

Building Cities on a Foundation of Cooperation

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October 23, 2014 – Against a backdrop of surging urban populations, crumbling infrastructure and dwindling public funding, metropolitan planners are creating the vision for transportation networks that will support the growth and vitality of cities today and well into the future. A key to their success, according to Myron Gray, president of U.S. Operations for UPS, will be the same unique human trait that gave rise to the first cities centuries ago: cooperation.

Good afternoon, everyone. It's a pleasure to be with you.

In the company of so many people dedicated to the future of our nation's metropolitan areas, it's fascinating to remember that cities are a fairly recent phenomenon. ... Relatively speaking, that is.

I'm certainly not the expert on cities that you are, but I did a little research on the subject ... just for this occasion. ☺

The first cities we know about were built around 2900 BC, in a region that is modern-day Turkey and Iraq.

Before then, humans evidently spent the majority of their time doing a lot of hunting and gathering, but not much congregating.

Of course, cities have never been more popular.

Currently, 54 percent of the world's population lives in urban areas. That's up dramatically from 34 percent in 1960.

By 2050, it's predicted that 64 percent of the developing world and 86 percent of the developed world will be urbanized.

Think about that. ... While it took all of human history to reach 3.5 billion urban settlers, we're going to add 3 billion more in the next 30 years.

There are many reasons why urbanization continues to gain momentum – not the least of which is that all of the Starbucks are in cities.

A more important reason is due to a unique human trait. It's the ability to cooperate. That's the theory put forth in a recent issue of *Scientific American* magazine.

According to the authors, we owe our evolutionary success not simply to brainpower, but to our ability to use our brains to cooperate with one another.

Without cooperation, cities and metropolitan areas could not function. They would resemble Congress on a huge scale. A scary thought.

In the future, cooperation will be even more important because there are going to be a lot more of us living in cities.

Urban areas growing at their predicted rate of about 2 percent per year will double their populations in just 36 years.

At that rate, you can almost see development taking place before your eyes.

Highways add more cars, green space becomes the color of concrete and what were once sleepy communities on the outskirts of towns are overtaken by new homes, offices and shopping malls.

Of course, all this comes under the heading of growth and progress. But both are raising issues that are new to us. It is demanding solutions that remain elusive.

The surge in urbanization ... meets the failing state of our surface transportation infrastructure ... meets limited public funding.

And there is a toll being collected in everything from quality of life to strength of the economy.

I believe social planners call it a “wicked problem.” One with fast-changing, often contradictory requirements -- where solutions can cause changes that cause new problems.

The wicked problem of rampant urbanization and inadequate infrastructure is driving a need for action that is running ahead of our ability to respond.

Every four years, The American Society of Civil Engineers issues a report card on the state of America’s infrastructure.

The transportation portions of the 2013 Report lay out the degree of our dilemma:

Aviation – D. ... Roads – D. ... Transit – D. ... Inland waterways – D.

Bridges and rail both outperformed – they got a C+.

The Engineers Society says this depressing report card comes with a big cost.

The sorry state of our surface infrastructure will cost the American economy more than \$3 *trillion* through the decade.

The report card, to be fair, does indicate that progress is possible. In four years since the 2009 report, the cumulative grade for 16 areas measured has moved from a D to a D+.

So: how do we improve?

It starts with the work you do.

Your long-range plans are what create the vision for transportation networks that support the growth and vitality of metropolitan areas today and well into the future.

In that work, MPOs and UPS – on the same side of a number of critical issues.

For example ...

We agree with you ... that federal funding should be increased to improve surface transportation infrastructure and ensure America’s competitiveness.

We agree with you ... that the Highway Trust Fund should be maintained at sufficient levels to provide for a safe transportation network for commercial and public travel.

We agree with you ... that a multimodal freight program with sufficient revenues to improve intermodal networks is needed at the metropolitan and state levels.

And we *absolutely* agree with you that there should be a public policy *focus on freight*.

You might expect me to say that, right?

After all, every day UPS delivers more than 16 million packages to more than 8 million customers.

It's estimated that at any given time, the economic value of the goods and services moving in the UPS network represents 6 percent of our country's gross domestic product and 2 percent of global GDP.

But we need a focus on freight for more than any of my self-serving reasons.

Simply put, the numbers demand it.

The Census Bureau says the U.S. population will increase nearly 20 percent by 2040.

That's one new person *every 12 seconds*.

With the average American requiring the movement of a staggering 57 tons of cargo per year – everything from new cars and trucks, machinery for factories, televisions, smart phones, and many, many other goods that we buy and sell every day – our ships, trains, trucks, ports and roads are going to get a lot more crowded.

Synchronizing all of those flows of commerce is what we do. And it's going to require a lot of cooperation, including from Congress.

As you know, Congress has begun to recognize freight as a national priority.

Because it affects almost every one of us and is crucial to our economy, we would like to see Congress make an even stronger commitment to freight.

Maybe if lawmakers and the public had a better understanding of the role of freight, it would ease the way to greater cooperation.

Here are three things we believe more people should understand about the freight business.

The first thing ... is that the secret to moving freight efficiently and economically is the ability to shift between modes.

Today's consumers don't care how a product gets to them as long as it arrives on time, undamaged and at the right price.

The ability to move packages and freight through different modes – from air to truck, truck to rail or air to ocean – is critical to our ability to deliver goods in the most efficient, economical and environmentally friendly ways possible.

The second thing people need to understand ... is that a focus on freight means a focus on logistics.

You may have heard that at UPS we love logistics.

We love logistics because logistics is the secret sauce that synchronizes transportation modes, technology and data.

But here's the thing about logistics. Logistics can give us the most efficient route between two points, but it cannot improve the underlying infrastructure that makes that efficiency possible.

For that, we need cooperation. ...

In the face of dwindling federal funds, we've seen signs of cooperation on a smaller scale among counties, states and regional authorities that have found ways to generate their own funding sources.

But upgrading our highways, airways, railways and ports at the national level is a bigger ballgame. And something only Congress and the Administration can do.

Meanwhile, MPOs must be seen as the place where the most important transportation issues are raised.

MPOs need to make sure you're talking to the right people. And that those people are hearing you loud and clear – especially when it comes to the need for adequate funding ... the need for faster project delivery and the need for local decision-making on projects affecting metro areas.

Because until our nation's infrastructure is upgraded, many of the gains we make in logistics will be given back in inefficiencies.

The third thing ... that's important to understand is that weaknesses in our freight infrastructure won't be solved by an improving economy ... or a patch here and a fix there.

We need a new approach to addressing problems in the nation's freight transportation system infrastructure.

This is a system that was built in silos and stitched together over the course of decades.

Highways were built to connect with highways ... railways with railways.

Congress has tried to link them together, but it's still a patchwork.

The failings of that patchwork are obvious to all of us.

Crumbling roads ... collapsing bridges ... eroding dams ... and aging airports.

Of course, these same roads, bridges, dams and airports were once shiny and new – some were marvels of their time.

But for many, their time has passed. It's not an issue of rebuilding them. We can't even afford to maintain them.

In many regions – especially older cities in the Northeast – transportation funds are barely meeting maintenance needs for the infrastructure we already have.

I know that Congress has heard from AMPO on this subject numerous times.

... And that some AMPO members have developed their “disinvestment” lists ... bridges and roads projects that can be abandoned as the money dries up.

Congress, of course, is divided over how to fix it.

The only policy approach is to take a long-term, coordinated view of how different transportation modes can work together.

The only workable solution is to transform our infrastructure from a patchwork to a network.

At UPS, we know the power of networks.

We’ve been working on ours for more than a century.

As we approach the holiday season, we’re gearing up to handle what will probably be record volume, thanks to the explosion of e-commerce.

On six days in December last year, we delivered more than 25 million packages. Each day.

That’s like delivering a package to every man, woman and child in New York, Dallas, Phoenix and Atlanta ... on the same day.

We’ll probably surpass those numbers this year.

To handle the volume – not just during the holidays but every day of the year – we use practically every available mode of transportation.

We started this business 107 years ago delivering messages on bicycles.

Today we have a delivery fleet of more than 96,000 commercial vehicles.

We have one of the world's largest airlines, with more than 560 aircraft.

We use tuk-tuks in Asia ... and gondolas in Venice.

We have an extensive network of ocean intermodal connections.

And we're one of the largest customers of America's freight railroads.

As packages and freight move along the supply chain, we collect and crunch more numbers than you can imagine. All to become more efficient and create more value for our customers.

Every day our engineers and experts work to shave just a few seconds off a route, off a package sort, off a driver's single movement.

If there's a greener or more time efficient way to do something, we'll find it.

That's how we arrived at a proprietary technology platform called ORION.

ORION is one of the most complicated things our company has ever tackled.

But it started with a simple question: What is the absolute best way to get from Point A to Point B?

We know that one of our drivers typically delivers to about 120 locations per day.

Between any two of those stops, there are an almost unlimited number of available routes.

Of course, we want drivers to take the best route, which is *the most efficient route*.

Because in our business, time and miles are big money.

How big? ... A reduction of just one mile a day per driver saves the company as much as \$50 million.

As it turns out, according to ORION, the number of possible routes for a driver making 120 stops in a day is 199 digits long. That's 13 numerals followed by 183 zeroes.

The number exceeds the number of nanoseconds that the Earth has existed.

ORION – which stands for On-Road Integrated Optimization and Navigation – is one of the great examples of Big Data at work.

ORION uses 1,000 pages of code to analyze 200,000 possibilities for each route.

It does all that in real time and delivers the optimal route in about three seconds.

By the end of 2013 – after being applied to just 10,000 routes – ORION had already saved 1.5 million gallons of fuel and 14,000 metric tonnes of CO2 emissions.

Needless to say, we're working hard to deploy the system to as many of our 55,000 North American delivery routes– and then the rest of the world – as quickly as possible.

But not even ORION can solve all of the problems that threaten efficient freight movement.

Traffic congestion ... bottlenecks in the rail system ... unpredictable weather. Every obstacle that slows freight reverberates through our network with implications to our customers, their customers and to the U.S. economy.

Because of the work we do, we do battle with the infrastructure every day.

- The lack of long-term planning to link intermodal connections.
- An antiquated air-traffic control system.
- The lack of commitment to adequately finance the Highway Trust Fund.
- A crumbling surface-transportation infrastructure.
- Too few trade agreements.

- Customs delays for commercial goods entries.

That's just the short list. But you get the picture.

When you think about it, our problems are America's problems. Because when and where U.S. capacity to move goods suffers – so does U.S. competitiveness.

So what will it take to move freight transportation into the 21st century?

Here is a summary of the policy changes we believe would make the system more efficient and America more competitive.

- We must link different transportation modes together, moving from a silo-ed approach to one that is seamless ... from a patchwork to a network.
- We need greater centralized coordination in transportation policy, not a scaled back federal role.

Some in Congress have pushed to delegate the federal transportation program to the states. We think this would be a mistake because it would remove the national purpose for a transportation system.

- We also need to increase the federal motor fuels tax and index it to inflation.
- We support dedicating these additional tax revenues exclusively for highway spending programs to bolster the Highway Trust Fund.
- Congress should even consider alternative funding mechanisms, such as mileage-based user fee programs and tolling authority for new highway capacity.
- We need the approval of several free trade agreements that are now on the table with negotiators in this country and elsewhere.

Many of these policy changes will take significant resources and years to implement.

Others could be accomplished more quickly. Such as increasing the length – but not the overall weight – of trailers from 28 ½ feet to 33 feet in twin trailer configurations.

But all of these solutions are tied together by a single, critical reality. None is possible without cooperation.

I want to close by thanking AMPO for the opportunity to be with you today.

I also want to thank you and your organizations for the work you do to keep America moving ... and moving in the right direction.

It's a big job.

By facilitating the collaboration of government, business and the public in the planning process, you're creating a shared vision for the future of our nation's metropolitan areas.

You deserve the help and cooperation of all stakeholders.

Daniel Burnham, the American architect and urban designer who created master plans for Washington D.C., Chicago and Manila, once said this about your jobs:

"Make no little plans," he said. "They have no magic to stir men's blood and probably themselves will not be realized."

We all need to think bigger – more creatively and more cooperatively.

We need to remember the days when great cities were taking shape to meet the challenges of modern urban areas.

We need to make big plans and think in terms of big solutions. The strength of our economy and the quality of our lives demand nothing less.

Thanks.