Written Testimony of Senator Byron Dorgan
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Introduction

The nation's aviation system is part of the lifeblood of our economy, yet the system is facing rising demand, limited airport capacity, and aging navigation technology. The Federal Aviation Administration (FAA) has developed the Next Generation Air Transportation System (NextGen) in an effort to modernize the nation's air traffic control system. Once implemented, this system will continue to perpetuate safety standards and promote a more efficient, state-of-the-art satellite-based system. This system has the potential to safely facilitate economic growth, increase mobility, and provide the United States with the ability to keep pace with our international competitors.

Recognizing the challenge of air traffic control modernization, the Eno Center for Transportation brought together key stakeholders, former policymakers, and academics into the Eno NextGen Working Group. I have had the honor to co-chair this working group with Former U.S. Secretary of Transportation Jim Burnley. This group gathered to discuss how to best accelerate airspace modernization and to analyze the institutional barriers that have contributed to the issues surrounding NextGen's implementation. Our research detailed the history of air traffic control in the United States and the attempts that have been made to accelerate reformation. It also included an analysis of six different countries that have successfully reformed the way their air traffic control systems are governed and funded.

Based on the goal of reforming air traffic control provision in the United States to effectively and efficiently implement NextGen and its accompanying benefits, and the research that has been conducted for the working group, we have proposed a set of guiding principles for air traffic control reform. These principles are meant to be a starting point for crafting legislative reform.

The Need for Reform

As has been widely discussed in Congressional hearings[1], by the Government Accountability Office (GAO)[2], and the Office of the Inspector General (OIG)[3], the NextGen program has experienced unstable federal funding, which has led to

[1] For example, the recent *Options for FAA Air Traffic Control Reform*, an Hearing to the Subcommittee
[2] For example, *Air Traffic Control System:*
Selected Stakeholders' Perspectives on Operations, Modernization, and Structure (GAO-14-770), released on September 12, 2014.
[3] For example, *Status of FAA's Efforts to Operate and Modernize the National Airspace System*, released on November 18, 2014.

implementation issues and increasing costs. These challenges have not only made the program more expensive for U.S. taxpayers, but have also created costs for the economy and compromised U.S. competitiveness.

The FAA, like other federal agencies, is subject to federal procurement rules, which create additional challenges when it comes to managing large-scale projects such as NextGen. The inability of federal agencies to issue bonds or other forms of long-term financing further exacerbates these challenges. Our study of the causes of these issues has highlighted the potential drawbacks of the existing governance and funding structures for delivering ATC services, suggesting that reform could substantially accelerate and improve NextGen deployment.

These issues are not new. The FAA has consistently been slow to implement modernization plans and update the numerous systems that comprise U.S. ATC. This has catalyzed calls for the internal reorganization of FAA multiple times and has prompted many proposals to reform ATC governance and funding. Discussions of reform have been ongoing since the early 1980s.[4]

In 1994, following vice-president Al Gore's National Partnership for Reinventing Government, a very detailed proposal to create a government corporation to provide ATC services in the United States was put forward by then Secretary of Transportation Federico Peña, the *Air Traffic Control Corporation Study*. The following year, Representative Norman Mineta (D-Calif.) introduced a bill, HR 1441 – United States Air Traffic Service Corporation Act, on April 6, 1995, which aimed to "provide for the transfer of operating responsibility for air traffic services currently provided by the Federal Aviation Administration on behalf of the United States to a separate corporate entity." This proposed government corporation would have charged user fees to the airlines (in the form of weight and distances charges), would have had budget autonomy from Congress, would have had permission to issue bonds, and would have been subjected to distinct procurement procedures from the rest of the federal government. But, lacking support from the airlines, general aviation, and many members of Congress, this bill died in Committee. As it was in 1994, disagreement between stakeholders has been a constant theme in all efforts to reform ATC provision in this country.

Two years after introducing the bill to create a government corporation to provide ATC services in the U.S., Norman Mineta led a commission to study the issue. The conclusion of the "Mineta Commission" was that the FAA had "too many cooks" (including Congress, OMB, GAO, etc.) playing a role in ATC. The commission proposed a performance-based organization capable of charging user fees and

[4] For example, President Reagan's 1987 *President's Commission on Privatization* looked at the issue of air traffic control governance.

issuing bonds.[5] As a direct result of the Mineta's commission, the Air Traffic Organization (ATO) was created as an arm of FAA in 2000. This new ATO took a step towards reforming governance, yet it ignored the Commission's directive to reform ATC's funding structure.

The creation of the ATO did not solve most of the issues that have been identified, including the need for stable funding. The recent draft bill for USDOT funding for FY2016 is likely to increase challenges for NextGen deployment. While FAA's budget was slightly increased, the Facilities & Equipment (F&E) portion of the FAA budget – FAA's capital account, which funds both maintenance of existing infrastructure and modernization – was decreased by $100 million, reaching a 15-year low of $2.5 billion.[6] With a significant amount of back maintenance needs on FAA's legacy infrastructure, NextGen deployment will once again suffer if funding is cut. Within the current budgetary environment, it is hard to envision a scenario where these funding levels will have the potential for increase. Recently the FAA completed the deployment of the new En Route Automation Modernization (ERAM), a critical system that future NextGen developments will use. While this is a crucial step in the implementation of NextGen technology, it experienced cost overruns of $370 million. Of that $370 million, FAA Administrator Michael Huerta has noted that $40 million can be attributed to the budget sequester.[7] With more potential sequesters looming in the horizon, passengers, carriers, and our national economy cannot afford to wait.

International Experiences

While the United States' ATC system is operated by the federal government and financed through taxation, most other developed countries have departed from a system provided directly from the national government. In our research, we analyzed six peer countries. Three of the countries (Australia, Germany, and New Zealand) have created government corporations to provide ATC services. The other three (Canada, France, and the UK) all have unique structures: an independent non-profit user co-operative in Canada, a reformed government agency in France, and a public-private partnership in the United Kingdom. All six countries avoid relying on taxation to finance their operations and are instead funded by weight and distance fees charged to users of the airspace.

These nations also have separated their ATC operation from safety regulation, which remains in governmental agencies. This separation eliminates an inherent conflict of interest that exists today with the FAA doing both jobs. The International Civil Aviation Organization (ICAO), the UN agency responsible for aviation safety,

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[5] National Civil Aviation Review Commission, *Avoiding Aviation Gridlock: A Consensus for Change*, released on September 10, 1997.
[6] House Appropriations Committee, *Fiscal Year 2016 Transportation, Housing and Urban Development Bill,* released on April 28, 2015.
[7] Air Traffic Management (April 30, 2015). *ERAM achieves its ultimate milestone.* Available at: http://www.airtrafficmanagement.net/2015/04/eram-achieves-its-ultimate-milestone/

since the early 2000s has recommended that member states proceed with the separation of ATC provision and regulation.[8] In addition, the European Union has also mandated separation for all its 27 members.[9]

Not only is separation recommended by ICAO, but this rationale has also been used before in the United States with the Atomic Energy Commission (AEC). Until 1975, AEC performed research and development (R&D) for the nuclear industry, and also regulated the safety of the same industry. In order to eliminate this potential conflict of interest, in 1975 these functions were split into two separate entities: the Nuclear Regulatory Commission for safety regulation and the Energy Research and Development Administration (merged into the Department of Energy in 1977) for R&D.

In recent discussions here in the United States, there have been concerns that non-governmental ATC provision could lead to increased costs to the airspace users, poor service, or unsafe operations. The experience of our peer countries demonstrates that commercialized providers have the ability to keep costs in check, upgrade their systems without public funds, and improve safety.[10] Some key factors that are essential to the success of these systems include reliable, independent sources of revenue; independent, but accountable, management; and direct stakeholder involvement.

Principles for Air Traffic Control Reform

The only way to solve the challenges associated with NextGen deployment is through transformational governance and funding reform at the FAA. Based on our research, the members of the Eno NextGen Working Group have agreed to a set of 10 Principles for Air Traffic Control, which should be used as a starting point for crucial FAA reauthorization discussions. The 10 principles are:

1. Promote growth and accommodate diversity in the national airspace system
2. Ensure a coherent, stable, and predictable funding structure for air traffic control
3. Establish a self-sustaining funding mechanism for air traffic control
4. Enable an efficient procurement system for air traffic control modernization
5. Enable bonding authority

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[8] International Civil Aviation Organization (2006). *Document 9734 – Safety Oversight Manual, Part A,* 2nd edition.

[9] European Parliament (2015). *Fact Sheets on the European Union – Air Transport: Single European Sky*. Available at: http://www.europarl.europa.eu/aboutparliament/en/displayFtu.html?ftuId=FTU_5.6.9.html

[10] Government Accountability Office (2005). *Air Traffic Control: Characteristics and Performance of Selected International Air Navigation Service Providers and Lessons Learned from their Commercialization* (GAO-05-769); Oster, C. V. and Strong, J. S. (2007). *Managing the Skies: Public Policy, Organization and Financing of Air Traffic Management*. Ashgate.

6. Include aviation stakeholders in the governance of the air traffic control provider
7. Enhance and improve the Federal Aviation Administration's role as the safety regulator
8. Improve the certification processes at the Federal Aviation Administration
9. Facilitate robust Research & Development for air traffic control
10. Create and carefully implement a plan to ensure a seamless transition to a new system

A complete description of each principle is included for the record. Also included in the record is a list of institutional and individual members of the Eno NextGen Working Group.

The principles expressing the need for predictable and stable funding, and the need for a self-sustaining funding mechanism, are inspired by the need to ensure that the ATC provider is insulated from political whims. This is extremely important if we wish to avoid what happened in the 2013 government shutdown and the budget sequester. Air traffic control is a 24/7 technological service, the backbone of the aviation industry, and one of the most important industries in this country. It is imprudent to let such a service be subject to political and budgetary cycles. The current funding streams must be replaced by direct payments to the ATC provider, allowing users to pay for the services they receive.

Furthermore, bonding authority is essential for more efficient investments in modernization efforts like NextGen. Trying to deploy multi-billion, multi-decade investments in technology with a budget that is appropriated year-by-year, like the FAA is subject to, is next to impossible. With bonding, backed by the ATC provider's own stream revenues, better capital management will be possible.

As for governance, principle number six highlights the need for more stakeholder involvement in the system's governance. While the Management Advisory Council (MAC) has an important role in aiding the FAA, this should be taken a step further with stakeholders having a direct role in the governance of the system. This involvement would promote a balanced system that is more attentive to the stakeholders' needs. This can provide a more effective way of prioritizing investments, but it would not mean that the federal government would be taken out of the picture. As the guarantor of the public interest, the federal government must maintain a role in governance.

These principles are just an initial step to the creation of a better, more efficient ATC system. Congress and aviation stakeholders should take the opportunity of the momentum that has been created and come up with solutions that will allow U.S. ATC to reclaim its title as the gold standard of the world.

Conclusion

Congress has an opportunity during the upcoming FAA reauthorization to do something bold and transformational that will allow ATC in our country to enter into the 21st century. The time for small scale attempts to reform the FAA is over. We need to do something big and transformational. Following the numerous discussions that we had during the work of the Eno NextGen Working Group, I have come to realize that full-throttle reform is the only way to solve the issues that have been identified throughout the decades. The logical conclusion of these discussions and the principles that we have put forward is that ATC provision should be spun off the FAA into a new independent entity. This new independent entity, which should be a government corporation or a non-profit organization that is fully outside the federal government, needs to have budget independence, needs to be funded by its users, and needs a governance structure that is responsive to the industry stakeholders.

There has been some discussion about removing the entire FAA from DOT or even the government; this is an unworkable idea. Even without air traffic control, the FAA will have a very important role and essential governmental role as the safety regulator of our nation's aviation system – this is a critical public role. It is inconceivable that such a role could be handed over to an entity that is outside the direct control of the government, even if it is a government corporation. Moreover, this would not accomplish the critical separation of the operator from the safety regulator, in line with ICAO standards and the rest of the developed world.

We should also use this opportunity to remove the inherent conflict of interest that exists in having the FAA both providing ATC and regulating ATC safety. No other agency within USDOT both operates and regulates a transportation service. For example, the Federal Railroad Administration regulates railways and issues grants, but does not manage train dispatching. The National Highway Traffic Safety Administration regulates the safety of motor vehicles, but does not set speed limits or control traffic lights. Separation allows each organization to focus on their core mission and avoid potential internal conflicts of interest. A new ATC organization could focus on serving customers without having broader regulatory responsibilities, and the FAA could focus on regulating ATC safety and the rest of the aviation industry, ensuring that the United States airspace continues to be the safest in the world. ICAO recommendations and our own experience in this country are very clear that separation of safety regulation from safety regulation is a worthy goal.

Some have raised the question of "what problem" we are trying to solve. While it is true that the FAA has been making progress with NextGen, this progress is still far too slow compared to what is needed. The fact is that with the current budget and regulatory environment, only so much can be done. Only governance and funding reform, and the creation of a new independent entity to provide air traffic control services, will allow the NextGen effort to be significantly accelerated. After 30 years

of attempted reforms, there is now an opportunity to move forward and reform the U.S. ATC provision into a system more ready to deal with the challenges that the increase of air traffic in the next decades will bring.

Appendix

Eno Center for Transportation NextGen Working Group – Statement of Principles for Air Traffic Control Reform

Principles for Air Traffic Control Reform

1. **Promote growth and accommodate diversity in the national airspace system**

Access to the national airspace system is crucial for the economy of the nation as well as of many small communities around the country. General and business aviation represent an important share of the traffic in our airspace and make a vital contribution to the national economy. Both domestic and international air carriers depend on an efficient system, and government is also a critical user. Effective representation of all airspace users in the governance structure of the air traffic control provider is essential to ensure that stakeholders' interests are safeguarded. Congress and the federal government should also continue to play a substantial role in promoting the growth of the entire aviation system to ensure that adequate capacity exists, delays are reduced, and access is maximized.

2. **Ensure a coherent, stable, and predictable funding structure for air traffic control**

The current funding mechanism for air traffic control provided by annual appropriations is not an effective mechanism for a highly technological and capital intensive service business. Air traffic control should be removed from the federal budget process and should not be dependent on annual appropriations. This would insulate air traffic control from events like the budget sequester and federal government shutdown of 2013.

3. **Establish a self-sustaining funding mechanism for air traffic control**

The current funding system, which is based on a mix of taxes and general revenues, should be replaced, to the extent possible, with direct payments to the air traffic control provider. This funding method would create a self-sustaining system and would be in line with international principles. It would also improve the link between the services provided and the revenues coming in, providing an incentive for efficiency. Additionally, allowing all sectors of aviation to be a part of its governance will allow them to be more engaged in the system's modernization.

4. **Enable an efficient procurement system for air traffic control modernization**

Despite 1996 legislation to exempt the FAA from many federal procurement rules, today's FAA procurement system substantially mirrors that of the rest of the federal government and remains inefficient. These procurement rules and procedures are not effectively designed for the highly technological ATC system, and hinder the system's modernization. Air traffic control modernization must include improvements to procurement processes.

5. **Enable bonding authority**

The air traffic control provider will need the ability to issue debt, including bonding authority to aid in long term financing of capital expenditures. The ability to issue bonds, backed by the user-based revenues streams, will ensure better capital planning and will help modernization efforts like NextGen to be more effectively managed and implemented.

6. **Include aviation stakeholders in the governance of the air traffic control provider**

Stakeholders must play a strong role in governance of the air traffic control provider in order for it to be responsive to the needs of its users and other aviation stakeholders. This involvement would promote a system that is more attentive to the stakeholders' needs. This could be a more effective way of prioritizing investments. The federal government will have a role in the governance structure as a guarantor of the public interest.

7. **Enhance and improve the Federal Aviation Administration's role as the safety regulator**

The United States has the safest airspace system in the world. The FAA should retain its role as the safety regulator of the airspace system after reform to ensure that it will continue to be the safest in the world. This will bring the FAA in line with the rest of the administrations within the U.S. Department of Transportation, which regulate safety but do not operate the services. In addition, existing rules and procedures should be reviewed, streamlined, and improved, including expediting safety regulatory procedures. Separation of provision of air traffic control services from safety regulation will also follow international recommendations, allowing

each organization (the FAA and the air traffic control provider) to focus on their core responsibilities and avoid potential internal conflicts of interest.

8. Improve the certification processes at the Federal Aviation Administration

A critical component of FAA's continuing role as government safety regulator is the certification and approval processes of aviation products, flight standards, and people. Effective and timely certification processes are essential for the industry and the nation's economy, and delays in the approval processes can be extremely costly and disruptive to the successful implementation of NextGen, third class medical reform, updating the existing general aviation fleet with modern equipment that will improve flight safety, among other concerns. Moreover, the current processes are unable to keep pace with the rapid advancements in technology and must be reformed, quickly, in order for the national aviation system to continue to be the best and safest in the world. The FAA culture, as well as the regulatory and certification processes, especially in the area of general aviation, need to evolve in order to better keep pace with changes in technology.

9. Facilitate robust Research & Development for air traffic control

The FAA, with the support of NASA, has sponsored laudable Research & Development (R&D) to improve the safety and efficiency of our skies. Like other areas within the agency, however, this work is constrained by federal budget and procurement procedures that delay projects and increase their costs. R&D should be freed of such constraints.

10. Create and carefully implement a plan to ensure a seamless transition to a new system

The transition to any new approach for financing and governance must be thoughtfully and meticulously implemented. Every effort must be made to avoid any adverse effects on the day-to-day functioning of the air traffic system during, or subsequent to, the transition. An important component is to provide as stable and secure a working environment for the employees of the agency as possible, including the continuity of the collective bargaining relationships and processes for employees who currently are represented. The transition in the financing should be done in a way that avoids any significant changes in the financial burdens of the users of the system. Sufficient time must be given to all stakeholders to prepare for the new operating environment.

Disclaimer: While we succeeded in reaching a broad consensus on the need for air traffic control reform, as is often the case with an exercise like this, these principles, in whole or in part, may not necessarily represent the views of all who participated.

Membership

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Former Senator Byron Dorgan
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