

This white paper examines the opportunities for Congress and the Trump Administration to use existing FAA authority and new management reforms, innovative financing mechanisms and private sector capital—adopting governance models applied successfully throughout the global Air Navigation Service Provider sector—to modernize America’s civil aviation infrastructure.

ATC Reform: Innovative Financing Solutions Are Ready Now

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The Trump Administration has identified ATC reform as one of its signature issues. With strong opposition from general aviation, consumer groups, a significant number of state and local governments, some security experts, numerous liberal and conservative think tanks, and many members of Congress, corporatization could run into severe headwinds.

In the meantime FAA infrastructure modernization needs urgent attention. By treating the physical ATC system as eligible infrastructure, and applying corporate best practices, private capital, innovative financing tools and public private partnerships, desperately needed progress should become visible quickly, and at reduced cost to the American taxpayer. We refer to this alternative as the FAA P3 ATC Modernization Plan (P3-AMP). A detailed blueprint for P3-AMP will be released early in 2018 for public review, and can accomplish infrastructure modernization with proven efficiency.

A Thirty Year History

Central to the President’s 2018 Budget is a multi-year plan to move FAA’s ATO into a privatized entity. The Budget *“Initiates a multi-year reauthorization proposal to shift the air traffic control function of the Federal Aviation Administration to an independent, non-governmental organization, making the system more efficient and innovative while maintaining safety.”* Despite the logic that that this is a good idea, corporatization has run into organized and persuasive resistance over the past thirty years.

It is tempting to look outside the U.S. for successful privatization models and reach a conclusion that FAA’s ATO needs to be run like a business or a utility company. Fundamental differences become obvious when closely studying NavCanada, UKNats or AirServicesAustralia, starting with the fact that the FAA manages the largest, highest volume airspace in the world. The complexity of the infrastructure needing modernization or replacement is orders of magnitude beyond what other countries have dealt

with. What is a safe system today can be made unsafe as a result of hasty reengineering of FAA’s complex systems and procedures, especially as major modernization efforts like NextGen will be simultaneously integrated.

Further, little has been studied over the past three decades to gauge privatization’s impact on America’s aviation economy. Currently the GA sector generates over one million U.S. jobs and more than \$200 billion in economic activity. Potential fallout when relegating GA to second class status could cost jobs and damage the sector.

FAA Has Chosen to Modernize Air Traffic Infrastructure Using 1980’s Management Practices

America is still using World War II era radars to separate aircraft in flight, and these radars are essential even though transition to a new satellite surveillance system should be imminent. Reasons are many:

- FAA procurement processes are steeped in a bureaucracy optimized for government-led acquisitions using traditional government methods (Figure 1);
- Acquiring new ATC systems is complex to begin with, but is rarely performance based, where risk sharing is rebalanced toward the responsible contractor;
- Many programs struggle to keep up with accelerating technological change (radar is a good example); and
- Although the FAA Acquisition Management System (AMS) provides for the use of new mechanisms such as P3s and innovative financing tools leveraging practices such as “Systems as a Service,” these tools have been ignored of late;

The status quo is clearly unacceptable. In a Department of Transportation Inspector General report¹, Calvin Scovel predicted NextGen will need about \$80-120 billion to complete without a major change in FAA practices. While this estimate seems extreme, under the right conditions, the private sector will be willing to invest any reasonable amounts needed (probably more than \$50 billion) to modernize the ATC system.

“P3-AMP” and the Way Forward

P3-AMP is a common sense plan that will accomplish FAA infrastructure modernization needed today. By treating the ATC system as eligible infrastructure, and using both innovative financing tools and public private partnerships (P3s), this path can attract desperately needed outside capital and private sector practices.

P3-AMP uses existing AMS authorities and a few straight forward FAA management reforms, so that ATC upgrades can be performed with proper funding and using best commercial practices. Once developed these new systems and services are integrated into FAA’s existing ATC framework and made operational.

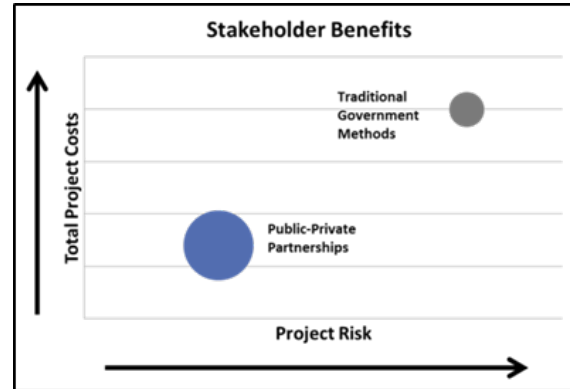


Figure 1 P3s versus traditional government procurement methods

There are several key conditions that provide the strongest possible foundation for P3-AMP to work:

1. Private sector willingness to assume both the technical responsibility and the performance risk for ensuring the FAA ATC system is modernized and once again becomes the best and most efficient in the world;
2. Readiness to use tools such as Innovative Financing and Public Private Partnerships, which are permissible under the broad authority of AMS, and offer private sector capital and best commercial practices leading to reduced program risk and better taxpayer value. FAA management should be encouraged to borrow from the Office of the Secretary of Transportation (OST) whose expertise is deep and extensive; and
3. FAA needs added assurances that it can apply AMS to support these new partnership constructs.

FAA has prior experience using innovative financing methods. The best example is with the FAA’s own SBS ADS-B surveillance system, one of four critical legs of the NextGen stool. Awarded in 2007 and with over 500 ADS-B towers placed into service by 2010, this accomplishment was made possible using performance-based contracts, off budget financing tools and a P3-like structure that kept the program on schedule and below budget. The government’s

¹ Statement of Calvin Scovel, Inspector General, U.S. Department

of Transportation, before the House Aviation Subcommittee, Hearing on ATC Modernization, February 5, 2014

own estimates are that this program likely saved the U.S. taxpayer over \$1.5 billion over the twenty year forecast period.

Next Steps for P3-AMP

Many FAA systems urgently need to be modernized today, at the same time recognizing that this is a critical juncture because the federal government is faced with severe budget challenges. A detailed and actionable P3-AMP Blueprint will therefore be released for public comment in the Winter of 2018. This will be a step-by-step roadmap with goals, ATC priorities, procedures and savings, and built around proven P3 structures, but tailored to the unique requirements of the federal regulations. The P3-AMP Blueprint will identify sources of capital that can take pressure off of the general fund, save taxpayer dollars, and score favorably against the federal deficit. Further many of these projects will revitalize safety-critical aging infrastructure while creating hundreds of new jobs. They will generate long-term savings to the taxpayer through substantially lower operating cost profiles.

Of the dozens of highest priority FAA infrastructure candidates suitable for P3-AMP, attention is directed to:

- VOR Network Sustainment Implementation: Modernize and sustain 938 aging facilities that are a critical element of the NextGen PBN strategy, with state of the art technologies;
- Oceanic Facilities and Services: Including centers, air to ground communications, automation and aircraft equipage;
- ARTCC and CCF facility replacement programs; and
- SENSr: Replacement of hundreds of aging radars in the NAS for the benefit of FAA, the Department of Defense and other agencies. Although this program will eventually be supported through a radio spectrum auction, project financing remains an immense unknown.

An innovative financing structure could accelerate new radar deployment by a decade, save taxpayers over \$3 billion and reduce project risk to FAA. SENSr managed this new way would score “zero” toward the federal deficit.

Several of these opportunities can be activated in the next calendar year. By the way, estimates developed for VOR Sustainment alone have identified taxpayer savings over \$700 million over the next 20 years. Considering the taxpayer savings due to the SBS ADS-B surveillance system of \$1.5 billion, the benefits quickly add up. Billions of dollars in potential taxpayer savings will be detailed in the P3-AMP Blueprint planned for release shortly.

Infrastructure Finance Summit: January 22-23, 2018

In response to this challenge, NEXA and other major sponsors have organized a two-day Conference and Summit, ***FAA Infrastructure Modernization, Innovative Financing and Public Private Partnerships***, to be held at the National Press Club in Washington D.C. January 22 - 23, 2018.

This Conference and Summit is designed to engage thought leaders from the Administration, Congress, the investment community, the aerospace sector, airlines, airports, air cargo companies, and academia. The overarching goal is to share ideas, explore and challenge assumptions, policy positions, and current practices that need to be reevaluated or altogether changed such that the benefits of 21st Century aviation infrastructure can be fully realized.

In the weeks prior to the Conference and Summit, NEXA will be introducing a comprehensive list of 30 future FAA infrastructure opportunities, including UTM and UAM, having a combined value of over \$50 billion, and suitable for innovative financing or P3 programs.

SUMMARY OF “P3-AMP”

Regrettably the FAA has come up short of its mission to update U.S. air traffic infrastructure including key programs like NextGen. Many ATC modernization programs are urgently needed at a time when the federal government is also facing severe budget challenges. As a general concept, P3-AMP uses proven public private partnership concepts, innovative financing, private sector capital and commercial best practices, without requiring controversial changes in FAA governance or the institution of user fees. P3-AMP offers an established performance-based model, customarily used for infrastructure development in the U.S. and elsewhere, to deliver results on time and below cost. As a relevant case study, consider the 20 year taxpayer savings due to the SBS ADS-B NextGen surveillance system delivered in 2010 by ITT/Exelis, of \$1.5 billion.

As the way forward, P3-AMP:

- Activates several urgent FAA modernization programs as soon as 2017.
- Offers billions of dollars in potential taxpayer savings, due in large part to accelerated development driven by commercial best practices.
- Uses long-term capital provided by private sector markets through a wide variety of means, and not the taxpayer.
- Makes use of existing FAA AMS regulations and simple FAA management reforms.
- Will positively impact the aviation and aerospace sectors. Jobs and GDP growth will be guaranteed.
- Requires only minor congressional legislation to tighten FAA management reforms and create credit enhancement mechanisms such as federal loan guarantees.
- Does not require User Fees.