

**PANEL VI: THE ROLE OF PUBLIC INSTITUTIONS IN PROVIDING
TRANSPORTATION INFRASTRUCTURE IN 2056**

(Thursday, November 16th 3:30 – 5 p.m.)

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Christopher Boylan has served as Deputy Executive Director, Corporate and Community Affairs, Metropolitan Transportation Authority (MTA), State of New York since 1996 where he directs corporate-wide internal and external relations functions, including government relations, community relations and marketing & corporate communications. In addition, he oversees the MTA's Arts for Transit Program and the "New York Transit Museum," the largest public transit museum in the country.

The MTA's operating agencies include MTA New York City Transit, MTA Long Island Rail Road, MTA Long Island Bus, MTA Metro-North Railroad, MTA Bridges & Tunnels, MTA Capital Construction and MTA Bus.

Mr. Boylan's previous positions with the MTA include Chief of Staff to two Chairmen, and Deputy Director and subsequently Director of Government Relations. He also held positions with the New York City's Office of Management and Budget, and Office of Intergovernmental Relations, the New York State Department of State in Albany, and the New York State Assembly.

In addition to his work at the MTA, Mr. Boylan currently serves as a Member of the Board of Directors of the American Public Transportation Association (APTA) and has held a number of positions with APTA. He also sits on the Board of Directors of the New York Public Transit Association and on the New York Metropolitan Transportation Coordinating Council (NYMTCC.)

Mr. Boylan holds a Master's Degree in Public Administration from the State University of New York at Albany's Nelson A. Rockefeller Graduate School of Public Affairs and a Bachelor of Arts Degree in Political Science from Fordham University in the Bronx.

**Remarks of
Christopher P. Boylan
Deputy Executive Director
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“The Role of Public Institutions in Providing Transportation Infrastructure”

November 16, 2006

The MTA – Who We Are

Good afternoon members of the Commission. On behalf of the 65,000 employees of the New York State Metropolitan Transportation Authority (MTA) welcome to New York and to not only the nation’s financial capital, but its transit capital as well. For within a few short blocks of this building are literally dozens of gateways to the largest public transportation system in the western hemisphere and one that serves a region of 14 million people, 2 states and 5,000 square miles.

Our seven operating arms: MTA New York City Transit; MTA Long Island Rail Road; MTA Long Island Bus; MTA Metro-North Railroad; MTA Bridges and Tunnels; MTA Capital Construction, and; MTA Bus, support a 24 hour a day, 356 day a year system that provides over 8 million rides a day – nearly three billion a year -- on our subways, railroads and buses. On top of that, our bridges and tunnels move an additional 1.4 million people each day in over 900,000 vehicles.

Our current operating budget exceeds \$9 billion a year – none of which is federal -- and our current five-year capital program adds more than \$4 billion a year in rebuilding and rehabilitating our hundred-plus year old infrastructure – approximately 27% of which is made up of federal funds.

Those are certainly big numbers by themselves, but they are more telling when put in a more global context. MTA services alone move one third of the nation’s transit riders and two thirds of its rail riders. That’s more transit riders than the next ten U.S. transit systems combined. We move as many customers in three days as Amtrak does in one year -- and in ten weeks more than all domestic airlines do in a year.

And while size may matter in the context of looking at the extent and scope of the investments that need to be made to keep our system running, I’m here today to share with you more about how our family *history*, rather than simply its size, has demonstrated the need for significant and predictable multi-year *public* investment.

A Family History

The MTA itself is less than four decades old, created in 1968 to integrate several separate transit systems into a more efficient and cost-effective regional network. But parts of our family tree date back to the first half of the nineteenth century. A decidedly public entity, our roots are largely private. The story behind how they came to be public, however, gives us a first hand perspective on how critical continued public investments in transit infrastructure are. They are as fundamental to our health, well being and economy as are the public investments made in water mains, roads, bridges and sewers.

Although our world renowned subway system celebrated its centennial just two years ago, our story begins well before 1904. Metro-North and the Long Island Rail Road trace their ancestry to 1832 and 1834 respectively, when two privately owned railroads, the New York & Harlem Railroad Company and the Long Island Rail Road Company began service in the New York region – one north from the Bowery and the other east toward a ferry link to Boston.

Like much of the passenger rail industry in America, these railroads went through times of boom and bust. Latter times were stoked by shifts in personal choice and in national direction as the railroads' direct competition was nurtured through direct and indirect public financial support. The resultant shrinking profit margins nonetheless belied the continued need for the services they provided. To make matters worse, the cost to replace and rebuild their capital intensive infrastructure grew exponentially as they aged in place.

On the transit side of the house, between 1868 and the turn of the century, with congestion plaguing New York City, no fewer than seven private entities: the NYC Central Underground Railway Company; the NYC Rapid Transit Company; the Central Tunnel Railway Company; the NY & NJ Tunnel Railway Company; the Terminal Underground Railway Company; the Underground Railroad Company of the City of NY, and; the Rapid Transit Underground Railroad Company tried to undertake the building of what was clearly a necessary, but difficult and prohibitively expensive undertaking – the now famous New York subway system. None were able to succeed in securing the necessary resources to do so.

It wasn't until Mayor Abram S. Hewitt finally urged municipal involvement/ownership that the first subway was finally completed by 1904, in what was for all intents and purposes one of the earliest public-private partnerships with August Belmont's Interboro Rapid Transit (IRT) Company operating the City-financed system. Said Hewitt, *"It was evident to me that underground rapid transit could not be secured by the investment of private capital, but in some way or other its construction was dependent upon the use of the credit of the City of New York."*

At the same time the private Brooklyn Rapid Transit (BRT) Corporation was busily sewing together a number of smaller above-ground railroads into a separate above ground system. In an early sign that the capital and operating costs of such a necessary undertaking were unsupportable for a private entity, the BRT doubled the fare on its lines to Coney Island to 10 cents in 1906. Passengers refused to pay and ridiculed the BRT as "Beggars, Robbers and Thieves." The BRT would ultimately join with the City-funded effort to build new subways and eventually became the Brooklyn Manhattan Transit (BMT) Corporation.

By 1940, the IRT and BMT were no longer financially viable as private entities and were "unified" into "The New York City Transit System," which is today the subway operation of MTA New York City Transit, our largest operating agency.

A similar scenario ran its course above ground with the private bus system. Myriad bus companies were added to the mix of failed -- but nonetheless economically necessary -- transit entities that were assumed by the New York City Transit System.

The Result of Both Private and Public Disinvestment

So our history has largely been defined by the assumption of unprofitable remnants of private companies. And remnants they were, having suffered from decades of deferred maintenance and sporadic or no capital re-investment. I'd like to be able to claim that the disinvestment was reversed immediately when the MTA stepped in, but the sad truth is that it continued for some time. As vital as transit was to not only the regional and national economies – with Wall Street hugely dependent on our system to get both high and low income employees to their jobs -- the MTA lurched from year to year with short-term and short-sighted annual operating and capital budgets.

The result was something that many New Yorkers still remember vividly – a system that teetered on the edge of collapse in the late 1970s and early '80s. A critically important system that had been starved of adequate financial investment for decades was poised to bring the nation's largest city – and, ironically, the world's financial capital – to its knees.

The subways suffered derailments every 18 days, 325 train runs were abandoned on a typical day. On average, buses in Manhattan and the Bronx broke down every six days. Daily track fires caused delays, evacuations and posed significant safety risks for our riders. Graffiti covered subway cars, buses, and stations became the symbol of urban decay. The system seemed out of control and people – and business -- had no confidence in its reliability. Transit ridership plummeted and businesses fled.

Going the Right Way

Facing the threat of systemic collapse in 1982, the MTA, led by a new and vigorous Chairman, Dick Ravitch, who you will hear from on today's panel, fought to develop a broad political consensus to save the transportation network. The result was the first in a series of multi-year capital plans — a \$7 billion commitment to rebuild the system. It was unprecedented anywhere else in the nation.

As big as that first program was, it was but a band-aid for a long-neglected network that was estimated at the time to be worth more than \$250-\$300 billion. But it made history by bringing together private and public entities who started to get it and understand the fundamental economic need for a safe and reliable system. More importantly, as a group they understood that they were collectively responsible for making the necessary investments to make it so. And together they supported a plan that ensured stable, predictable and dedicated multi-year sources of revenue. The system was saved and in the process, so, too, the City and the region.

By the mid 1990s, while reclamation of the system continued, subsequent capital programs had slowly been able to increase investment in normal replacement, new technologies and capacity enhancements, all with the goal of improving the quality and reliability of the system. Some were visible to the public, such as fleet replacements, station improvements, MetroCard electronic fare collection and E-ZPass. Perhaps more critical, however, were the investments in the invisible infrastructure such as fan plants; pump rooms; shops, yards, and depots; track; signals; and power systems.

By 2004, with five successive multi-year plans under its belt, the MTA had re-invested nearly \$60 billion in capital funds to reclaim and improve the system.

The results of those investments were remarkable and very palpable for our customers and for the economy. The most basic benchmarks were the best proof of this:

- On-time performance increased from 85% to over 93% on the Long Island Rail Road, and from 80.5% to nearly 99% on Metro-North Railroad.
- Mean distance between failures (MDBF) for the subway doubled every five to seven years, increasing from a mere 6,988 miles in 1981 to nearly 145,000 miles in 2003.
- Some 356 rehabilitated subway and rail stations provided a welcome rather than ominous environment for our customers.
- Crime on the transit system fell dramatically.
- At MTA Bridges and Tunnels, average peak-hour queue time at our toll booths dropped from 3 minutes in 1996 to 20 seconds, despite a 13% increase in traffic.
- Customer satisfaction skyrocketed, with 68% of our riders acknowledging the improvement.

In 2004, the MTA faced a different challenge as we approached our sixth capital program. It was one that threatened to erode the gains that had been made over the previous two decades. But it was the same challenge that was at the core of all the previous system failures -- complacency. Some thought that because things looked pretty good, that the job was done. Time to spend limited resources on other needs.

But many of us knew that the real story was that even at a level of investment between \$2 billion and \$3 billion a year we wouldn't reach a state of good repair until 2019 at the earliest. Failure to reinvest in the core MTA system would have ignored the lessons learned from both our private and public forebears and prevent the MTA from meeting the region's future needs.

And so we found that we needed to educate a new generation of customers and funding partners. With the help of a cadre of enlightened leaders in the New York private sector, we were once again able to rally a broad range of rider and business stakeholders in forging an understanding of both the need and the responsibility of all of those constituent groups in helping to shoulder the load.

Certainly the MTA needed to manage its resources as efficiently as possible. Fare and toll payers understood they had a role, too, as long as they were assured good, clean, comfortable and reliable service. And the business community in New York also clearly understood their own vested interest in ensuring the health of a system that delivered roughly 80% of their local workforce. (For example, during peak periods, New York City Transit carries 83 % of city residents traveling into Manhattan; Metro-North carries 78 % of commuters in its area, and LIRR carries 76 %.)

At the end of the day, the magnitude of the \$21 billion in our current capital program could only have been done through publicly assembled resources that had public *and private* supporters.

The Case for Continued Public Investment

New York's economic boom of the mid to late 1990s and its recent historic population growth were supported by an increasingly dependable transit system. The MTA's ability meet a growing demand for service and to absorb a 46% rise in annual trips since 1992 was only made possible by the rebuilding programs that have increased reliability and quality.

Similarly, the robust population and employment growth forecasts for the next 20 years — reaching nearly 8.5 million NYC residents by 2025 and supporting a 1% per year increase in regional work trips — require a transit system that can be relied upon to access jobs and respond to business opportunities. That will continue to require significant levels of investment – in real dollars.

The question going forward then is how are we to meet a growing demand for transit service against a backdrop of federal sources of funding that are predicted to stagnate or shrink?

As with most such dilemmas, a range of options must be explored. Certainly public-private partnerships and investments could and should be part of the mix. There are many niches where such partnerships can provide benefits to our customers while providing a private partner with a visible profit.

But given the need to fund core infrastructure that on the surface don't seem to generate a "profit," and given magnitude of those needs, it seems that only with substantial and predictable capital resources can we prevent systems like ours from repeating the mistakes of the past.

It is troubling that public investment is, in some circles, looked on as a drag on the federal budget or the economy, rather than as a catalyst that helps foster and facilitate private economic activity. The return on investment (ROI) of the investments we at the MTA make in our capital program do not show up on our balance sheets. But make no mistake, there is a real ROI and it is buried deeply within the balance sheets of thousands of companies throughout the region.

And when one factors in the direct economic benefits that capital investments in transportation infrastructure provide, that ROI only increases. For example, the \$16 billion that the MTA invested in its capital program between 1982 and 1991 generated an estimated \$27 billion in short-term economic activity, wages, and state and city taxes. The 1992-1996 MTA Capital Program generated an estimated short-term economic benefit of \$18 billion on an investment of \$12 billion and created an estimated 148,000 jobs. Nationally, each \$10 million in capital investment has been found to yield a \$30 million gain in business sales.

The bottom line is this. As we build new systems, roads and bridges to keep our national and regional economies healthy and growing, the need for resources will only grow and no amount of alternative financing will solve the delta between what we have

today and what we'll need in the future. We need to be creative about finding real resources to deal with real needs.

Using the MTA experience I am happy to say that our New York business and political leaders get it, have rolled up their sleeves, and have joined with us to provide public reliable and substantial resources to build, rebuild and maintain our infrastructure.

Ongoing Investment in the Future

In conclusion, the MTA experience is one shaped by a history inadequate public and private investment in our physical assets – it was a painful lesson to be sure.

But the experience of the last 25 years took that harsh lesson and turned our system around. We demonstrated that adequate public investment to enhance service reliability and quality will boost the economic vitality. Only sustained public investment at sufficient levels can prevent disrepair from reversing these gains and once again hobbling the transportation system. It will require continued participation at the local, state and federal levels. Not an easy task to be sure, but one which, if history is our guide, is ignored at great peril.

Thank you for the opportunity to share our history and our thoughts with the Commission.

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Ms. Kelly currently holds the position of Director of the Tunnels, Bridges & Terminals Department of The Port Authority of NY & NJ. She is responsible for the operation, maintenance and security of the Department trans-Hudson vehicular crossings, including the George Washington Bridge, the Holland and Lincoln Tunnels, and the Bayonne Bridge, Goethals Bridge and Outerbridge Crossing in Staten Island. In addition, the Department operates the Port Authority Bus Terminal in midtown Manhattan and the George Washington Bridge Bus Station in upper Manhattan.

Prior to assuming her current position, Ms. Kelly served as Deputy Director of the department, and prior to that was Deputy Director of PATH, where she was involved in the PATH recovery and restoration program following the September 11th attack on The World Trade Center. Ms. Kelly also has extensive experience in the maritime industry, having spent 15 years in the Port Authority's Port Commerce Department, serving in a variety of positions including Manager of the Port Newark/Elizabeth seaport, the largest on the US East Coast, and Acting Deputy Director of the department.

She serves on the IBTTA Board of Directors, the E-ZPass IAG Executive Committee, the Transcom Board, the Eno Foundation Board of Advisors and the I95 Corridor Coalition Board. She is also a Board member of OmniAir, which focuses on toll applications for USDOT's 5.9 GHz program.

Ms. Kelly has an undergraduate degree from Barnard College and a master's degree in City Planning from Harvard University.

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

Victoria Cross Kelly
Director, Tunnels, Bridges & Terminals Department

Statement for Presentation to The National Surface Transportation Policy and Revenue Study Commission On the Occasion of Its Meeting in New York, NY on November 16, 2006

The Port Authority of New York and New Jersey manages and maintains the bridges, tunnels, bus terminals, airports, the PATH rapid transit system and seaport facilities that are critical to the bistate region's trade and transportation capabilities. Through our facilities and services, people are able to make vital connections and businesses are able to grow. Providing safe and efficient travel is our highest priority, and enhancing the well being of everyone who lives, works and travels in this region is our strongest commitment. Our facilities and operations support more than 500,000 jobs and \$25 billion in annual wages, and contribute \$ 65 billion annually to the region's economy.

The mission of the Port Authority is to enhance the region's competitiveness and prosperity by providing transportation services that efficiently move people and goods within the region and facilitate access to the nation and the world. The Port Authority is a financially self-supporting public agency that receives no tax revenues from any state or local jurisdiction and has no power to tax. The agency relies almost entirely on revenues generated by facility users, tolls, fees, and rents to fund the operations and maintenance of its facilities, as well as the capital investments required to maintain, improve and expand the system.

The Port Authority is overseen by an unsalaried Board of Commissioners appointed in equal number by the Governors of the State of New Jersey and the State of New York. All actions of the Board are subject to acceptance by both Governors. The Bistate Compact that created the agency specifically defines its area of operations, described roughly as encompassing the area within a 25-mile radius from the Statue of Liberty.

The Port Authority's experiences and mandate are highly relevant to the work of this Commission. Our focus is regional and multi-modal. We serve as the agent of two States, recognizing shared transportation and economic challenges, often brokering interagency partnerships. As a self-financing agency, the Port Authority consolidates the revenues across its businesses to finance capital projects and we have a strong history of public-private partnerships to progress transportation and trade.

This statement draws on the full range of the Port Authority's experience and future strategic direction. Starting with a discussion of conditions, needs, and trends, it presents our perspective on the future and the federal role in the future, as well as the opportunities and responsibilities of public operators at the regional level. Also included here are summary descriptions of recent interagency and public-private partnerships across the range of the agency's core businesses, and some thoughts about the opportunities the PA model can offer.

Setting the Context: Conditions and Needs

Aging Infrastructure - Our oldest facilities are 75 years old and more. The need to direct ever-increasing capital investment to maintain existing facilities in a structurally sound condition represents a tremendous financial commitment. This significant capital outlay is essential, but will merely maintain the vitality of aging facilities and infrastructure to meet the fundamental service and mobility standards that they provide today. The state-of-good-repair investment often has minimal impact on improving the capacity and efficiency of the transportation network. The level of ongoing operating expenditures for basic maintenance and the sustained level of state-of-good-repair capital investments represent a substantial ongoing revenue requirement. When overlaid with the magnitude of infrastructure replacement needs in the form of "mega projects" looming in the twenty-year horizon, new funding commitments and regional cooperation are essential.

Congestion - The New York–New Jersey region is not unlike other metropolitan areas throughout the United States, in facing the challenge of congestion. In 2003, travelers in the bistate region lost 400 million hours, valued at more than \$7 billion, to congestion on the region's highways and river crossings. Typical peak-hour delays at the bridges and tunnels are between 30 and 45 minutes on an incident-free day. The region's airports are consistently ranked among the nation's worst in delayed arrivals and departures. Air travelers are not satisfied with their ability get to and from the airports in a quick, reliable manner. At our marine terminals, it is not unusual for trucks to wait for four hours or more to load cargo. Truck drivers leaving the ports or airports face additional hours of delay on congested roads and highways alongside passenger travelers. Because times have been good, the loss of productivity and economic activity stemming from the limitations of the transportation system has been accepted. Nevertheless, the region is on the cusp of a congestion crisis. We are not alone in confronting congestion and its effects, but because the future prosperity of the New York-New Jersey metropolitan area will depend international trade and global competitiveness, the requirement to keep pace and rise to a world-class standard is critical for the region and the nation.

Limitations to Expanding Capacity - The density of population and land uses surrounding our transportation assets, as well as physical constraints of the existing transportation infrastructure, present very limited opportunities to expand the capacity of the transportation system. Roadway expansion strategies in this region must contribute meaningfully to mobility, which means that such improvements must address capacity through an entire travel corridor. The three-airport system serving New York-New Jersey is capable of handling only 30% growth above the 100 million people served today, but the navigable airspace is finite and with safety considerations imposing a restriction on the number of planes that can arrive and depart within the region's air space. As Senator Daniel Patrick Moynihan once said, "you cannot add sky and you cannot add more minutes to the hour." This suggests the need to consider a fourth airport to serve regional demand. The capability of our trade gateways to meet growing international trade will require access improvements including new capacity along goods movement corridors and new warehousing and distribution facilities on brownfields sites closer to airports and seaports. The challenge of meeting all these profiles of growing demand will require balancing that demand across the spectrum of transportation modes and complementing current systems with new technologies, demand management solutions, and pricing incentives. In order to be meaningful, the scope needs to encompass corridor-based planning and investment that strives toward integrated systems and balanced multi-modal solutions. For our

critical goods movement and interstate transportation corridors, this suggests even closer relationships with the State Departments of Transportation, local roadway operators, and the Metropolitan Planning Organizations (MPOs) to coordinate investment plans to enhance corridor management strategies and improvements.

Security - Like no other entity, public or private, in the U.S., the Port Authority understands the risks and threats facing the security of our transportation system. Security continues to be central to many initiatives being advanced by the Port Authority. The necessity to examine the security elements of every aspect of operations, and in all aspects of our capital program, presents new expectations, extreme challenges and high costs. The long-term implications will affect every facet of our businesses and challenge us to constantly balance the ability to provide high levels of customer service and mobility against the requirements of security. With time, we are defining a new balance between these objectives and attempting to define the appropriate balance for the long-term. In many respects, the Port Authority and this region are breaking new ground in the area of security standards, planning and practice, as well as serving as a leader for security-related research. The demands of maintaining high levels of awareness and vigilance require the means to sustain the intensity of our efforts. Ongoing programs addressing employee awareness, risk assessment and threat evaluation will be essential to ensuring that we do not become satisfied or complacent with past successes and current practices. Equally important is the need for a regional focus with regard to security. Operational protocols, interagency coordination, advance planning and integrated communications must be undertaken together with all regional agencies to ensure the highest level of security. The availability and utility of external services and funding must be continuously weighed against our ability to address needs with internal resources. The agency must also examine every facet of its businesses to identify potential opportunities to offset the significant costs associated with a comprehensive security program. This will require ongoing assessments of operating practices, work rules, and O&M standards, as well as a sustained review of all aspects of capital projects to identify security concerns. Perhaps the greatest immediate challenge is to advance the priorities identified in our structured risk assessments in a manner that balances appropriate responses with related resource requirements and implementation schedules. The more difficult challenge facing the agency is to define appropriate levels of risk tolerance to ensure adequate safeguards and response capacity within a reasonable resource constraint, all while ensuring mobility.

Network Financing - As a self-financing public agency, the Port Authority consolidates the revenues of all its facilities and services to fund ongoing operations and finance capital investments. At the airports and seaports, major revenue streams are derived from long-term leases with terminals operators and carriers, often complemented by private investment and public-private partnerships to improve facilities, capacity and productivity. For the Port Authority's interstate transportation facilities, we rely on toll and fare pricing as a primary source of revenue. The agency has traditionally viewed the tunnels and bridges, the bus terminals, PATH, and ferries collectively as an Interstate Transportation Network. All these businesses serve a common mission and markets, but given the capital-intensive nature of transit services, PATH and the bus terminals have a long history of subsidy, while the tunnels and bridges have been strong generators of net income for the Port Authority. The financial history of the Interstate Transportation Network is characterized by overall net deficits that require active and ongoing management to maintain financial performance at acceptable levels. From the mid 1980s through 2003, the Interstate Transportation Network has generally maintained a net deficit within a range of less than \$100 million annually. Since 2003, despite aggressive expense reductions, capital investment management, and active new advertising and

sponsorship revenue programs, the costs of security and insurance have propelled the Interstate Transportation Network deficit to its greatest levels in 25 years. The significant investment needs at the airport and seaport gateways, along with higher rent payments at all the Port Authority airports have left less surplus revenue to finance the Interstate Transportation Network's deficit now and in the years ahead.

Looking Ahead: A Vision of the Transportation System in 2056

"The world is too big for us. Too much is going on -- too many crimes, too much violence and excitement. Try as you will, you get behind in the race in spite of yourself. It is an incessant strain just to keep pace and still you lose ground. Science empties its discoveries on you so fast that you stagger beneath them in hopeless bewilderment. The political world's news is seen so rapidly that you run out of breath trying to keep pace with who's in and who's out. Everything is high pressure. Human nature cannot endure much more."

The Atlantic Journal, June 16, 1833

Change is a constant. While the pace of change may sometimes be considered overwhelming, we cannot allow the rate of change to become so daunting that it deters our ability to define a vision and goals for the future. In 1956, years of planning and debate culminated in a bold program to advance an Interstate Highway system to address goals of economic expansion and national defense. The vision was backed by pay-as-you-go funding and the establishment of a highway trust fund. Today this network of superhighways has transformed our nation and our economy. But with the Interstate highway system essentially complete and a wide array of transportation challenges facing the nation, it is time to define a new vision for the future.

The Economy and Society of the Future

As this Commission considers the future of transportation policy and revenue in the United States, consideration of the future of the U.S. economy and American society is essential to ensure that a transportation system supports emerging needs. The nature of the U.S. economy of the future may be characterized by the following trends.

- Globalization will fuel increased international trade. More consumer goods will be imported over the next 50 years, arriving at trade gateways that depend upon the same congested highway and rail networks that passengers rely upon. Without new transportation capacity and efficiency, demand for existing transportation infrastructure will suffer from higher costs and deteriorated reliability. The transportation system of the future must address these trends by allowing businesses and customers to balance their cost-speed-reliability needs, so that goods handling remains an economic stimulant.
- Service industries will play an increasingly important role in the U.S. economy. These businesses range from entertainment and hospitality to financial, legal, business, political, and communications to sales of medical, educational, and creative expertise. Service transactions will result in new income and wealth, contributing an essential element to the expansion of U.S. economy. In order to grow and prosper, service industries will need high quality inter-city transportation connections within the U.S. and around the world.
- Technological advances will establish viable travel substitutes in the form of telecommuting, video conferencing, distance-based learning, home-based entertainment and cultural options, etc. Nonetheless, the growth of new travel substitutes will only partially offset the growing demand for transportation infrastructure and services.

- Local development will become more oriented toward rationalized centers of population and economic activity as the viability of sprawling development becomes economically and environmentally unsustainable. Metropolitan areas will prosper from opportunities for economic expansion by adding new transit capacity to the most congested parts of a region. A concentration of future development in locations that can readily be served by enhanced transit services, will add reliability, efficiency and choice to daily transportation decisions required for economic prosperity.
- Advances in telecommunications and information technology will drive new expectations and requirements by the businesses, commuters and travelers who use our transportation systems. Customers will expect complete real-time information about travel conditions, including routing and modal options that will ensure reliability and predictability of travel times.
- As passenger and freight traffic steadily increase with economic growth, security threats to critical transportation systems and assets will remain an important concern. The cost of reasonably mitigating safety and security risks must be balanced with the costs of operating, maintaining and growing the transportation system. The transportation systems of the future will adopt rigorous risk assessments, priorities that reflect security criteria, and resilient and redundant systems capable of emergency response and economic recovery.
- The U.S. and world economy will move toward more fuel efficient and alternative-fueled vehicles. Such strategies will address national objectives of reduced dependence on foreign oil and improved environmental conditions. However, transportation finance strategies must act to immediately complement the federal motor fuels tax with new revenue sources with an eye toward replacing the motor fuels tax over time. Future transportation policy will necessarily need to adopt more direct user fees in the years ahead.

The Transportation System of the Future

As we look forward and define a vision for the national transportation system over the next half century, the national goals and objectives must be crafted in a manner that ensure that the system will support the emerging needs of a national economy -- one that will continue to be shaped by globalization, technological advances, new energy sources and environmental challenges. The new investments and new concepts that will be required to advance this vision will certainly require new partnerships, institutions and standards among transportation operators, government agencies, private investors, and business and commercial interests.

The following points lay out a vision of what the transportation system will look like fifty years from today. On the surface, these may appear to be a utopian characterization of the transportation system of the future. In fact, these characteristics lay a foundation by which policies and partnerships can be established today to transform the U.S. transportation system and maintain its vital role in sustaining the American economy and quality of life.

- The U.S. transportation system will be an interconnected network of facilities, services and systems that provide excellent connections among and between modes, both within and between regions. The system will also provide an array of effective options to access international gateway facilities serving business and leisure travelers having the U.S. as their origin or destination, as well as imports and exports moving internationally. The effectiveness of the system will be measured by its reliability, cost, efficiency, safety and convenience.
- The interconnectedness of the U.S. passenger transportation system will be realized through greater highway-transit interfaces within regions, creating more options for travel

and increased in-route real-time choices through new information technologies. New high-speed intercity rail services will provide viable options that relieve congestion from both our highway system, as well as from crowded air spaces. New airport capacity serving urbanized centers will ensure the adequacy of terminal and air space capacity to meet growing demand. High-speed rail connections to airports will ensure efficient and reliable access.

- The interconnectedness of the goods movement network will be represented by an array of services and facilities that are planned and developed as commercial corridors. A new system of warehousing and distribution centers that are located in close proximity to seaports and airports will ensure efficient intermodal transfers. New investments will create dedicated infrastructure to shift trucked goods that are not for regional consumption onto a dedicated roadways, shuttle trains, or automated conveyance systems, allowing quick movement to distribution points. Additional non-highway capacity for flexible and economic goods movement will include freight ferries, short-sea shipping, short-line railroads and inland distribution networks. The goods movement network will be designed to reduce competition between passengers and freight for highway and rail capacity.
- A more interconnected and redundant transportation system as outlined above will ensure a resilient transportation sector with the flexibility to respond to, and recover from, disaster and emergency conditions by re-routing and substituting for impacted services and facilities. These features will help sustain the national and regional economies from either natural disasters or terrorist acts.
- Multi-state and inter-regional corridor planning will augment statewide plans, allowing investment priorities to be advanced based on economic benefit rather than jurisdictional interests. Corridor-based plans will identify and eliminate critical bottlenecks and chokepoints in the highway and rail networks, enhancing mobility and productivity.
- Future transportation planning practices will encourage rational land-use planning and sustainable development patterns. Centers of population and economic activity will emerge that limit the growth of some travel demand and create nexuses of travel origins and destinations, supportable by transit-based systems.
- Technology within vehicles and transportation infrastructure will greatly enhance safety and dramatically reduce transportation-related fatalities. While such technologies will address safety, they will also harness new productivity from existing transportation infrastructure by allowing more traffic, at higher speeds, to operate free of incidents.
- Every vehicle in America will be equipped with built-in dedicated-short-range communications (DSRC) devices and global positioning system (GPS) capabilities that will allow for a full range of safety and dynamic route guidance applications, as well as for automated revenue collection.
- Distance-based vehicle user charging systems will replace federal and state motor fuels taxes as the primary source of transportation revenue in the United States. Such systems will be enabled by the new in-vehicle communications devices cited above, and allow an array of revenue sources at the national, state and local levels. Distance-based user charges will promulgate advanced demand management capabilities through congestion pricing mechanisms that vary charges by levels of demand. These strategies will allow transportation capacity to be priced in a manner that reflects the true marginal costs of using that capacity at any point in time.
- New transportation user charging systems will be supported by nationally interoperable electronic payment systems built upon open architectures and common standards. These systems will enable universally accepted methods of payment across modes and regions, backed by standardized clearinghouse operations through financial institutions already used by the businesses and customers using the transportation network.

- The transportation system will be affordable, with costs equitably allocated based upon user benefits. Transportation pricing will support congestion mitigation through demand management.
- Public transportation investments will be complemented by more private sources of finance through public-private partnerships. Locally and regionally established regulations will allow flexibility of approaches, appropriate public policies, and suitable public roles. The result will be greater transportation investment and world-class asset management practices based on life-cycle economic decisions.
- The transportation system at all levels will be focused on safety, reliability, cost, efficiency, convenience and security, with operations rooted in accountability. Funding, system enhancements and basic operating priorities will be determined by meaningful measures of performance.

The Federal Role in the Future

Movement towards the vision for the U.S. transportation system defined above will require leadership and partnerships at all levels of government, as well as with business and commercial interests, private investors, and other special interest groups. It will also require new institutions and institutional relationships that can transcend jurisdictional interests to consider the economic justification for transportation investment along corridors within and among regions.

Federal leadership will be vital in building the momentum for change. The time for action in setting the course is now, while the opportunity to leverage the evolutionary changes in SAFETEA-LU still lies before us.

National economic expansion and sustainability will require long-term rethinking of resource management as it relates to transportation. It will also require seeking closer alignment among the objectives and programs of the Administration, Congress, the States and metropolitan areas. As we collectively strive for a transportation system that better ensures safety, reliability, cost effectiveness, efficiency, convenience and security, a stronger emphasis will need to be placed on defining strategic goals and objectives for the transportation sector nationally and regionally. Finally, in order to ensure that this direction is advanced, the national funding base for transportation operations and investment will need to be expanded in order to maintain the existing transportation network and expand it to meet new demands. The Commission can help begin this process by focusing on the following critical areas:

- (1) The Federal Government should define the future of the country and its transportation system. The transportation system exists to help the country's economy grow, and the federal government should define what that future looks like, and then garner public support for that vision. The vision should include strategic objectives that will guide resource management and system development. An important dimension of this direction should emphasize critical corridors, by advancing programs that address inter-regional and multi-state needs. Specific supporting federal activities include:
 - Identify corridors of national and regional significance and designating priority highway and rail corridors.
 - Reform project approval processes to enable corridor-based planning and program development.

- Encourage new institutional mechanisms and partnerships by supporting multi-state and inter-regional coalitions with programmatic initiatives and funding.
 - Define federal focus areas that are not modally stove-piped, but encourage multi-modal solutions and systems. Areas of focus may include safety, security, reliability, efficiency, cost-effectiveness, environmental quality and convenience, among others.
 - Federal focus areas should be structured for accountability through specific measures of performance and targets for achievement.
- (2) Expand the national funding base for transportation operations and investment. The federal government will need to address the inadequacy of the motor fuels tax to continue to meet the nation's transportation funding needs in both an evolutionary manner in the short-term and a revolutionary manner in the long-run. In addressing the near-term objective, federal policy must first seek to protect the purchasing power of the federal motor fuels tax, while seeking immediate new sources of revenue and investment. In the long-term, sustainable and viable revenue sources and investment policies will require research, development and demonstrations that identify alternatives to replace the motor fuels tax. In the near-term, the federal government should:
- Index the federal motor fuels tax to protect future erosion of its purchasing power from inflationary trends.
 - Encourage more permissive tolling and innovative road user charges.
 - Support more extensive congestion pricing applications through significant new funding beyond the modest levels allocated for the FHWA's Value Pricing Pilot Program.
 - Encourage greater development of state infrastructure banks (SIB) and similar credit assistance programs at the state and regional levels to foster infrastructure improvements.
 - Create a flexible environment for local and state transportation operators to engage in public-private partnerships where such agreements are desirable.
 - Eliminate the restrictions on Airport Improvement Program (AIP) and airport Passenger Facility Charges to advance investment across the spectrum of aviation system needs.

In the long-term, the federal government should:

- Explore whether a distance-based national roadway charging system based upon vehicle-miles traveled would enable new federal revenue streams and also creating new revenue opportunities at the State and local levels.
- Advance distance-based roadway charging by evaluating and testing technology options for all-electronic charging (e.g., dedicated short-range communications, global positioning systems, etc.) and selecting a national standard.
- Eliminate and/or reduce modal-based stovepipes for funding, allowing transportation investments to maximize efficiency across modes.
- Adopt new funding mechanisms and revenue allocations to consider regional, corridor and multi-state investments that are not encouraged today through state-based funding formulas.
- Establish federal legislation that allows public agencies and quasi-governmental agencies to compete with the private sector for delivery of major infrastructure initiatives.

- (3) Support the definition and implementation of more secure transportation facilities and systems, as well as safer transportation systems with redundancy. The combined regional and federal response to the September 11, 2001 attacks in New York provides a rich source of lessons learned for transportation network operators and emergency-response agencies. These range from the essential role played by passenger ferries in the evacuation of Lower Manhattan; interagency mobilization to manage vehicular access through stages of recovery, site clearance, and reconstruction; restoration of vital transit services with federal assistance; multi-agency coordination with USDOT agencies and FEMA; and the intensive process of planning the permanent reconstruction of destroyed or damaged transportation assets. Federal policies and programs should:
- Seek to replicate the intergovernmental cooperation achieved in the face of national crisis on an ongoing basis by establishing criteria for transportation system planning and structural/security standards that can be infused within present requirements and processes governing the transportation sector.
 - Establish risk-based criteria that are used to prioritize and allocate federal funds to enhance security.
 - Require interagency coordination at the regional level as a better way to leverage funds received by one particular transportation entity.
 - Support advanced research and development in new technologies and demonstration of those technologies in the transportation sector with the goal of enhancing security while not hampering mobility.
- (4) An appropriate federal role will be to establish, maintain and utilize national standards that will support national strategic objectives and guide program development, project implementation, and operating practices. Specific supporting activities include:
- Advance interoperable electronic transportation payment systems, through open architectures and national standards that permit payments. The objective is to ensure universally accepted methods of payment across modes and regions, that are supported by standardized financial clearinghouse operations through financial institutions already used by the businesses and customers using the transportation network.
 - Continue efforts to automate traffic information and traffic management applications through the use of integrated and interoperable Intelligent Transportation System (ITS) technologies, improvements to connecting infrastructure, and interagency agreements and cooperation.
 - Adopt the International Bridge, Tunnel & Turnpike Association's (IBTTA) Performance Specification for electronic toll collection as a means to promote the development of suitable standards for national interoperability among the toll operators and dedicated short-range communications (DSRC) applications.
 - Pursue programs and policies that facilitate linkages between business and trade processes process (i.e., transactions, contracts, documentation, customs, loading, inspection, security, processing) and information flows of the logistics chain (i.e., plants, warehouses, ports, terminals, intermodal facilities, logistics centers, and delivery points).
- (5) Adopt new federal policies and programs aimed at advancing demand management objectives that help promote more effective utilization of available capacity and greater network efficiencies. Specific supporting federal activities include:

- Promote telecommuting and flexible work hours by providing incentives to employers and congested urban areas municipalities that implement strategies that result in meaningful demand reduction or demand shifts to less congested periods.
 - Encourage off-peak goods deliveries at gateway facilities and receiving points by seeking incentives targeted for receivers and shippers that implement strategies that result in meaningful reduction in highway use by trucks or shifts of highway demand to less congested periods.
 - Seek FAA and USDOT support of airport operators' leasing policies that encourage air carriers to upgrade, and thus improve, the utilization of facilities.
- (6) Advance activities that begin a transformation of the community of 20th-Century transportation agencies and businesses to the institutions and relationships that will be required in the 21st Century. Specific supporting federal activities include:
- Devote new transportation programs for professional capacity building, education, research and development.
 - Promote communication between transportation providers and other publicly funded or regulated services, including programs for low-income worker job access, senior citizens services, etc.
 - Educate the public to the role of transportation to the nation's future.

What Is the Public / Regional Operator's Future Role?

As at the federal level, progress toward more effective regional transportation systems rests heavily on creating a vision for improved service and connectivity among the public agencies that share collective stewardship of transportation assets across the country. A visionary federal framework will both challenge and support efforts at other levels of government to better meet mobility needs for people, goods, and communities.

The Port Authority sees transportation as the foundation for a healthy, growing, and thriving economy -- for the region's prosperity. Transportation services should be a resource, and not a problem, in addressing regional and local needs. Regional growth depends on creating a 21st-century transportation infrastructure, moving people and goods more reliably, conveniently, and securely.

The Port Authority's Board of Commissioners defined our commitment to fostering regional prosperity last December by endorsing a Strategic Plan that outlines a 10-year program to address the region's critical transportation needs. It calls for a new generation of partnership investments and direct spending to achieve this vision of a more mobile and competitive region. The Plan attempts to present a comprehensive blueprint incorporating the agency's direct regional transportation responsibilities, the investment plans of the major state and regional agencies serving the bistate metropolitan region, and development policies identified by state and local governments.

The strategic plan embodies a coordinated approach, organized into five transportation goals, or campaigns:

- Support our service-based economy by building systems that move more people in and out of the region more efficiently and effectively, including through enhanced inter-city air and rail service;
- Create modern, efficient public transit that serves commuters in existing and emerging population and job centers;
- Provide the freight industry with reliable, fast, and affordable ways to deliver their goods to the region;
- Upgrade and maintain our existing infrastructure to state-of-the-art standards of service, safety, and security; and
- Bring about seamless regional travel.

The integrated approach in the Port Authority's Strategic Plan proposes that the region's leadership identify shared strategic objectives in transportation, and then coordinate and leverage all available resources in an effort to fulfill those objectives. National policy and local practice should continue to evolve away from the precept that each agency or jurisdiction should do just what it can within its jurisdiction and current modal transportation assets and move toward the concept of collective responsibility for meeting regional mobility goals.

The public sector has the responsibility to provide long-term, strategic, multi-modal, and regional planning that links transportation with area development. Government also will continue to be the investor that is responsible for long-term, large-scale public infrastructure that provides widespread benefits for the general public, as well as fee-paying users, and which does not have a high enough rate of return to attract private investors. This is especially true for mass transit service.

Government also is responsible for ensuring that the transportation networks and facilities are secure, reliable, and resilient, using rigorous risk assessment and established security criteria to set priorities for the protection of existing facilities. This includes the need to provide redundancy in transportation services by strengthening regional backup planning and disaster response in the face of catastrophic events.

What Works? The Port Authority's Public-Public and Public-Private Partnerships

Thanks to its unique combination of governmental powers, the Port Authority has been able to serve as a laboratory for innovative financing and transportation partnerships throughout its history. This section highlights initiatives that best illustrate the benefits of regional, multi-modal, independently financed, partnership approaches in anticipating and meeting transportation needs of this region and gateway access for the Northeast and beyond.

The lesson is in the approaches more than in the specific institutional form. The Port Authority's role has evolved to include a complex layering of actions by all levels of government: the Bistate Compact, sanctioned by the Congress, which created the Port Authority; subsequent legislative authorizations in Albany and Trenton; agreements and leases

with host municipalities in both states; and procedures and roles sanctioned by various federal oversight agencies.

The following provide some insights into some of the ways in which the region's leadership has been able to utilize the agency's capabilities, often with crucial policy support from federal oversight agencies.

Developing a cohesive strategic vision incorporating regional and national public policy goals and supporting trade and commerce.

Examples:

- The Port Authority Strategic Plan - Transportation for Regional Prosperity: Approved by the agency's bistate Board of Commissioners in December 2005, this plan offers a unified vision integrating the agency's investment strategies for its core transportation businesses with those of partner transportation agencies, also reflecting national transportation policy and supporting enhanced gateway connectivity with the Northeast and beyond.
- The Comprehensive Port Improvement Program: This program is embodied in an agency-supported Federal-State-Local plan for bistate port development to 2060, coordinated with the U.S. Army Corps of Engineers channel deepening program and including a Port Inland Distribution Network initiative and other landside-access strategies to address projected increases in maritime trade. The Port Authority's consolidated budget also is the primary source of local matching funds for the US Army Corps of Engineers channel-dredging program.
- Long-Term Business Partnerships: The Port Authority has an extensive portfolio of long-term partnerships with major tenants, especially for development of terminal facilities at its airports and marine container terminals. A combined \$7.4 billion of Port Authority and private investment has been committed at the region's three major airports between 2000 and 2004 for renewal or replacement of airline-financed unit-terminal facilities, roadway and parking infrastructure, air-cargo facilities, and a co-generation plant.
- World Trade Center Redevelopment: This complex effort is underway with the involvement of New York City and State governments, privately financed construction by Silverstein Properties, Port Authority capital funds and insurance proceeds, and federal funds earmarked for transportation infrastructure reconstruction. The combined effort will restore the functions of the World Trade Center complex as a major commercial office asset, the Lower Manhattan terminus of the agency's PATH rapid transit system, intermodal connections with adjacent subways, and enhanced linkages to other NYC Transit subway lines and commuter-ferry services. The Port Authority owns the site and is providing overall coordination of the redevelopment effort.

Ensuring regional coordination of planning for surface transportation renewal, capacity expansion, and improved connectivity.

Examples:

- Goethals Bridge Replacement Planning: The Port Authority has proposed replacing the Goethals Bridge, a functionally obsolete crossing linking Staten Island and New Jersey, which has become a worsening pinch point on the I-278 interstate highway corridor. The U.S. Coast Guard is leading a federal environmental-impact review to evaluate project alternatives for this constrained crossing. Opened in 1928, the Goethals Bridge requires major investment to achieve a state of good repair. The agency has recommended bridge replacement, with a new facility providing today's standard roadway lane design

standards, as well as including capacity for a priority-lane and transit service to support efforts in both states to promote commuting alternatives. A new facility will not only provide lane widths and geometrics suited to today's trucks and buses, but also advance modern security and seismic-protection features, and bicycle-pedestrian access. The bridge provides the primary mainland access for the Howland Hook Marine Terminal, a fast-growing container terminal on Staten Island. Paralleling this corridor, the Port Authority is completing capital improvements to restore rail freight service to the container terminal and other sites in New York City's fastest growing borough. The Port Authority's capital program is the funding source for these critical links to the national highway and rail systems, with New York City contributing capital funding for the rail improvements.

- The Trans-Hudson Express Tunnel: This proposed NJ Transit project would allow doubling the number of peak-hour trains that could be scheduled into mid-Manhattan, with new tunnels under the river and additional tracks and platforms linked to the existing Penn Station. The Port Authority brokered, hosted, and provided primary funding for the Access to the Region's Core Major Investment Study, a planning partnership in which the agency, NJ Transit, and the Metropolitan Transportation Authority collaborated to confirm future service requirements, study modal and alignment alternatives, and select an alternative compatible with MTA and Amtrak rail operations in the Penn Station complex. This July, the Port Authority's Board of Commissioners agreed to become a funding partner of the project, which NJ Transit is leading through the environmental review and preliminary engineering process.
- Trans-Hudson Commuter Bus System: The Port Authority is leading partnership studies to examine a range of options for expanding capacity and reliability of the Exclusive Bus Lane system, the primary transit connection for West-of-Hudson commuters to Midtown Manhattan. Each weekday morning more than 62,000 bus commuters save an estimated 20 minutes on a contraflow bus lane through the Lincoln Tunnel, with most buses connecting via direct above-grade ramps to the Port Authority Bus Terminal. The Port Authority is analyzing the feasibility of establishing new capacity for buses and HOVs to handle projected growth in bus commutation. The studies are also assessing possible high-occupancy toll (HOT) lane options to balance inbound traffic flows. These analyses are being undertaken by an array of partnerships at the local, state and federal levels, and are being funded by FTA and FHWA grants. In New York, the Port Authority is the primary funder of a joint planning study with the New York City Economic Development Corporation to identify options to address the scarcity of bus parking and staging capacity in Midtown Manhattan that would support expanded commuter and intercity bus service, while facilitating the City's plans for large-scale redevelopment of the West Midtown area.
- Regional Air Service Demand Study: The Port Authority and other Mid-Atlantic State agencies are participating in a comprehensive FAA-sanctioned analysis of the future volumes and characteristics of demand for air travel. This will provide an important input for ongoing Port Authority planning to accommodate projected growth in air passenger volumes, from current levels of 100 million annually to 130 million by 2025. The agency's airport development strategy will use this information for planning continued improvement of facilities at the three major regional airports.
- Airport Transit Access: When the passenger facility charge (PFC) program was being debated by Congress, the Port Authority was not only an advocate for the program but secured key language in the final legislation (i.e. that ground access projects that extended off of the airport boundary were an eligible item), which proved to be of tremendous value to the agency and the region. With this core funding as a catalyst, the Port Authority created two innovatively funded, multi-agency, public-private partnerships to

link the region's two premiere airports to the region's rail transit system and the Northeast Corridor. At Newark Liberty International Airport, AirTrain Newark is an on-airport monorail linking the passenger terminals with a transfer station where passengers connect with NJ Transit and Amtrak trains. The three agencies developed the transfer station as a joint project; a private firm built and operates the monorail. At John F. Kennedy International Airport (JFK), AirTrain JFK serves the eight unit terminals, car rental, and remote parking areas as a vital on-airport circulator, and connects with both the NYC subway system at the airport's boundary and the major Long Island Rail Road (LIRR) and subway hub in Jamaica Queens. LIRR trains provide a quick connection to Manhattan's Penn Station as well as the Long Island suburbs. AirTrain JFK's construction was funded by PFC and Port Authority capital funds. Additionally, because the project extended both to rail stations and to a local highway, both the MTA's Long Island Rail Road and NYSDOT accelerated major capital projects that were in their long term capital plan to coincide with the AirTrain construction. This resulted in saving those agencies money by using the Port Authority's existing contractors and certainly saving the traveling public from having their travel paths disrupted twice. The AirTrain JFK connection also has become the centerpiece of ongoing efforts to promote the development of downtown Jamaica as a satellite downtown, especially for aviation and transportation-dependent businesses.

- Regional Ferry Services: The revival of privately operated passenger ferry services represents one of the most significant innovations in the region as transportation agencies have sought affordable and flexible options for relieving rush-hour congestion on some Manhattan-bound transit corridors, providing transit access to centers of new development and redevelopment on the region's waterfront, and improving the resiliency of the region's transportation network in restoring connections subject to emergency disruption. Two decades ago, the Port Authority took the leading role among public agencies in the region in supporting the ferry revival, starting with a decision to reintroduce privately-operated service between Lower Manhattan and the transit hub across the Hudson River in Hoboken in lieu of investment to expand the PATH stations and purchase new rail cars to provide longer trains on this service. A new World Financial Center ferry terminal in Lower Manhattan will open next year, managed by a private operator as a union terminal available for various commuter and recreational services. As with many other Port Authority projects, this effort represents a blend of public and private investment, as the Port Authority typically invested in ferry terminals, while the ferries themselves were provided by, and operated by, the private sector.
- Airport Road Access: At Newark Liberty International Airport, the Port Authority has financed phased access-highway and on-airport improvements planned in conjunction with the New Jersey Department of Transportation and triggered as airport passenger volumes reached forecast milestones. Under its recently approved lease renewal to operate the New York City airports, the Port Authority and the City committed to attack worsening congestion on the limited highway network serving the airport. Airport-generated funding earmarked under the lease is supporting an interagency planning effort that includes the New York State Department of Transportation and other partners, reporting to a public-private task force.

Providing more seamless transportation service by coordinating capital investment plans across jurisdictions, modes, and major travel corridors.

Examples:

- E-ZPass: The Port Authority was a founding member of the E-ZPass Interagency Group (IAG) that introduced E-ZPass electronic toll collection technology. The IAG agencies brokered efforts of New York and New Jersey based toll agencies to identify a workable technology and develop coordinated procurement strategies to ensure operational interoperability. The members of the IAG also developed the legal, financial, and business rules that now govern the interoperability of toll payments and parking charges among 22 agencies in 11 states. By equipping all toll lanes on its six interstate bridges and tunnels with E-ZPass in 1997, the Port Authority achieved significant congestion relief on its own crossings, advanced regional acceptance of the technology, and laid the foundation for the Port Authority's congestion pricing program at its six bridges and tunnels. The E-ZPass system now covers toll roads from Maine to Virginia to Illinois, and represents more than 2 billion toll transactions annually. In peak periods, 80 percent of all transactions at Port Authority crossings use E-ZPass.
- Regional Fare Cards: The Port Authority's PATH system pioneered the introduction of magnetic fare cards in this region in 1991. The agency has installed a new fare collection system that accepts both PATH Quick Cards and MTA MetroCards, offering one of the nation's first regional fare collection systems. PATH is also introducing a new contactless smart card (SmartLink), and has formed a Strategic Alliance with the MTA and NJ Transit to determine how best to implement contactless fare cards across all modes of transit. The Alliance is conducting some of the nation's first field tests of bankcards and other devices (cell phones, payment fobs, etc.) to replace traditional fare cards and tickets.
- TransitCenter: The Port Authority hosted this consortium of regional transit operators. In a region with heavy reliance on transit provided by multiple transit operators, TransitCenter pioneered the TransitChek concept. TransitCheks are issued by local employers who participate in IRS-approved tax-free fringe benefit programs to help workers offset the cost of regular transit commuting. TransitCheks are redeemable by all the region's transit services, including private ferry operators. TransitCenter was spun off by the Port Authority as a non-profit corporation.
- TRANSCOM: The Port Authority created, and continues its active involvement in, this consortium of transportation operations and emergency response agencies in the tri-State metropolitan area to support coordinated operations and construction, as well as expanded coordination of real-time traffic management across the region. Six years ago, TRANSCOM became a private not-for-profit corporation. TRANSCOM has supported the development of electronic links among traffic management centers of its 16 member agencies across the region, providing real-time information exchange about traffic and transit incidents and responses. The approach exploits the large penetration of E-ZPass transponders, using them as anonymous vehicle probes accompanied by ITS technology, as a means of managing delays and providing advisories to motorists. TRANSCOM also does proactive planning, and helps ensure that construction projects are coordinated across agencies, to help ensure regional mobility is not hampered.

Most of these initiatives have had their starting point in the identification of a need through Port Authority planning and market research, industry developments, or work by our partner agencies and metropolitan planning organizations. The Port Authority then has been able to act as a flexible resource in the region, providing seed funding, procurement services, administrative support, or petitioning of federal oversight agencies on behalf of the region. The agency's ability to pool revenues from its various business areas has provided a limited but vital increment of financing capacity that has enabled the region to pursue planning and capital investment opportunities without diverting funds from the core transportation functions dependent on tax levy funding in this and other metropolitan regions.

The Role of Public-Private Partnerships

As described above, the Port Authority has unusually broad experience with public-private partnerships as well as jointly-sponsored projects and services with partner agencies in both states. However, the agency's experience also suggests cautions that need to be heeded with respect to public-private partnerships (PPP), especially with regard to the Port Authority's responsibilities to assure adequate transportation connections between New York City and the New Jersey communities of the Port District. The Port Authority has evolved a multi-modal network concept in which services are provided and coordinated with other operating agencies, and revenues generated by tolled vehicular crossings are made available to help subsidize essential transit services and to support selective investments in transportation network improvements.

The terms of PPP agreements also bear close consideration. Ultimately, the public sector needs to ensure that it receives the full value of the asset to be privately operated, and we are still have relatively little experience, in this country, in evaluating an asset's value over 99 years. The more control the public entity cedes to the private operator, the greater the payment it is likely to receive. But the public sector has to make difficult decisions about the level of control over future toll rate increases, because the more control it retains, the lower the payment it will receive. Similarly, to the extent that the public sector removes any operating restrictions on the private operator, it is likely to realize a higher payment, but needs to understand to what extent those restrictions may result in a future imbalance on the transportation network of the area. A private operator's decisions can have implications for the operators of parallel and connecting facilities. This may complicate efforts to operate metropolitan transportation networks as a system, which in some degree is a requirement under federal transportation and air-quality mandates. Similarly, the length of the term of the agreement will have a direct impact on the payment the public sector receives. All of these issues are manageable, but there are complex tradeoffs that must be evaluated carefully. There clearly is a role for the private sector, and the challenge for the public sector is to fully understand and make the appropriate tradeoff between its risk and the value of what it receives. The public sector needs to ensure that it benefits as much as possible in these deals, recognizing that if the private sector entity fails, the public sector will be still responsible for the transportation asset.

Perpetual Motion: The Port Authority Idea

The States of New York and New Jersey created the Port Authority in 1921 with an agenda grounded in the issues of the day: the need to rationalize railroad freight services and rates at a time when the uncoordinated management of competitive private freight railroad services was impeding the region's burgeoning growth. The railroads successfully challenged that initial mandate for the agency in federal court. Through the decades, the states and the region's leading cities agreed to assign, and sometimes pushed, the agency into new roles in meeting transportation challenges that were never envisioned by its founders.

In the nation as in the region, effective and flexible transportation is the means to achieving human, social, and economic ends that are constantly evolving. The Port Authority as an institution represents two states' solution to a very particular set of historic and geographic circumstances. The evolving idea embodied by the Port Authority is that economic regions

need a transportation resource that can respond to unanticipated crises and opportunities by providing a regional perspective, a long-term vision, resources for investment, and multi-modal capability.

No one can predict confidently the region's specific transportation needs in 2056. But the region's leadership presumes continued growth and progress in efficiency and sustainability. Increasingly, agencies like the Port Authority set our sights on assuring the critical movements of people and goods for the markets we serve, and less on modally based planning. National policy should continue to support this approach, while supporting stewardship of the transportation assets created by our predecessors.

The last 50 years have brought fundamental changes in all of the transportation modes in our region. Passenger ferries crossing the Hudson to Manhattan have disappeared and returned. Breakbulk shipping centered in Manhattan and Brooklyn has shifted to container terminal facilities in New Jersey and Staten Island. Rail freight traffic here faltered, shifted to uncompetitive ConRail service, and resumed expansion with CSX, Norfolk Southern and corollary public investments in both states. Airports have grown to major importance for domestic and global travel. Toll collection has changed from a primarily cash system to a highly electronic, non-stop environment. Penn Station and Grand Central Terminal lost much of their intercity traffic but play essential roles as commuter facilities. Northeast Corridor rail service waned but in more recent years has grown as an alternative to highway and short-haul air travel.

The Port Authority and its partner agencies in both states have managed these waves of change primarily with state and local and user-fee resources. All levels of government must work together to keep our customers moving through changes at least as dramatic between now and 2056 as those of the past 50 years. Our agency has played a special role in anticipating change in the maritime, aviation, and interstate transportation sectors, and financing the strategic investments needed in each area through regional plans, pooled revenues, flexible procurement policies, and public-private partnerships.

No wonder that when the Port Authority marked its 75th anniversary of service, the agency's commemorative history was entitled "Perpetual Motion". While there is no single institutional structure that is guaranteed to be effective for all metropolitan areas, or states, or multi-state regions, the Port Authority has served its parent states effectively by applying these approaches to this region's changing role as a maturing metropolitan area, as well as a vital gateway linking the Northeast and the nation to the global economy. They have served the region - and the nation - well. Our partnership successes here lend substantiate the surge of support for applying these integrated, results-oriented approaches as a hallmark of national transportation policy in the new century.