

Economist discusses turbulent world of aviation reform

August 20 2015, by Cortney Langley



John Strong knows aviation. For roughly 30 years, the CSX Professor of Finance and Economics at William & Mary's Raymond A. Mason School of Business has immersed himself in the economics, safety and politics of the airline industry, the Federal Aviation Administration and international transportation operations and infrastructure.

He has co-authored a number of books, consulted for government private agencies and taught workshops for organizations including the World Bank in Latin America, the Middle East, Africa, India and

Southeast Asia.

He's also the sole academic [voice](#) on the Business Roundtable's Working Group on Aviation, an industry group that is calling for a reorganization of U.S. air [traffic control](#). Although efforts to reform and modernize the FAA have spanned decades, Strong believes the time is finally ripe for change.

William & Mary News recently sat down with Strong to discuss what those changes might entail.

What are the biggest changes you've seen over the years in transportation?

We moved an entire important sector in the global economy – airlines, trucking, shipping and railroads – from a largely government-run sector to a privately run sector, but the government still provides much of the transport infrastructure, whether airports, air traffic control or port operations.

As the industry changed and rapidly grew, the demands on infrastructure changed. So over the last 20 years, the biggest issues in transportation have become how we manage and develop the next generation of infrastructure.

That's been nowhere more true than in [aviation](#), because it's just not the same kind of infrastructure anymore. In particular, the air traffic control environment is a completely different world than we've lived in in the last 50 years.

How so?

We're now on the cusp of moving from a radar-based air traffic control system to a satellite-based air traffic control system. Everyone's familiar with using GPS technology on phones or in your car. We still manage the flow of air traffic across the U.S. using radar technology that has its roots in the late 1940s and early 1950s. While there have been many improvements, it still is yesterday's technology.

So we have a 60-year-old system based on a technology that rapidly is becoming obsolete. Many other countries have moved further, faster than the United States. In a sector where we always were the leaders in air traffic control, we're clearly falling behind.

We need to make that transition from one technology to another technology, as has been done across some parts of Europe, and in Canada in particular.

But we move more planes – and more safely – than anywhere in the world ...

Privatization meant industry growth and more flights. That growth has doubled since 2000. The FAA's air traffic control system handles about 15 million flights annually. The United States does operate the biggest and safest air traffic control system in the world. The question is not what we're doing today, but how we're going to do that five years from now, 10 years from now. We're trying to operate a system that increasingly is hard to maintain and grow.

It's becoming harder and more expensive to keep our legacy system limping along.

Just as one small example, when you travel across the U.S., you move from one air traffic control center to another. So from Leesburg to

Cleveland to Chicago, you're handed off from one radar center to another. Those centers were all built more than 50 years ago. You can't use wireless communication in them because they were built using a different technology. So a lot of the technologies that we take for granted in the rest of our lives, we're not using in our airspace management.

What that means is in order for us to operate a very busy, very safe system, we have to reduce capacity. So we have lots of delays. The system operates safely at a cost of lots of delays and a much higher cost of operation.

As the industry grows in the future, those capacity constraints are going to become more and more important – as anybody who sits on a [runway](#) in LaGuardia knows.

But the Federal Aviation Administration has been trying to modernize for a long time...

There's clearly about 20 years' experience of FAA reform efforts. But a long series of reports and studies – some of which I have been involved in – show that these modernization efforts have experienced significant cost overruns and delays.

I think there are three fundamental challenges the FAA faces. One is in the general area of financial challenges. Then there are some organizational challenges, and finally some political challenges.

First the financial challenges. The FAA total budget is about \$15.5 billion. About two-thirds of that (\$9.5 billion) goes to running the air traffic control system; the other one-third goes to support airport programs (about \$3.3 billion) and to operate the regulatory parts of the

business (safety, certification, etc.).

The way that we're supposed to pay for the air traffic control system is through the Airport and Airways Trust Fund. Whenever you buy a ticket, a 7.5-percent ticket tax as well as a \$4 fee for every flight you take goes to the trust fund. There are also contributions through a fuel tax on general aviation, plus some charges on air cargo and international travel.

The problem is that the trust fund doesn't cover the cost of the regulatory, [airport](#) and air traffic control programs anymore. It raises about \$11 billion a year. So we're short by about \$4 billion a year, which is made up by general tax revenues. The FAA is always competing for general tax revenues with every other government program. What always happens is the operating part of the budget gets first claim. The capital budget – which supports modernization – has been cut and cut. So the capital budget is now about \$2.5 billion per year, which is far short of the more than \$30 billion required to modernize the system.

And much of that capital budget is going to repair the old technology and equipment we have, rather than building the next generation air traffic control system.

So how are we ever going to raise the money to build the next generation system? We need a system that can fund a long-term capital program.

The problem is the FAA is dependent on an annual appropriation from Congress. If they want to fund a 20-year capital program, they don't get – and can't plan for – 20-year funding.

The organizational challenge then leads to the political challenge, which was the thinking that we operate the safest system in the world. You know, "If it's not broke, don't fix it." It became a really bad problem two

years ago with the federal budget sequester. When government funding stopped, all the capital and modernization programs stopped. I think it made the entire aviation community realize we can't continue to do things this way.

Some groups that were very reluctant to support any kind of change rethought their positions. In particular, some key members of Congress, some key congressional staff and the National Air Traffic Controllers Association (the main air traffic controllers' union), have dramatically changed their views about reforming the air traffic control system, its organization and funding.

I think this is probably the best time in recent memory for something significant to be done. That will be good for the country, it will be good for the economy and it will be good for travelers as well.

But you admit the FAA's been trying to reform since the 1990s. So what's different now?

This is one of the few issues where the political acrimony in Washington is becoming less severe. There's more bipartisan support at the Congressional committee level. While it's probably true that the current administration doesn't have an appetite for big changes, it clearly is something that could be included early on in the agenda of the next administration, whether that is Republican or Democrat.

What's the ideal fix look like?

There are a lot of proposed solutions, but the general evolution has moved toward a few key principles.

The first is making air traffic control, currently under the FAA, into an

independent organization. That would give it dedicated funding and the ability to obtain long-term financing to fund the infrastructure. We have to make air traffic control independent, and we have to give it its own financing capabilities.

The way to do that is to change the system from collecting ticket taxes, cargo taxes and fuel taxes to a system that would charge each plane for using the [air traffic control system](#), just like you charge tolls on the highway. If you're an airline, the costs of providing air traffic control would be a function of how many takeoffs, how many landings and how long you were in the system.

We should move to a cost system where airlines would pay for air traffic control services directly rather than through ticket taxes and fees on passengers. It doesn't make sense that two 737s flying the exact same route pay different amounts depending on the fares paid by the passengers onboard or that a private business jet on that route would pay based on the fuel it used. We are one of the few countries in the world that has not moved to a user charge system. All the airlines pay this way when they operate in Canada or in Europe, for example.

Doing so would create a dependable stream of revenue that a new air traffic control organization could rely on to issue bonds and finance long-term investments. It solves the budget problem and it aligns costs with the underlying activity in a better way. But you can't do it with air traffic control remaining as a government organization inside the Department of Transportation.

Another aspect I think worth mentioning is the FAA currently has a dual role. It's supposed to manage the safety of the system, but it's also the operator of the system. The rest of the world has decided that's an inherent conflict of interest. We should have a government agency that regulates and monitors and manages safety, but that's different from the

operating part of the system. That's one other benefit that would come with FAA reform.

What would private air traffic control look like? And where would its initial funding come from?

It's not necessarily private [air traffic](#) control. For example, the model that we have put forth and which has gained industry support is based on a not-for-profit, nongovernmental enterprise, that would have a stakeholder board represented by industry, government, and passengers. The way it worked in Canada was they took all the same revenues – from ticket taxes – and transferred them to the new organization. Then they started to charge the airlines and general aviation, and as those funds grew, the taxes went down. Then it became an independent organization.

One of the big tests for the new system in Canada was September 11, because all those planes from Europe went to Canada. And they had to land all those planes right away. And it worked.

So what's the flip argument, the risks?

One was whether the new technology was going to work. When you're having the conversation about satellite GPS systems in the 1990s, that's very different than having that conversation in 2015.

Also, managing a transition from a radar system to a satellite-based navigation system was an unknown. Canada's now got 20 years of experience with it. The UK now has 12 years of experience with it.

So how do we get there? In the medium-term, we're going to run two systems in parallel. Then as we get more and more comfortable with the

transition, we'll be able to phase out the old system and move toward a new one. That'll bring not just more capacity, not just fewer delays and lower costs, but it will also be a safer system.

The questions of risk have become less and less compelling. In the most recent United Airlines in-flight magazine, Hemispheres, the CEO Jeff Smisek's editorial basically says, "We need a new [air traffic control](#) system and we need it now. There's lots of experience with it. We should get there as quickly as we can."

This is off topic, but you've also commented before on trends in the airline industry itself.

I've been involved in lots of cases and analyses over the years where I thought the mergers and acquisitions that happened in the industry haven't always been good for the public. I have been pretty skeptical about airline mergers. It became a situation where once you allowed one merger, you had to allow another and so on. Not everyone agrees with this, but maybe we should have thought differently in the first place. We should have never started in the first place.

Many small communities have been hurt by industry consolidation. When you had United, Continental, Delta, Northwest, American, U.S. Air – when you had six or eight carriers – every secondary city had two airlines that provided service. All these smaller places have one airline now – and sometimes not even that. And in many of these cases fares have increased dramatically.

Provided by The College of William & Mary

Citation: Economist discusses turbulent world of aviation reform (2015, August 20) retrieved 24

April 2024 from

<https://phys.org/news/2015-08-economist-discusses-turbulent-world-aviation.html>

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