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Impacts of the New Digital Economy on Transportation

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Thank you, Mr. Doi (Katsuji Doi, President, Japan International Transport Institute or JITI), for the gracious introduction.

Over the past several years the Department of Transportation has been fortunate to work with the Japanese Ministry of Transport in a number of ways, but particularly to encourage innovation and technological advancement in the field of transportation.

Last February, Mr. Doi and a number of DOT representatives attended the 6th Plenary Meeting of U.S.-Japan Transportation Experts in Los Angeles. Following that meeting, we invited participants to join us in a three-day workshop on transportation accessibility, bus rapid transit and Intelligent Transportation Systems (ITS) in Honolulu, Hawaii, which I was privileged to attend.

While the beautiful weather was difficult to ignore, we learned a great deal from each other during those sessions and increased the scope of future U.S.-Japan cooperation. In addition to transit and rail technologies, we will be exchanging information in the areas of emergency response, earthquake disaster prevention and fuel cell applications.

We look forward to continuing our cooperation in transportation science and technology with Japan, which we believe will benefit the citizens of both nations.

Today's session will focus on how information technologies can be used to improve logistics and to "transform" the transportation industry.

Just a half-century ago, the few large-scale computers in businesses performed back-office tasks like payrolls and accounting. Today computers of all sizes are the mainstay of almost all production and service industries. Most workers use a computer at work and are

increasingly using them at home for on-line shopping and other transactions. Many industries are ordering machinery, raw materials and other goods on-line, using increasingly complex computer-based exchanges to manage the process.

The "Dotconomy" – based on real-time transactions and door-to-door overnight delivery – is now a driving force behind the prosperity -- both in the U.S. and globally. While the Internet has primarily been a positive -- particularly for the consumer -- it has also brought with it new coordination and logistics challenges for industry.

Companies – from toy marketers to automakers -- are expected to deliver the goods at "Web speed." Carriers specializing in the delivery of goods ordered via the Internet should expect heavy volumes again this fall as e-commerce continues to surge. Analysts reporting in the new quarterly ***e-Commerce Scorecard*** expect consumers' total e-commerce expenditures to reach $40 billion for the year.

Being able to deliver what the customer orders on time and intact is key, and carriers and shippers who understand this will be competitive in today's global marketplace. Companies can't simply put a product on the truck and not worry about it. As we've seen with some dot.com companies, you can't survive if you can't deliver. And you need to think through how the customer returns the shirt that doesn't fit or the book that wasn't what he or she expected.

As we move further into the digital age, there will likely be pressures for infrastructure investment to build more and larger runways or expand the highway network. But, a less expensive and time-consuming answer to the e-commerce boom is technology -- information technology integrated into Intelligent Transportation Technologies.

Technology-savvy transportation companies are using the Web to provide their customers with real-time rate quotes, order management, and shipment tracking information. We're seeing transportation and manufacturing companies forming joint ventures with companies across the globe to help them deliver the goods to customers faster and more efficiently.

For example, Ryder System, Inc., a global leader in logistics and transportation management, two weeks ago announced a joint venture with Toyota Tsusho America and its parent corporation in Japan. The venture will focus on Toyota and other Japanese auto companies at first,

with plans to offer services in global transportation management, distribution management and supply chain logistics and design.

We're seeing more airline company alliances forming around e-commerce and cargo delivery. Ocean carriers are increasingly using web-based systems to streamline business transactions, including shipment tracing and self-service options.

Recent alliances, such as the proposal for linking FedEx and the USPS, take advantage of special abilities of each partner to serve elements of the total transportation network.

In the U.S. and Japan, we can build on the ITS systems we have to create more efficient logistics, including our respective enhanced Global Positioning Systems. In fact, the pervasiveness of the Web and of supply chain management systems has begun to draw upon the capabilities of ITS and Commercial Vehicle Operations technologies in new ways. Supply chain logistics and the Web have been integrated throughout our business sector. Market-driven progress toward integration of the wireless, PC, speech, voice and video into logistics operations has led to enhanced ITS and CVO capabilities.

Information technologies and the increasing use of GPS have dramatically improved U.S. transportation and logistics efficiency. Annual U.S. logistics costs are about $800 billion. As a percentage of GDP, our logistics expenditures have been cut in half as a result of incorporating these technologies and business methods -- declining to 10.5% of GDP in 1996 from 20% of GDP in 1960. (Source: Volpe White Paper, September 2000)

Three decades ago, corporations began re-engineering the supply-chain process to achieve just-in-time (JIT) inventory-control that cut costs, increased speed and boosted overall productivity.

Japan has been a leader in the inventory control and logistics arena, and American companies adopted many of the inventory and logistics technologies and methods from Japan after studying their success in the auto industry.

With the continuing growth of e-commerce, the business community is taking positive steps to ensure that the logistics of moving goods is increasingly efficient and productive. The

four-year-old Supply Chain Council -- with more than 700 member companies and headquartered in Pittsburgh, Pennsylvania -- wants to create a standard to improve supply chain processes among manufacturers, suppliers, distributors, and retailers. Its members include manufacturers, software vendors, logistics service providers, consultants, researchers, and universities. (Information on the council and its activities can be found at its Web site, www.supply-chain.org.)

How will this new electronic economy change the way we move goods, and what are the potential environmental impacts? What is government's underlying role with regard to the Internet and the digital economy? These are fundamental questions that deserve some exploration because the issues are so important to current and future generations.

Transportation is a key link in the E-commerce chain, and I believe that one of government's important roles is to gather data about potential impacts so that we can better prepare for future investment in and planning for public infrastructure.

The Future of Transportation Logistics

Many in the transportation community can envision a future in which information and other technology makes it possible for the customer to track products or goods from the point of origin, on the ship, to the dock, to the train or truck, and to the final destination. The research community has played and should continue to play an important role in achieving this vision.

The Department of Transportation is strongly encouraging the transportation industry to continue to find ways to make transportation intermodal and truly seamless as well as safer. We believe that together -- with technological and human innovation -- we can create a transportation system that will meet the demands of this new century.

Businesses are increasingly using the Internet to improve efficiency, and this has, I believe, made our transportation sector more competitive and dynamic. Firms are moving their supply networks and sales channels on-line and participating in the on-line marketplaces. Freight companies are teaming up with software developers.

As more and more countries get connected, we'll see even more growth. Global electronic commerce could be worth $7 trillion to the global economy by 2004. (Source: White House Website document, source quoted: Industry Standard, Feb. 21, 2000)

Transportation is no longer the industry we have known in the past. Andy Grove of Intel said last year that: *In five years, all companies will be Internet companies or they won't be companies at all*. We see this in the news as carriers like FedEx and UPS team up with software companies like Oracle and Sun Microsystems to create more efficient shipping and logistics networks.

Conclusion

The forces that elevated the Web to the center stage of the global commercial transactions have been enabled by powerful communication and information networks. We have only begun to understand the transportation and economic impacts of the immense capabilities offered by the new IT systems and the Web.

E-commerce growth and prosperity are closely tied to the viability of the global transportation network. Government's role is to develop a better understanding of how e-commerce is impacting transportation demand, highway capacity, urban bottlenecks, intermodal market share, and the environment.

Both the United States and Japan will continue to rely on technology – especially information technology – to make transportation safer and more efficient. Governments, in partnership with industry, will continue to have a role in making these systems -- information and transportation -- safe, efficient and accessible for citizens and visitors.

In the coming years, DOT plans to work with Japan on the development of information systems for intermodal transportation in port areas, on harmonizing port facility technical codes, and on many other transportation technology issues.

We believe that U.S.-Japan cooperation has been mutually beneficial and look forward to working with you to improve our transportation systems for a new century.

Thank you.