

A New Transportation Agenda for America

in the Aftermath of 11 September 2001

NCIT—National Center for Intermodal Transportation
A Partnership between the University of Denver and Mississippi State University

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I. PREAMBLE

On a typical day in the United States, tens of millions of people are on the move—by automobile, airplane, intercity bus, passenger train, a variety of commuter and transit services, and even ferry boats and cruise liners. On that typical day, the scale of their travel amounts to ten billion passenger-miles. Meanwhile, for every passenger moving on this vast and complex system, a ton of freight is also moving—by truck, train, airplane, barge, cargo ship, and pipeline. Daily ton-miles of freight transport equal roughly the extent of passenger trips and mileage—another ten billion.

On a typical day in the United States, the users of these transportation services take them for granted. They are not inclined to consider the colossal level of public and private investment in infrastructure, equipment, improvements, and upkeep that make these networks function. Nor are they likely to understand that transportation accounts for about 20 percent of the US economy, or that this 20 percent of economic activity makes nearly all of the remainder possible, for without transportation, neither industry nor agriculture could function, tourism would not exist, and retailing could not offer products or attract customers. Transportation is the circulatory system of the nation, bringing people, goods, and services to all its citizens.

On a typical day in the United States, the users of these transportation services do not pay much attention to the fact that, despite its remarkable contributions to American life, transportation systems routinely operate in the face of rather significant and long-standing defects. And these defects have important consequences for all Americans—even on a typical day.

It is only when we Americans, the users of these transportation services, awaken to a day that is atypical do these matters pierce our consciousness. With stunning suddenness, the terrorist attacks of 11 September 2001 brought home to Americans the vulnerabilities of the transport system. When one component of that system shut down, the pre-existing defects afflicting all modes only served to magnify the chaos that ensued.

II. THE LESSONS OF 11 SEPTEMBER 2001

- The US transportation system security "umbrella" is more porous than we Americans realized. Unlike people in a number of other nations who have adapted to more stringent security practices in recent years, Americans have been complacent with regard to the threat potential and what is necessary to minimize it—not only in commercial aviation but also in the surface modes as well as in other sectors of the economy and society.
- The US is excessively reliant upon a single mode of commercial passenger transportation for intercity travel. When the airline system ceased operations on 11 September, many stranded passengers had no choice but to await the reopening of air service. This level of dependence upon aviation is undesirable in terms of national security and in terms of the ability of the economy to function.
- Intercity commercial passenger transportation alternatives are poor or nonexistent outside of a very small number of city pairs (the Northeast Corridor between Boston, New York, and Washington DC, for example).
- Intermodal connectivity is poor or nonexistent in many parts of the country. Even if they could secure a seat on a train or a bus, the stranded airline travelers of 11 September often found that they were ten to thirty miles away from the nearest intercity rail or bus terminal and that a taxicab was the only practical way to get to the terminal.
- As the nation adjusted to the reality that it was at war, the nature of the potential conflict suggested the possible disruption of the petroleum supplies on which all of the transportation modes are so dependent. Memories of the OPEC and the Iranian embargoes of the

1970s have resurfaced. In spite of assurances from several oil-producing nations and the recent declines in crude prices, Americans once again are reminded of the uncertainty of the oil supply and the risks of dependency upon oil imports from a politically volatile part of the world.

It is important to remember that all of these defects and risks existed prior to 11 September and were well recognized by many experts and professionals.

III. GUIDING PRINCIPLES FOR A NEW TRANSPORTATION AGENDA

The goal of the US should be to overcome these defects and to create a transportation system that promotes efficiency, safety, mobility, economic growth and trade, national security, protection of the natural environment, and enhancement of human welfare. In order to achieve this “sustainable” result, Americans must better utilize the strengths of the individual modes and integrate them into a seamless transportation system. Specifically, four factors must be considered:

CONNECTIONS. All modes must be connected with one another to accomplish the convenient, expeditious, and efficient movement of commodities and people. Connecting points should be proximate to each other and timed to facilitate movements from one mode to another.

CHOICES. The intermodal network should offer choices, allowing its users to select the mode that can most efficiently satisfy their transportation needs.

COORDINATION. The transportation infrastructure must be planned, designed, and built in a way that brings the modal networks sufficiently close together so that connections can be made relatively effortlessly. In addition, transportation providers must coordinate their schedules to reduce dwell time between intermodal movements.

COOPERATION. There must be cooperation and collaboration among transportation providers and governmental agencies at the federal, state, and local levels to ensure that the needs of the users for seamless service are realized.

These four principles serve as an overall framework for thinking about a new transportation agenda. In light of the post-11 September situation, several additional principles deserve attention.

1. Recognize that transportation priorities have changed.

Clearly, significant investments are essential to improve transportation security. But this is only part of the challenge. Until the long-standing defects of the nation's overall transportation system are cured, Americans will be vulnerable to economic damage and mobility disruption if terrorists mount future attacks against any transportation mode or against the nation's energy supply or delivery systems. Future curtailments of the petroleum supply are an ever-present threat. Additionally, several regions of the country are vulnerable to serious and prolonged disruptions of transportation services due to natural disasters, such as earthquakes and hurricanes.

The new transportation priorities will provide a hedge against disruption and, at the same time, serve as an ongoing source of immense value to the economy and to the American quality of life. The new priorities place a premium on national and economic security and will enhance the efficiency, mobility, and economic productivity benefits that the US transportation system provides.

2. Understand that implementing the new transportation agenda will require governmental agencies to reform their structures and operating practices.

Under today's arrangements, many projects that would make a meaningful contribution to the new transportation agenda must overcome bewildering turf battles in the US Congress, the US Department of Transportation (USDOT), and state and local governmental agencies before they can be considered on their merits.

During the past forty years, an intermodal revolution has swept the

global freight transportation industry, but its impressive achievements are the result of private-sector initiatives. The efforts of the USDOT to improve intermodal policy and decision making have mainly produced new layers of bureaucracy, yet none of these new bureaucracies have any real authority.

Rail matters are low-priority concerns of the USDOT and in most state transportation agencies. Intercity bus is ignored entirely at all levels of government. Local governments are organized to maintain roads and transit systems. Airport authorities exist as independent fiefdoms. Today's arrangements are inadequate for the tasks and require reform.

3. Create a level of redundancy in the transportation system that will cushion the nation against economic shocks and that will enable essential passenger and freight movements to occur at all times. The US transportation policy has consisted of building the modes in isolation, of believing that highways and airways represent a universal solution, and of emphasizing ever more expensive highway projects, which offer only temporary relief in a losing battle against traffic congestion. It is unreasonable to think that a wholesale substitution of surface modes for either air travel or the private auto is practical for the foreseeable future.

The goal of the new transportation agenda is to supplement the commercial market with efficiently performing alternatives—conventional and high-speed rail for travel markets with high densities of air and auto travel, and bus and conventional rail for travel markets in selected city pairs. The commercial surface modes, rather than aircraft and automobiles, can offer superior performance in terms of overall travel time and consumer cost in short-haul travel markets.

How important is redundancy? The Internet exists because the US military decided that national security concerns required a completely new communications network, one that would interconnect all telecommunications networks and route information around any disabled junction.

4. Recognize that redundancy works only if the modes

are integrated. The ability of a passenger mode to function as a practical option for travelers is degraded severely wherever common terminals do not exist. Amtrak serves no US airport directly. The relatively few urban transit systems that connect airports to city centers often do not provide direct service to downtown bus or rail stations. These conditions hurt the current economic performance of all modes, create an oppressive level of inconvenience for the traveler, and add to the cost of a trip.

5. Change the focus from supply to demand. Currently, the passenger traveler takes what the transportation modes have to offer and suffers from an absence of choice in modes, routings, and fares. Freight transportation services, however, provide greater efficiencies and choices because they are largely customer-driven. What works in freight transportation must be duplicated in passenger transportation services.

6. Acknowledge that freight transportation is equally as vital as passenger transportation. Although recent events have highlighted problems in moving people, remember that for every person moving on the nation's transportation system, a ton of freight is also moving. Freight and passenger modes utilize common infrastructure: highways, railroads, airports, and airways. Despite recent improvements in freight operations, costly bottlenecks remain. Many of the proposed transportation improvements will benefit both freight and passenger operations. In the case of rail transportation, nearly all of the routes are owned by the freight carriers, whose cooperation and investment partnerships are essential to a successful upgrading for higher volumes of passenger use.

7. Build for the long term. Although work can begin quickly on transportation security measures and on projects for which plans already exist, many infrastructure and service reconfigurations will take a number of years to put in place. This fact does not, however, diminish their desirability, because an integrated intermodal network is essential to the nation's mobility needs and economic productivity. The new transportation agenda should be

viewed both as a short-term economic stimulus but also, and more importantly, as a necessary investment in the nation's future. This agenda is valid even if the economy recovers and the terrorism threat is extinguished.

Just as the construction of the Interstate Highway System, which began a half a century ago, served as a catalyst for a period of economic growth unrivaled in world history, the development of an integrated, efficient, and seamless intermodal transportation system will enable other economic sectors to enjoy enhanced productivity as well, thereby enhancing overall economic growth and securing a competitive position for the US in the global economy. The new transportation agenda will also promote fuel conservation, combat congestion, and reduce air pollution. The 21st century American economy needs a 21st century transportation system if America is to continue to be among the world's most prosperous nations with the highest quality of life for its citizens.

IV. SPECIFIC RECOMMENDATIONS

1. FINANCE THE NEW TRANSPORTATION AGENDA. An annual \$15 billion commitment from the US Government for a period of fifteen-to-twenty years will suffice to finance the new transportation agenda.

This sum should be viewed as an investment in the nation's future prosperity and well-being.

- About one-half of the dollar amount (\$7.5 billion) can be provided from existing modal trust funds, without the need for additional appropriations, by selecting projects that reflect the new national transportation priorities. (The authority to use Highway Trust Fund monies for intermodal projects—including commuter services, intercity rail passenger and freight improvements, truck-rail terminals, and similar initiatives—has existed for a decade in those urban areas designated as Congestion Mitigation/Air Quality

Regions. Most of the nation's passenger and freight hubs fall within these regions. Consideration should be given to broadening that definition.)

- The remaining annual federal government commitment can be paid from general revenues. Direct outlays from this source can be reduced somewhat by the prudent use of bonding and bond guarantees. Increased federal user taxes are not recommended, because they are counterproductive during economic downturns. Some state governments may need to consider modest fuel tax increases to fund their matching shares.
- The federal government commitment will generate additional matching dollars from state and local governments, whose transportation spending patterns largely derive from the standards set by Congress for trust fund spending. If Congress places a priority on intermodal improvements, state and local governments necessarily will follow suit.
- Some intermodal projects will attract additional private investment from a variety of sources. An investment tax credit for private investment will provide a further stimulus.

2. REFORM THE FEDERAL ROLE. The existing process used by Congress to supervise transportation is cumbersome and not suited to the new national priorities for transportation. The process must be streamlined. The USDOT structure is anachronistic, stratified along the perspectives of disconnected modes.

The USDOT should be reorganized into two basic operating divisions—passenger and freight. This reorganization will inspire the USDOT to view the transportation system from the perspective of the

transportation user—and his need for seamless connectivity from origin to destination—rather than from the perspective of the transportation provider.¹

3. RESTRUCTURE THE ROLES OF THE STATES AND MUNICIPALITIES. The majority of state transportation agencies place 90 percent of their emphasis on highways, with transit, aviation, and railroad functions closeted off in minor sub-departments, which are several management layers removed from the real decision makers. Intercity bus transport is largely ignored. Freight issues receive little attention at the state level. City governments focus on street maintenance and local transit services to the exclusion of nearly everything else. State and city agencies require restructuring to reflect an intermodal focus that includes both passenger and freight transportation as does the pattern of relationships between state DOTs and MPOs.

4. IMPLEMENT A NEW VISION FOR COMMERCIAL AVIATION. One goal of the proposed new transportation agenda is that of supplementing the air travel system with the surface modes. Today, the airline industry is beset by ongoing economic problems, which result, in part, from the practice of transporting connecting passengers from nearby feeder cities to hubs at fares that do not cover costs. Smaller, "regional" aircraft are less economical, less efficient, and contribute to airport and airway congestion. Airline managers will derive meaningful economic and service benefits if the surface modes can replace flights from nearby cities. The new intermodal approach will allow the managers to focus on the inherent advantages of aviation in serving long-distance trips.

5. DEVELOP NEW PRIORITIES FOR AIRPORT MANAGERS. Conventional terminal planning is based upon the assumption that all originating and terminating passengers will arrive or depart by auto,

¹ Some might argue for a third division to manage safety regulation. That concept could merit discussion, but only on the basis that safety regulation for all modes would be placed within that division.

limousine, and taxi. Transit service to downtown usually requires either a lengthy walk or a shuttle to the nearest direct transit connection. Airport managers have rebuffed most attempts by intercity bus companies to load and unload passengers at the terminal "front door." No direct intercity rail connections exist at any US airport. Airport authorities must embrace the principle of seamless access by public transit and commercial surface transportation. The USDOT should insist that seamless access be a condition of federal funding.

6. DEVELOP A ROLE FOR HIGH-SPEED RAIL. High-speed rail offers the most promising opportunity to create redundancy and to supplement or replace air travel in a number of short-haul markets, such as between urban centers of high population and in areas where highway congestion is serious. Electrified high-speed rail lines also would reduce the reliance upon petroleum fuels. Eleven corridors in thirty-three states—to be developed by states or partnerships among states—have been designated but as yet are unfunded. The USDOT should be given the authority to evaluate high-speed rail projects and set developmental priorities, focusing on the projects that can deliver high ridership.²

7. EXPAND CONVENTIONAL RAIL PASSENGER SERVICE. The primary obstacle to the ability of Amtrak to gain market share in short- and medium-haul markets is the low frequency of its service. In the majority of these city pairs, service is limited to one daily train in each direction. This restricts customer choice to an unacceptable level. The priority for future Amtrak development should be that of increasing train frequency and service quality in its most promising markets. In some short-distance operations, high-performance conventional rail could provide most of the service benefits of high-speed rail but at a much lower developmental cost.

8. SUPPORT A MORE IMPORTANT ROLE FOR INTERCITY BUS.

² Some have suggested that Amtrak be given this role, but the scale of these projects is beyond its capabilities and Amtrak's status as a potential bidder for operating contracts creates an inherent conflict of interest.

The intercity bus offers several advantages. It is flexible; buses can go wherever highways exist. If airlines retreat from the smaller feeder markets, the bus is the most practical alternative to provide substitute service because the traffic volumes generally do not justify the development of either high-speed or conventional rail. The bus fleet can be expanded at a lower cost than the airline or rail fleets. Fewer operating personnel are required, and they can be trained more quickly. If the nation was to conclude that contingency planning for emergency situations warranted a "passenger transportation reserve" component, the intercity bus offers the low-cost option, and the reserve fleet would be exceptionally mobile in terms of repositioning to serve regional markets.

9. DESIGN NEW AND RECONFIGURE EXISTING INTERMODAL PASSENGER TERMINALS. Major changes are required in both the design and the operation of intermodal passenger terminals. In some urban areas the airport is the logical hub for intermodal operations. In others, it is a downtown facility centered on a rail or transit station. In all cases, a high-performance connection is required between the city center and the airport. Wherever it is located, the intermodal terminal must deliver the connecting passenger to the "front door," whether that passenger arrives by airplane, train, transit, or intercity bus. Coordinated schedules are necessary to reduce dwell time. Arrangements for baggage transfer are essential. People-mover walkways should be installed between airport entrances and surface-mode connections. Where possible, high speed ferries should augment the passenger transportation system. Intermodal terminals are key to this entire process, and their development probably represents the most expensive component of this new transportation agenda.

10. IMPROVE FREIGHT TERMINALS AND INTERMODAL CONNECTIONS. Despite the advances in the intermodal freight transportation industry in recent years, inadequate access and traffic bottlenecks persist at freight transfer points. Drayage trucks choke Chicago's roadways each day as the trucks interchange containers among the rail

carriers. Trucks access many urban ports on traffic-clogged streets. Railroads serving the ports are hampered by a proliferation of grade crossings. Rail yards, where containers or trailers are transferred to and from trucks, are plagued by similar problems. Many airport air-cargo facilities are accessible only by truck. Undue reliance is placed upon truck drayage for port-to-rail transfers.

Efficient port and rail yard operations require high-quality access by both rail and truck, and consideration should be given to truck-only, limited access, roadways from dockside and air-cargo centers to the nearest interstate highway. A major effort is required to eliminate the number of at-grade highway-rail crossings—through closure, separation, or more advanced crossing protection technology. A number of freight transfer facilities require more efficient container-handling equipment.

Improving freight intermodal seamlessness will increase the efficiency of the railroads and will help to alleviate highway congestion, which will reduce the pressure to build more highways. The coastal ports and waterways must also be upgraded—with ample capacity and redundancy—to facilitate trade in the 21st century global economy.

11. PROMOTE A NEW PARADIGM FOR CUSTOMER SUPPORT SERVICES. Success of the new intermodal passenger system will depend upon the quality of customer support services. Today's travel agent shops for fares among airlines and for prices among car rental companies. The travel agent of the future will need to offer a broader menu of choices involving, perhaps, three modes per trip, information on dwell times, details on the walking distances from the bus or rail connection to the airport gate, and the like. The Internet will serve as a valuable tool, providing maps portraying the interface between modes at terminals. Airline computer reservations systems should be opened to connecting and alternative modes. Corporate travel departments, in particular, will require information that will assist in scheduling the most efficient trip at the lowest cost. Some private-sector information sources already are in place. Ideally, the passenger who boards a bus in a small town, and later travels by rail and air, should not handle his or

her checked baggage until arrival at the final destination. Local transit vehicles will need to be equipped with larger baggage racks, like those found on airport parking lot shuttles.

12. CONTINUE THE EMPHASIS ON RESEARCH, EDUCATION, AND TECHNOLOGY. Technology holds the key to the solution of many of the problems that confront the present transportation system—congestion, pollution, lack of modal choice, and inadequate safety and security. Accordingly, careful attention must be paid to the development and implementation of relevant technologies. The successful deployment of technologies as well as the development of a “sustainable” transportation system also requires professionals with the requisite education and skills.

Is this transportation agenda for America feasible? The contributors to this report are unanimous in believing that it is. The proposed financial outlays are modest within the overall federal budget—especially considering transportation’s vital role in America’s economy. The major challenge is to recognize that the nation’s priorities have changed and that policies, operating practices, and investment patterns also must change to reflect these new realities. NCIT stands ready to be of service.

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NCIT is a partnership of the University of Denver in Colorado and Mississippi State University and builds upon the activities of the Intermodal Transportation Institute at the University of Denver and the activities of the centers with transportation focuses at Mississippi State University.

NCIT promotes the assessment, planning, and design of the nation's intermodal transportation system and focuses on improving the efficiency and the safety of services for both passengers and freight by identifying ways to better utilize the strengths of the individual modes of transportation through education programs, research projects, and outreach programs and activities.

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