

**United States House Committee on Transportation and
Infrastructure
“Building a 21st Century Infrastructure for America”
Testimony of Frederick W. Smith
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Chairman Shuster, Ranking Member DeFazio, and members of the committee, thank you for inviting me to testify before the committee today. We are at a critical crossroad, given the economic challenges that face our nation. If we want to maintain the U.S.’ status as a global economic and policy leader, we must work together on policy and infrastructure solutions that will modernize and drive our economy forward.

Since 2007 our economy has been slowing, our national debt has increased from 63% to 105% of GDP, net business investment is subdued, protectionist tendencies are increasing here and abroad, and our infrastructure is deteriorating in many areas. To change these trends and advance our success in the world economy will require significant cooperation from both Houses of Congress and both political parties. A key component of economic success depends on our modernizing American transportation infrastructure. Infrastructure investment cannot be limited to road and bridge improvements. A holistic modern transportation system needs to be established combining physical infrastructure enhancements with sound transportation policies, including incentives for improved safety and fuel efficiency. And, without stable sources of funding, we will be unable to successfully support our key role in global commerce.

There are solid areas of growth in today’s economy. Just look at e-commerce. I will discuss e-commerce in more detail later in my testimony, but sales in this area are expected to reach \$2.4 trillion worldwide by 2018, a 26% increase from 2016. To help achieve this forecast,

our nation needs three things: a robust infrastructure that can support the timely and efficient movement of goods and services, open trade that encourages the movement of goods, and regulatory reform based on sound public policy that will spur innovation.

FEDEX

At FedEx, we are an engine for job and economic growth. We find that when we help businesses access new markets, they expand and create jobs in their communities, a critical issue for those who are feeling left behind in this country. Further, a more connected world sparks innovation when shared ideas, goods, and technologies interact to transform how we live and work. Federal and state governments, along with industry and community leaders, must work together to achieve these objectives. They cannot be achieved by one entity alone.

- Our FedEx Express air-ground system, now a global network, offers time-definite air express, ground and freight shipping within the U.S. as well as linking the American economy to 99 percent of the world's GDP.
- Our FedEx Ground and FedEx Freight networks use both road and rail to speed products from business-to-business as well as business-to-consumer services, which are essential in these days of Internet shopping.
- Our FedEx Trade Network business provides heavy air cargo and ocean services around the world.

In April 1973, FedEx launched a new air cargo service with a handful of employees. Today, we have a fleet of over 650 aircraft including our new Boeing 777 freighter, one of the most efficient freighter aircraft in the world. We serve over 375 airports in the U.S. and abroad. On the ground side, we operate 150,000 motorized vehicles. This includes the latest in all-electric and hybrid trucks, some of which transit the streets of Washington each day. Together, our 450,000 team members operate one of the largest logistics and transportation companies in

the world, serving more than 220 countries and territories. FedEx jobs are transportation and trade jobs.

Think about the FedEx headquarters city Memphis, Tennessee. Transportation and trade have made Memphis the largest customs clearance port of entry in the United States. The FedEx SuperHub has helped make Memphis “America’s Aerotropolis.” An Aerotropolis is “aviation plus”: a city or an economic hub that extends from a large airport into a surrounding area of distribution centers, light manufacturing firms, innovation centers, linked to the airport via intersecting expressways and rail lines. FedEx Express arrives by air, supplemented by our surface transport companies, FedEx Ground and FedEx Freight. There are three interstate highways traversing the city, plus Memphis also has advantages in having five Class 1 railroads and the fourth largest inland water port.

On our first night of service on April 17, 1973, FedEx delivered 186 packages to 25 U.S. cities. Today we average more than 12 million shipments each business day around the globe. Vehicles providing service on behalf of FedEx Ground and FedEx Freight each logged more than 2 billion miles last year. From our Memphis Hub, we have 150 aircraft flying every night, with an average aircraft landing interval of 90 seconds. Other major FedEx Express hubs in Indianapolis, Newark, Oakland, Anchorage, Ft. Worth and Miami connect the U.S. with every corner of the globe.

The rapid growth of e-commerce is putting significant and enormous new demands on our transportation infrastructure. E-commerce has driven major shifts in demand over the past several years. E-commerce shopping isn’t a trend — it’s a fundamental part of retailing today in the U.S. and growing exponentially worldwide. The changing landscape of the marketplace has presented FedEx with a wonderful growth opportunity well into the future, and FedEx is

committed to providing our customers with industry-leading e-commerce solutions that leverage all of our enterprise-wide capabilities. By 2020, the global B2C e-commerce market is expected to generate \$3.2 trillion in revenue, with the B2B e-commerce market expected to be twice that size. In terms of transportation revenue, the global B2C e-commerce transportation market produced \$85 billion in 2015. Most importantly, e-commerce is expected to grow at a 15 percent CAGR by CY19.

The FedEx global networks are capital intense, large physical systems, built over 40+ years, and are essential to the growth of e-commerce today. Without our physical networks – along with several major competitors – there would be no e-commerce. Virtual online retailers must be rooted in the physical as e-commerce goods need to be physically delivered to a destination. Building this type of global, integrated network does not happen quickly. FedEx has worked to build a presence in communities big and small for more than four decades. Access to the Internet is sparking growth in once under-served communities, and those communities count on FedEx to connect them with the world.

FedEx and other transport providers need modernized infrastructure that includes:

- The best air traffic control system, so that more flights can operate safely in the congested air space and at crowded airports around the United States.
- Updated sea and air ports, with modern technology to speed shipments through potential choke points.
- Well-maintained roadways, so that the most direct routes can be operated safely, efficiently and swiftly.

Transportation and logistics are the lifeblood of U.S. commerce from factory to warehouse to retail outlets or e-commerce fulfillment centers to consumers. Within the U.S. and around the world, FedEx moves shipments that are compact, often perishable and are high value added goods that need to be quickly delivered. Today our Express and Ground companies move

both the products that consumers want and items such as lifesaving medical devices that people desperately need. FedEx offers a broad array of time certain delivery options depending on the needs of our shippers and recipients.

However, FedEx and other transportation and logistics companies cannot continue to help grow the U.S. economy and increase jobs without improved infrastructure and wise policy decisions from Washington. Let me discuss a number of important issues that are essential if we are to build a quality infrastructure in the 21st Century.

FAA REAUTHORIZATION AND AIR TRAFFIC CONTROL REFORM

The current FAA authorization extension expires on September 30, 2017. We look forward to FAA Reauthorization hearings, particularly as they relate to the structure of the Air Traffic Organization (ATO) and the ongoing transition to NextGen. Presently, there are three main issues of importance to FedEx:

- Improving the air traffic control (ATC) system
- Ensuring transparency in the payment for the ATC system
- Assuring irrelevant provisions are not added to the legislation

The current ATC system needs to be improved to achieve increased capacity in the skies and on the ground, more efficient flight paths, enhanced safety, reduced noise and emissions, reduced delays, and a less labor intensive working environment for pilots and controllers. Improving ATC system efficiencies is dependent on the implementation of the multiple programs, procedures, and systems encompassed by NextGen. Much of NextGen will require long-term capital expenditures which is difficult, if not impossible, while the FAA is subject to annual Congressional appropriations.

We commend Chairman Shuster and this Committee for tackling the difficult issues associated with ATC Reform. We support recent efforts to create a new independent ATC system. In general, we believe that an independent enterprise will work more effectively and efficiently than the current government operated system. That assumes, of course, this new ATC system is allowed to operate as a bona-fide stand-alone business organization separate and apart from the government. It must be able to efficiently respond to the needs of its users, appropriately charge for its services based on a credible cost accounting and allocation system, and have access to capital markets.

From past experience, this type of organization is difficult to create. If instead, we see a “hybrid” type of privatized ATC system with little control over costs, no credible cost accounting system, with “Ramsey” or weight based pricing (based on ability/willingness to pay), and without all segments paying their true share of allocated costs, we cannot support the effort.

Any new reauthorization bill must ensure transparency and fairness in the payment of fees for the ATC system. Currently the FAA is funded through excise taxes deposited in the Airport and Airway Trust Fund (AATF) as well as a contribution from the General Fund, which recently was up to 30% of the total. The amount of excise taxes paid by all-cargo carriers is roughly equal to the use of the system.

Any changes to this current payment system must address the following concerns. Charges for the system must be based on actual costs using a transparent cost accounting system and all users of the system must either pay their fair share of the costs or those costs must be subsidized by the government. No carrier’s charges should be materially increased over the current rates. The major funding gap that will be created if the amount from the General Fund is removed from the system’s funding must be replaced in some fashion other than through

payments from the users of the system. If a user fee is proposed, the weight of an aircraft should not be a factor in calculating the user fee. The weight of an aircraft is not a factor in the cost of handling that aircraft in the ATC system.

In past years, many operational measures have been added to FAA reauthorizations. FedEx opposes all amendments that do not relate to improving the efficiency and safety of the ATC system.

NEXTGEN

In addition to changes in our ATC system, we need technological advancements that NextGen can deliver. Critical to the safe and efficient operation of the U.S. aviation system is a modern air traffic control system. Unfortunately, the basic design elements of the FAA system have not changed significantly since its inception in the 1950s which is incredible given technological change over the last 60 years! To meet future demand, improve safety, and avert gridlock, the nation must deploy new technology, modernize procedures, add capacity, and increase productivity. The NextGen initiative is vital for our country's economic future.

FedEx Express is excited about the possibilities that FAA's NextGen air traffic control – the GPS-based system – offers because it will enhance safety, reduce delays, save fuel, and reduce emissions. For our operations, NextGen means less time sitting on the ground and holding in the air. NextGen procedures can shave minutes off flight times, which translate into money saved.

For our fleet and our crews, NextGen innovation and improvements can deliver an even higher level of safety. NextGen can provide air traffic managers and pilots with the tools to proactively identify and deal with weather and operational hazards. NextGen will make aviation

even more environmentally friendly. Direct routing eliminates circuitous flight plans which waste fuel and energy. More precise flight paths and controlled descent will further reduce the numbers of people affected by aircraft noise, a factor especially important to FedEx Express, so we can be better neighbors while flying at night.

INTERSTATE ROAD SYSTEM

The building of the U.S. interstate highways fundamentally changed our country and the way we work together as Americans. It took 17 years to create and fund the idea of the interstate, beginning with a 1939 Report to Congress and culminating with President Eisenhower signing the Federal-Aid Highway Act of 1956. As we all know, President Eisenhower understood the importance of a strong highway system in no small part because of his experiences with the German Autobahn in World War II.

Our interstate system is now over 60 years of age and it is in desperate need of updating. We need both short and long term investment. Short term, we must stop the deterioration in many interstate roads and bridges that have long suffered from neglect. Long term we need a plan to modernize, improve, and expand the entire system.

Currently, more than 40 percent of major U.S. highways in urban areas are congested. On average, a typical American commuter loses 34 hours sitting in traffic each year. According to the American Society of Civil Engineers (ASCE), over 30 percent of U.S. interstates are in poor or mediocre condition. These substandard roads result in drivers' paying \$67 billion, or \$324 per motorist, annually in vehicle repairs and operating costs. The ASCE rates U.S. roads 19th in the world, behind Namibia.

Left unaddressed, future demand will continue to challenge our bridges and roads for years to come. The U.S. Department of Transportation projects that by 2045 freight volume will increase by 45%, and the DOT currently has 20 proposed new interstate highway segments planned. This growth will add even more pressure on freight bottlenecks throughout the country and further hamper the performance of our highway system and the transportation industry alike by adding delays to truck freight. We must build this modern interstate highway system as the current situation can no longer be tolerated.

Along with the American Trucking Association, FedEx supports federal investment in highways primarily funded by user fees. The trucking industry – which currently pays more than 40 percent of federal highway user fee revenue – supports an increase in highway user fee payments if they perceive value in the form of road and bridge improvements from the expenditures. The sources of revenue should:

- Be easy and inexpensive to collect;
- have a low evasion rate;
- be tied to highway use; and
- avoid creating impediments to interstate commerce.

We must identify revenue sources that provide sufficient long-term funding for the Highway Trust Fund. We must recognize that due to changes in vehicle technologies, fuel taxes cannot alone fund the system. Alternative vehicles such as electric and natural gas need to also pay a user fee. This can now be easily done through technology. Consequently, FedEx supports a broad mix of revenue sources in order to avoid over-reliance on a single option. The recent, bipartisan effort to adequately fund the Inland Waterways Trust Fund can serve as an example.

33 FOOT TRAILERS

FedEx has a portfolio of shipping services to move e-commerce within the U.S. and around the world. Our two surface transportation subsidiaries, FedEx Ground and FedEx Freight, offer small parcel and less-than-truckload pallet shipping to businesses across the entire country.

To continue to move America forward, we must combine infrastructure enhancements with sound and efficient trucking policies, coupled with incentives for better safety and fuel technology. The growth of e-commerce in the modern economy necessitates quick and reliable shipping for the 122.5 million households and 7.5 million domestic businesses that now rely on the transportation system to obtain goods every day.

FedEx is part of a diverse group of American shippers, deliverers, and retailers, *Americans for Modern Transportation (AMT)* coalition who advocate for enhanced transportation policies. This coalition actively works to improve transportation infrastructure and policy to reflect, and meet, the growing needs of modern businesses and consumers.

One way we can help freight move around the U.S. is by making smarter, more effective use of existing infrastructure. In 2011, 67% of all U.S. domestic freight tonnage moved by truck— that is 9.2 billion tons of freight. As transportation demand has increased over the years, equipment standards for other transportation modes have been necessarily adjusted to accommodate more capacity (such as double-stacked rail containers). It is time to make adjustments to trailer standards for light freight and ground package shipments.

Less-than-truckload (LTL) carriers and ground package systems, including FedEx Freight and FedEx Ground, rely primarily on twin trailers to haul freight. In 1982, Congress fixed a standard of 28 feet for twin trailers that states must allow on their highways. Capacity expansion

opportunities for these types of trailers have not been adjusted for over two decades due to the Federal freeze on truck size and weight under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

FedEx strongly supports the proposal to increase the national standard for twin trailers from 28 feet to 33 feet. This would not include an increase in gross vehicle weight, so it would not increase wear-and-tear on the highway system. The adoption of a 33' twin trailer standard would allow a carrier, on any given lane, to grow the volume of shipments carried up to 18% before adding incremental trips. The use of 33-foot twin trailers was recommended by the Transportation Research Board in its Special Report 267 and also by the Energy Security Leadership Council.

Studies have shown that an increased trailer length of 33 feet will be as safe, or safer, than the existing 28-foot length trailers in terms of handling on the road. In fact, Twin 33s perform equal to or better than current trailer combinations in four critical safety measurements: static rollover threshold, rearward amplification, load transfer ratio, and high speed transient off tracking. In several years of operations in Florida and elsewhere, FedEx drivers have told us repeatedly that they find them to be more stable. Safety will be enhanced simply by reducing the trips and mileage driven with industry estimates of 1.3 billion fewer miles driven, 6.6 million trips eliminated and 900+ accidents avoided at today's level of demand. In short, more goods are transported per trip.

Such a reduction in truck trips would be environmentally friendly, saving on fuel and emissions from trucking. The EPA SmartWay Transport Partnership Program identified use of more productive vehicles as an effective emissions reduction strategy. By increasing the length of twin trailers by just five feet will enable companies to increase efficiency, and support

sustainability by reducing CO2 emissions by 4.4 billion pounds of carbon and saving more than 200 million gallons of fuel per year to move current volumes.

OPEN SKIES

The U.S. airline business consists of two geographic markets – domestic and international – with a wide variety of service offerings available to U.S. consumers in each. Federal Express was a pioneer in the U.S. air cargo business and a leader in the development of the international marketplace as well. In both, the deregulation of antiquated requirements on market entry allowed FedEx Express and the overall market to grow and better serve millions of customers. In the international context, it began with the instigation of the first “Open Skies” agreement in 1992 with a new bilateral agreement between the U.S. and the Netherlands. Open Skies Agreements eliminate government regulation of commercial decisions about the routes, frequency, pricing and capacity of airlines service. Instead, Open Skies promotes competition in the market, which benefits customers and consumers. All U.S. Administrations since 1992 have supported this policy, and each has negotiated additional Open Skies agreements that create U.S. jobs, support U.S. business expansion, and help market U.S. exports.

Today, FedEx has created a global air network that relies on 120 Open Skies agreements and our 650-plus aircraft fleet provides market access for U.S. manufacturers and merchants to offer their goods to international businesses and consumers, large and small. Over 300,000 U.S. businesses, 98 percent of which are small and medium sized businesses, depend on the supply chains supported by U.S. air cargo operators to sell and compete in the global marketplace.

FedEx supports Open Skies, wholeheartedly. We see Open Skies as a natural evolution of aviation deregulation that allowed our company to invent and develop the modern air-ground

express delivery industry. U.S. deregulation of cargo aviation in 1977 resulted in enormous job and revenue growth for both U.S. cargo operators and their customers. U.S. air freight services to fast-growing regions like the Middle East, Indian Subcontinent, and Africa contributed over \$3 billion to the U.S. trade balance in the last five years.

As international competition has become more vigorous and new models challenge the traditional legacy carrier dominance, some say that Open Skies agreements should now be limited to protect large U.S. airlines from new competition. FedEx is part of a coalition of U.S. passenger and cargo airlines, *U.S. Airlines for Open Skies (USAOS)*, which support Open Skies. This coalition represents airlines transporting more than 42 million passengers annually, and cargo airlines moving nearly 8 million tons of cargo. Airlines that benefit from Open Skies employ over 900,000 people. Open Skies agreements benefit not just U.S. airlines but also consumers, businesses, and our military.

FLIGHT AND DUTY TIME

One area which does NOT need change is expanding the application of Part 117 Flight and Duty Time Rules to the All-Cargo airline industry. FedEx has led the airline industry in fatigue risk management for over 25 years, and we continue to lead, using the same flight and duty regulations that have safely applied to cargo carriers since their enactment. In fact, portions of our industry-leading suite of safety related software tools are in the process of being patented; we received our first patent just last month.

Part 117 Flight and Duty Time Rules have produced unintended, negative consequences in passenger operations. FedEx is safer under its current, comprehensive fatigue prevention system than it would be under Part 117. FedEx has modeled the use of Part 117 in our system

and can categorically say that our system produces much better fatigue results than would Part 117. Part 117 rules do not fit our system.

NATIONAL UNIFORMITY IN AREAS OF INNOVATION

New technological advancements are changing the way we look and think about our transportation needs. These technological advancements must be factored into what kind of infrastructure we will need in the 21st Century. It is critical that the U.S. have policies that encourage national uniformity in areas of innovation such as autonomous or driverless vehicles as we advance into the next century.

AIRPORTS

Another important element of aviation infrastructure is airports. Adding runways in the U.S. has become a massively time-consuming effort, averaging 20 years from planning to pavement. However, within the next 10 years, the top twenty airports in the U.S. will become overly congested. While control of traffic in the air will help, new runways and facilities will still be needed and existing ones will need maintenance. The newest runway built in Memphis for example, is the 11,000 ft. World Runway, which allows fully loaded, wide-bodied jets that carry up to 25 percent greater maximum payloads to fly non-stop to points halfway around the globe. Using this runway, our B-777F's reach Asian points such as our operations in Japan and Korea without stopping, and then return direct from places like Hong Kong and Shanghai to our hubs in Memphis, Indianapolis and Oakland speeding up America's commerce in an unprecedented way. In the end, sufficient airport infrastructure is a *sine qua non* of U.S. air operations.

SUSTAINABLE ENERGY

Finally, although you may not think of it as infrastructure, we need a more flexible and sustainable energy supply – biofuel for aircraft, electricity for delivery vans and natural gas for our long-haul trucks. I include it as “infrastructure” because it is a critical element that supports our industry, and this need extends to all modes, not just aviation. For FedEx, sustainability is a relatively simple concept: to connect the world responsibly and resourcefully. That’s why we focus upon issues like vehicle fuel efficiency, cleaner vehicle technologies, reducing aircraft emissions, and finding alternative sources of cleaner domestic energy, including renewables. For aviation, we want a jet fuel that can be used (without changing infrastructure) that is safe and delivers environmental, economic and operational benefits, such as supply reliability. FedEx Express has a sustainability goal, set forth in 2009, to get 30 percent of its fuel from alternative sources by 2030.

While FedEx and other private sector entities will continue to seek sources of alternative fuels, we believe the U.S. government has a role to play in encouraging the development of alternative aviation fuels. FedEx participates in the joint private-sector-government taskforce, Commercial Aviation Alternative Fuel Initiative (CAAFI). We strongly support the work of this organization, allowing both private sector actors and appropriate government agencies to come together to meet the goal of developing alternative fuel for U.S. airlines.