modes of transportation. Valiant efforts have been made to create a “OneDOT” approach, whereby the different modal administrations would work together to accomplish unified goals. ISTEA even created a senior intermodal ombudsman unit within the Office of the Secretary, though that office has remained chronically underfunded and understaffed.

The fundamental problem within the USDOT is that it is organized along modal lines, and this organization causes each modal administration to think of transportation from the perspective of the service providers. A new perspective is needed – that of the actual users. This means thinking about door-to-door transportation solutions instead of modal point-to-point movement.

- How does the passenger move from his home to a business venue in a distant city? By taxi, by plane, by train, by bus – or by a combination of several of these modes?
- How does a package move from its point of manufacture to the point of consumption? By rail, by air, by truck, by sea – or by a combination of several of these modes?

The USDOT needs to think of transportation in this way – from the perspective of the passenger and of the freight, rather than from the perspective of the airport, the highway, or even the common carrier. Only then will priorities be established and funds allocated to ensure the efficient movement of passengers and freight between and among the modes.

Unfortunately, these efforts have failed and likely will continue to fail so long as the USDOT is organized along modal lines. One alternative would be to elevate the Office of Intermodalism to an Intermodal Transportation Administration. This would not solve the problem – but it would provide an equal voice at the modal administration table, which might be an improvement. Today, the USDOT Undersecretary of Policy could function as the internal, intermodal policy advocate. (This is a new position, which combined the Associate Deputy Secretary with the Assistant Secretary of Policy – and elevated the resulting position.)

6. Recognize inter-relationships. Reforming the USDOT would be a start. Because of transportation's pervasive nature, many other cabinet departments and executive agencies are involved. This complexity extends into the organization of congressional committee oversight, jurisdiction, and funding.

It would be impossible to develop an integrated transportation process immediately. However, Homeland Security and Defense are two departments that are dependent on transportation that might

have resources that can be utilized for mutual benefit. It is worth remembering that the Interstate Highway System was only possible because it was considered a national defense project.

As a second issue, the nexus of transportation, energy, and air quality also needs further consideration. Increased benefit could come from better coordination and alignment of societal concerns of all three issues.

7. Invest in an intermodal transportation system for the 21st century. For too long, transportation funding has been a debate about user fees, trust funds, and appropriations. The current legislative standoff between the recommended funding levels for TEA-21 reauthorization among the White House and both houses of Congress highlights the problem that government can never fully fund all requirements.

As a nation, we need to move beyond the traditional and seek innovation in funding mechanisms, including consideration of the following:

- Establish a federally chartered transportation finance corporation to issue tax credit bonds;
- Expand state infrastructure banks;
- Provide greater flexibility on private activity issues related to transportation facilities using tax exempt debt – and remove the alternative minimum tax penalty from that debt;
- Preserve/expand leveraged tax advantaged leasing of transportation assets;
- Broaden the ability to use passenger facility charges to enhance airport access; and,
- Provide a source of funding for the impending crisis in security related delays at US seaports.

XII. CONCLUSION

The following several recommendations will improve the transportation infrastructure, will enhance intermodal connectivity, and will create a level of redundancy in the transportation system that will, in turn, promote economic growth and enhance customer service.

- Improve freight terminals and their intermodal connections to confront the issues of congestion and accessibility and to improve efficiency and customer service;
- Design new and reconfigure existing intermodal passenger terminals to improve passenger service and to provide modal connectivity;
- Develop strategies to reduce short distance commuter air traffic at congested airports through modal alternatives or alternative airports;
- Promote modal alternatives and increase redundancy with initiatives such as expanding conventional rail passenger service and supporting intercity bus service in promising markets;
- Promote military base conversion strategies that develop freight or transportation distribution hubs; and,
- Acknowledge that both freight and passenger transportation are equally important and that they utilize a common infrastructure.

For too long, the United States has focused myopically on creating isolated modal transportation networks. It needs to turn the corner now and create a single, comprehensive,

integrated intermodal transportation system. In this way, waste and congestion will be alleviated, productivity and efficiency improved, and employment and prosperity enhanced. In short, it is time to invest in America's future and its long-term prosperity.

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