**NEXTGEN WAVE 1**

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Lack of funding will prevent NextGen, a plan to revolutionize the airline industry, from being finished.

Holeywell and Lippman 12

[Ryan Holeywell, staff writer at Governing, Daniel Lippman, Governing contributor, April 3, 2012, “The 5 Biggest U.S. Infrastructure Projects, Plus 5 at Risk,” Governing, http://www.governing.com/topics/transportation-infrastructure/gov-5-biggest-us-infrastructure-projects-plus-5-at-risk.html]

When airplanes are delayed, nobody wins. Airlines lose money. Passengers become inconvenienced. Airports get overwhelmed. That’s why the FAA is touting an effort that it says could reduce delays by 35 percent by 2018.

The project, which aviation administrators began planning in 2003, is dubbed NextGen, and proponents say it would revolutionize air travel in this country by switching from radar-based to satellite-based flight-tracking technology. That, along with other technological advances like improved weather forecasting and communication systems, would allow planes to fly more direct routes instead of following the existing, inefficient flight paths that are arranged like highways in the sky. The result: More flights in the air at any given time, fewer delays and less wasted fuel.

But the cost is enormous. FAA officials say they’ll need between $20 billion and $27 billion for the project through 2025. The Government Accountability Office says the cost could actually be as high as $160 billion. Meanwhile, there’s an ongoing debate about what proportion of the cost should be picked up by the airline industry, which has historically been skeptical of the benefits of government-mandated technologies. A recent report from the Department of Transportation’s inspector general said the system will likely face delays because the “FAA has not made critical, longer-term design decisions on NextGen ground and aircraft systems.”

To complicate matters, the FAA has spent more than four years without a long-term funding bill, thanks to congressional inaction. That’s made it difficult to pursue larger projects like this one. A long-term bill signed earlier this year should help on that front, but the funding for the effort is still in question. The president’s 2013 budget calls for just over $1 billion for NextGen, which is a drop in the bucket. In a Congress focused on spending cuts, launching something like NextGen could be tough. “I’m guessing we’ll muddle along,” says David Plavin, an aviation consultant. “They won’t provide the big, incremental investment … that’s ultimately necessary.”

**Plan: The United States federal government should fully fund the Next Generation Air Transportation System in the United States.**

**Advantage 1: Economy**

Economy is faltering – it’s headed toward another recession

Constable July 7

(2012, Simon Constable, columnist at Dow Jones Newswires and business journalist, “The Threat from a Recession,” Barron’s, http://online.barrons.com/article/SB50001424053111904317504577496670432140932.html?mod=BOL\_twm\_mw#text.print)

Fresh data show the U.S. economy is weakening. The economy added a paltry 80,000 jobs in June, not enough to keep up with population growth. Earlier last week, we learned the manufacturing sector contracted in June for the first time since July 2009. Other indicators have been equally uninspiring. Why does this matter to commodities? The raw-materials sector tends to get hit harder than the rest of the economy in a recession. The Economic Cycle Research Institute, which claims a perfect recession-forecasting record, says an economic contraction is imminent. "We have not seen a slowdown where year-over-year payroll job growth has dropped this low without a recession," ECRI states in a May report.

**We improve the economy.**

**1st internal link: jobs.**

NextGen generates recovery through jobs and business efficiency

Calio 11

[Nicholas Calio, President and CEO of the Air Transport Association of America, 2/9/11, “Aviation infrastructure is vital to winning the future,” http://thehill.com/blogs/congress-blog/technology/143033-aviation-infrastructure-is-vital-to-winning-the-future]

With broad consensus in the business community and organized labor that Congress should work with the president to improve the nation’s aging infrastructure, it is timely for bipartisan actions that support strategic investments to grow the economy. With deficit reduction a national priority, investing in infrastructure is not at cross purposes with cleaning up the nation’s finances. In fact, they go hand-in-hand. Making real progress on the deficit requires that we spark economic growth that drives job creation and generates additional tax revenue. It is essential that key infrastructure projects receive funding now so that industries like commercial aviation that enable businesses to grow can contribute more to the economic recovery. Providing the funding to accelerate implementation of modern air traffic infrastructure should be a top priority in the 112th Congress. The antiquated, ground-based system in place today is a major drag on productivity. As Ben Franklin famously proclaimed, time is money. Unfortunately, the nation has been losing both for years because our archaic air traffic control system has been unable to meet the demands placed upon it – let alone the demands of the future. According to a recent study commissioned by the FAA, flight delays cost the U.S. $31 billion in 2007. With a satellite-based system, airline efficiency will increase and flight delays will be minimized. Safety and customer satisfaction will improve and businesses - large and small - will reap the benefits of greater efficiency and be better positioned to create jobs. Commercial aviation already provides key connections that make the economy grow. The industry contributes $1.2 trillion to the economy, is responsible for 5.2 percent of the nation’s GDP and supports nearly 11 million jobs. A fully operational, NextGen air traffic management system will unleash the true economic power of commercial aviation and benefit every industry in this country. Conservative estimates predict that implementation of this system will lead to the creation of more than 150,000 jobs. In reality, the economic impact of this investment in modern infrastructure will be exponentially bigger. The sky is the limit for what this industry can contribute to the economy. Now it is up to our leaders in Washington to provide airlines with the infrastructure needed to compete successfully and support the U.S. in our national ambition to win

**2nd Internal Link: Congestion**

NextGen ends airport congestion – boosting America’s economy

Schank 6/23

[Joshua L. Schank, President and CEO Eno Center for Transportation, 6/23/12, http://www.enotrans.org/eno-brief/the-federal-role-in-transportation-four-ideas-for-greater-federal-involvement]

We often think of airports as local economic generators, and they are that, but some also have substantial national importance. The aviation network is dependent on large hub airports for the efficient and timely movement of passengers across the country and the world. A safe and reliable aviation network is essential for maintaining our competitiveness in the global economy. Unfortunately, we are in danger of losing our edge in this area because of congestion. Successful NextGen implementation could greatly alleviate the problem, but even if that happens airlines could take advantage of the new capacity and provide more frequent flights. Once economic growth picks up again we are likely to see airport congestion and delays increase as well. Airports such as Newark, San Francisco, and Chicago O’Hare already have approximately 30-40 percent of their flights delayed. Airports face substantial challenges in trying to tackle this issue on their own. The most widely recommended solution is pricing airport runways by time of day. But this politically unpopular solution has faced substantial opposition from communities such as smaller cities flying into hubs, or general aviation aircraft that are concerned about being effectively priced out of the market for a given airport. Congested airports would have a much greater chance of success if they were trying to tackle congestion in partnership with the federal government and other local transportation agencies. The federal role could be improved by dedicating a portion of the Airport Improvement Program (AIP) to provide grants to airports in regions that have a plan to work collaboratively to reduce congestion and overcome some of the political barriers to more effective pricing. Or the AIP could be retooled to set specific performance goals for airports and rewarding achievement. However it is done, there is a clear national interest at play here and the federal government needs to be more involved.

NextGen improves airplanes, airports, and their net-centricity

Joint Planning and Development Office, 7

[Joint Planning and Development Office, “Concept of Operations for the Next Generation Air Transportation System,” 2/28/07, http://www.jpdo.gov/library/nextgenconopsv12.pdf]

These transformations fundamentally change the approach to air transportation operations in 38 2025. Capacity and efficiency are increased with the transformation from clearance-based 39 operations to trajectory-based operations (TBO), as required by demand and complexity. 40 Advancements in aircraft capabilities allow for reduced separation and support the transition 41 from rules-based operations to performance-based operations. Controller workload is no longer a 42 limiting factor because of tools and automation, which provide expanded information and 43 improved decision-making capabilities. In addition, the transition of separation responsibility 44 from the controller to the flight crew in some areas allows controllers to focus on overall flow 45 management instead of individual flight management. Increased levels of service and dynamic 46 resource management will enable the NextGen to meet demand rather than constrain demand to 47 meet available resources. 48 Airports are the nexus of many of the NextGen transformation elements, including air traffic 49 management (ATM), security, and environmental goals. Accordingly, the sustainability and 50 advancement of the airport system is critical to the growth of the nation’s air transportation 51 system. Airports form a diverse system that serves many aviation operators and communities 52 with different needs. Airport operators include a mix of private and local government/public 53 entities that are responsible for aligning their activities with NextGen goals. New technology and 54 procedures will improve access to airports, enabling better utilization of existing infrastructure 55 and currently underutilized airports. The sustainability of existing airports will be enhanced with 56 a preservation program to enhance community support and protect against encroachment of 57 incompatible land uses and impacts to airport protection surfaces. Finally, new airport 58 infrastructure will be developed using a comprehensive planning architecture that integrates 59 facility planning, finance, regional system planning, and environmental activities to enable a 60 more efficient, flexible, and responsive system that is balanced with NextGen goals. 61 At the heart of the NextGen concept is the information-sharing component known as net-centric 62 infrastructure services or net-centricity. Its features allow the NextGen to adapt to growth in 63 operations as well as shifts in demand, making NextGen a scalable system. Net-centricity also 64 provides the foundation for robust, efficient, secure, and timely transport of information to a 65 broad community of users and individual subscribers. This results in a system that minimizes 66 duplication, achieves integration, and facilitates the concepts of distributed decisionmaking by 67 ensuring that all decision elements have exactly the same information upon which to base a 68 decision, independent of when or where the decision is made. The net-centricity component 69 binds NextGen operational and enterprise services together, thereby creating a cohesive link. 70 Enterprise services provide users with a common picture of operational information necessary to 71 perform required functions. The suite of enterprise services includes shared situational awareness 72 (SSA), security, environment, and safety. 73 SSA services offer a suite of tools and information designed to provide NextGen participants 74 with real-time aeronautical and geospatial information that is communicated and interpreted 75 between machines without the need for human intervention. A reliable, common weather picture 76 provides data and automatic updates to a wide range of users, aiding optimal air transportation 77 decision-making. PNT services reduce dependence on costly ground-based navigation aids 78 (NAVAID) by providing users with current location and any corrections, such as course, 79 orientation, and speed, that are necessary to achieve the desired destination. Real-time air 80 situational awareness is provided by integrating cooperative and noncooperative surveillance 81 data from all air vehicles.

**3rd Internal Link: Accidents**

NextGen improves aviation safety

Joint Planning and Development Office 7

[Joint Planning and Development Office, “Concept of Operations for the Next Generation Air Transportation System,” 2/28/07, http://www.jpdo.gov/library/nextgenconopsv12.pdf]

Aviation safety is steadily improved to accommodate the anticipated growth in air traffic while 97 the number of accidents is decreased through an integrated Safety Management System (SMS). 98 A national safety aviation policy is established and formalizes safety requirements for all 99 NextGen participants. The safety improvement culture is encouraged by management and 100 utilizes nonreprisal reporting systems. Safety assurance focuses on a holistic view of operators’ 101 processes and procedures rather than the individual pieces of the system. Modeling, simulation, 102 data analysis, and data sharing are utilized in prognostic assessments to improve safety risk 103 management. 104 Data from the above services are used to provide real-time system-level risk assessments and 105 operational impact reviews to evaluate the performance, system safety, and security of NextGen 106 via the performance management service. Real-time, onboard data are monitored and shared to 107 evaluate and manage individual aircraft risk. Safety compliance is monitored through network- 108 enabled data gathering, which collects interaircraft and pilot-to-pilot performance data. This 109 enhanced monitoring of operational characteristics facilitates the integration of “instantaneous” 110 system performance metrics into system management decisions.

NextGen solves weather disruptions

Stough 7

[Paul Stough, Senior research engineer in the Aviation Operations and Evaluation Branch at the

NASA Langley Research Center, “AIRCRAFT WEATHER MITIGATION FOR THE NEXT GENERATION AIR TRANSPORTATION SYSTEM,” http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/20070006538\_2007005339.pdf]

In the U.S., a Next Generation Air Transportation System is envisioned that can handle up to three times the current level of operations. A key to achieving this level of operations is minimizing the disruptions due to adverse weather. In addition to improvements in weather observing systems, forecasts, communications, and information integration, there is a desire for aircraft to operate in more demanding environments and even worse weather conditions than are currently possible, so as to enable further increases in the efficiency and capacity of the air transportation system. Needs have been identified to improve aircraft and their systems to counter the effects of turbulence, ice, wake vortices, obstructions to visibility, space weather, and atmospheric particulates. The solution is seen as an integrated system of observations, forecasts, information integration and dissemination, and aircraft enhancements that provide the greatest overall operational benefit for the least cost.

Accidents negatively affect the aviation industry

Bosch, Eckard, and Singal 98

[Jean-Claude Bosch, Associate Professor of Finance at the University of Colorado, E. Woodrow Eckard, Professor of Economics at the University of Colorado, Vijay Singal, Professor of Finance at Virginia Tech, “THE COMPETITIVE IMPACT OF AIR CRASHES: STOCK MARKET EVIDENCE,\*” 1998, http://www.finance.pamplin.vt.edu/faculty/vs/pdfs/JLE1998.pdf]

Our central hypothesis is that the product market reacts to air crashes either by consumer switching and/or negative spillovers. We expect the switching effect to be stronger the greater the overlap with the crash airline. We therefore first report difference-between-means tests for non-crash airline sub-samples with above and below mean market overlap (PCTLAP, see Section IV), as shown in Table 4.27 An economically and statistically significant difference of about 1.2 percent exists between the high and low PCTLAP sub-samples over the (0,2) event window. Non-crash airlines with little market overlap lose value while close rivals on average experience slight gains. The last step in our analysis is a regression of individual non-crash airline abnormal returns on the overlap index PCTLAP. The constant term in the regression allows us to simultaneously test the negative spillover hypothesis that implies a negative abnormal return absent a switching effect (zero market overlap). We also incorporate a dummy variable TWA96 that equals one for non-crash airlines at the 1996 “crash” (mid- air explosion) of TWA flight 800. The exceptionally large negative abnormal returns for the non-crash airlines (see regression results below and Table 1) may be caused by the initial reports of a possible surface-to-air missile attack.28 This suggests a new safety threat to all airlines beyond the control of present air security measures, that is, a large negative externality. Because our dependent variables are estimated with error, heteroscedasticity may be present. We therefore report weighted least squares 12 regressions where the weights are the inverse of the standard errors of the individual abnormal returns. This procedure assigns a greater weight to more precisely estimated returns, thereby increasing parameter estimation efficiency. The results are summarized in Table 5.29 First, PCTLAP is positive and statistically significant at the 10 percent level or better, supporting the switching hypothesis, and consistent with the means-tests of Table 4. Second, the constant term is negative in all equations. While it is not significant in the AR(0) equation, it approaches significance at the 10 percent level in the CAR(0,1) regression (t = 1.57), and is significant at better than the 1 percent level in the CAR(0,2) regression (t = 3.27). This suggests a negative spillover emerging on days 1 and 2, as additional information appears and the crash is given wider publicity. 30 For the CAR(0,2) equation, the switching effect offsets the externality (constant term) at PCTLAP = 73 percent; that is, rival airlines with higher overlap are forecast to gain because of the crash. Last, the TWA96 dummy is highly significant both economically and statistically, suggesting a special externality associated with this crash, reaching -6.54 percent for the (0,2) event window. Two observations regarding the spillover effect are in order. First, the crash airlines suffer from this in addition to switching, which also affects them negatively. This implies that the crash airline CARs of Table 2 should be greater in magnitude (more negative) than the corresponding constant terms of Table 5, which is indeed the case. Second, Jarrell and Peltzman31 on drug recalls and Mitchell32 on the Tylenol poisonings each report larger industry-wide effects, about -1.2 percent and -6.8 percent, respectively. Since they do not isolate switching effects, they do not measure a "pure" 13 spillover. Hence, an appropriate comparison is with our non-crash airline CAR(0,2) of - 0.48 percent in Table 3. The lower industry-wide impact for airlines may reflect the industry's overall excellent safety record.33 VII. CONCLUSIONS Previous work established that financial markets react to air crashes by reducing the market value of the crash airline, but did not establish the causal mechanism. We investigate whether a product market reaction is at work, in which consumers respond to crashes by switching to rival airlines and/or simply flying less. We find a positive relation between non-crash airline stock reactions and the degree of market overlap with the crash airline, supporting a switching effect despite likely mitigating strategies by the crash airline. This is consistent with the “brand name” effect observed by Mitchell and Maloney.34 We also find that non-crash airlines with little market overlap lose value, that is, a negative spillover exists. Previous studies finding little or no reaction may have been observing the net impact of these offsetting effects. Our results have public policy implications. The crash airline suffers significant financial losses from a crash, which appear to be related to consumer switching. While this suggests a traditional market incentive to "supply" safety, it can only apply to safety related factors under each airline's control. The evidence we find of a negative spillover suggests that consumers and/or insurers may be concerned about other elements of the commercial air travel system that are involved in the joint production of air safety. Perhaps regulatory concerns should be redirected from individual airlines toward system elements where market incentives are weak or absent.

The U.S. aviation industry is key to the economy

Trupo 6/21

Mary Trupo,  International Trade Administration's Director of the Office of Public Affairs, International Trade Administration, “Aerospace Industry is Critical Contributor to U.S. Economy According to Obama Trade Official at Paris Air Show,” 6/21/12.

PARIS – Francisco Sánchez, Under Secretary of Commerce for International Trade, addressed national and international groups at the 2011 Paris Air Show to reinforce the President’s National Export Initiative (NEI) and support the U.S. aerospace industry.

“The U.S. aerospace industry is a strategic contributor to the economy, national security, and technological innovation of the United States,” Sánchez said. “The industry is key to achieving the President’s goals of doubling exports by the end of 2014 and contributed $78 billion in export sales to the U.S. economy in 2010.”

During the U.S. Pavilion opening remarks, Sánchez noted that the aerospace sector in the United States supports more jobs through exports than any other industry. Sánchez witnessed a signing ceremony between Boeing and Aeroflot, Russia’s state-owned airline. Aeroflot has ordered eight 777s valued at $2.1 billion, and the sales will support approximately 14,000 jobs.

“The 218 American companies represented in the U.S. International Pavilion demonstrate the innovation and hard work that make us leaders in this sector,” said Sánchez. “I am particularly pleased to see the incredible accomplishments of U.S. companies participating in the Alternative Aviation Fuels Showcase, which demonstrates our leadership in this important sector and shows that we are on the right path to achieving the clean energy future envisioned by President Obama.”

The 2011 Paris Air Show is the world’s largest aerospace trade exhibition, and features 2,000 exhibitors, 340,000 visitors, and 200 international delegations.

The U.S. aerospace industry ranks among the most competitive in the world, boasting a positive trade balance of $44.1 billion – the largest trade surplus of any U.S. manufacturing industry. It directly sustains about 430,000 jobs, and indirectly supports more than 700,000 additional jobs. Ninety-one percent of U.S. exporters of aerospace products are small and medium-sized firms.

Economic Collapse causes Nuke War

Mead 9

[Walter Russel Mead Senior Fellowin U.S. Foreign Policy at the Council on Foreign Relations, 2009, http://www.tnr.com/politics/story.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8&p=2]

None of which means that we can just sit back and enjoy the recession. History may suggest that financial crises actually help capitalist great powers maintain their leads--but it has other, less reassuring messages as well. If financial crises have been a normal part of life during the 300-year rise of the liberal capitalist system under the Anglophone powers, so has war. The wars of the League of Augsburg and the Spanish Succession; the Seven Years War; the American Revolution; the Napoleonic Wars; the two World Wars; the cold war: The list of wars is almost as long as the list of financial crises. Bad economic times can breed wars. Europe was a pretty peaceful place in 1928, but the Depression poisoned German public opinion and helped bring Adolf Hitler to power. If the current crisis turns into a depression, what rough beasts might start slouching toward Moscow, Karachi, Beijing, or New Delhi to be born? The United States may not, yet, decline, but, if we can't get the world economy back on track, we may still have to fight.

And, economic decline leads to war

Royal 10

Jedidiah Royal, Director of Cooperative Threat Reduction at the U.S. Department of Defense, M.Phil. Candidate at the University of New South Wales, 2010 (“Economic Integration, Economic Signalling and the Problem of Economic Crises,” *Economics of War and Peace: Economic, Legal and Political Perspectives*, Edited by Ben Goldsmith and Jurgen Brauer, Published by Emerald Group Publishing, ISBN 0857240048, p. 213-215)

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin. 1981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Feaver, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that 'future expectation of trade' is a significant variable in understanding economic conditions and security behaviour of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectations of future trade decline, particularly for difficult [end page 213] to replace items such as energy resources, the likelihood for conflict increases, as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states.4 Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularly during periods of economic downturn. They write, The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & Hess, 2002. p. 89) Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. “Diversionary theory" suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to fabricate external military conflicts to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak Presidential popularity, are statistically linked to an increase in the use of force. In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas political science scholarship links economic decline with external conflict at systemic, dyadic and national levels.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention. This observation is not contradictory to other perspectives that link economic interdependence with a decrease in the likelihood of external conflict, such as those mentioned in the first paragraph of this chapter. [end page 214] Those studies tend to focus on dyadic interdependence instead of global interdependence and do not specifically consider the occurrence of and conditions created by economic crises. As such, the view presented here should be considered ancillary to those views.

Advantage 2: National Security

Terrorism still a threat – and they have empirically sparked massive retaliations

Brandt 11

[Ben Brandt, Director at Lime, a political risk consultancy based in the United Arab Emirates, ex-threat analyst for a major U.S. airline and New Jersey Office of Homeland Security and Preparedness, “Terrorist Threats to Commercial Aviation: A Contemporary Assessment,” Combating Terrorism Center at West Point, 11/30/11, http://www.ctc.usma.edu/posts/terrorist-threats-to-commercial-aviation-a-contemporary-assessment]

Ten years ago, al-Qa`ida utilized four U.S. commercial airliners to destroy the World Trade Center’s towers, damage the Pentagon, and kill close to 3,000 people. This attack spurred the United States to convert its counterterrorism efforts into a sustained war on terrorism, resulting in the invasion of Afghanistan and Iraq, the capture or killing of hundreds of al-Qa`ida members, and the eventual death of al-Qa`ida chief Usama bin Ladin. There has been extensive reflection in recent months regarding the implications of Bin Ladin’s death and the Arab Spring to al-Qa`ida and its affiliated groups. Two critical issues, however, have been partially sidelined as a result. How has the terrorist threat to commercial aviation evolved since the events of 9/11? How have actions by the U.S. and other governments worked to mitigate this threat? This article offers a thorough review of recent aviation-related terrorist plots, subsequent mitigation strategies, and current terrorist intentions and capabilities dealing with commercial aviation. It concludes by offering three steps security experts can take to reduce the terrorist threat to commercial aviation. Aviation-Related Plots Since 9/11 and the Regulatory Response A number of al-Qa`ida-affiliated plots sought to target commercial aviation since 9/11. A sampling of these include the “shoe bomber” plot in December 2001, an attempt to shoot down an Israeli airliner in Kenya in 2002, the liquid explosives plot against transatlantic flights in 2006, the Christmas Day plot in 2009, and the cargo bomb plots in 2010. Other prominent operations attempted or executed by Islamist extremists during this period include a 2002 plot to hijack an airliner and crash it into Changi International Airport in Singapore, the 2002 El Al ticket counter shootings at Los Angeles International Airport, the 2004 bombings of two Russian airliners, the 2007 Glasgow airport attack, a 2007 plot against Frankfurt Airport by the Sauerland cell, a 2007 attempt by extremists to target fuel lines at JFK International Airport in New York, the 2011 suicide bombing at Moscow’s Domodedovo International Airport, and the 2011 shootings of U.S. military personnel at Frankfurt International Airport. In response to these incidents, the U.S. government and many other countries have dramatically increased aviation security measures to prevent or deter future attacks. Many of these measures are well known to the public, including: the hardening of cockpit doors; federalization of airport security screening staff and the creation of the Transportation Security Administration (TSA); deployment of federal air marshals (FAMs) and federal flight deck officers (FFDOs) aboard aircraft; implementation of new detection equipment and methods, such as advanced imaging technology (AIT), often referred to as “body scanners”; increased amounts of screening for cargo; explosive trace detection (ETD), full body “patdowns,” and behavioral detection officers (BDOs); enhanced scrutiny for visa applicants wanting to travel to the United States; and the use of watch lists to screen for terrorists to prevent them from boarding flights or from gaining employment in airports or airlines. Certain measures—such as invasive patdowns, AIT scanning, inducing passengers to remove jackets, belts, and shoes for inspection, and requiring them to travel with minimal amounts of liquid in their possession—have drawn widespread complaints regarding their inconvenience, as well as questions about their supposed efficacy. The reactive nature of many such measures has been widely noted as well, with some security practices designed to counter highly specific attack techniques utilized in past terrorist plots. Al-Qa`ida in the Arabian Peninsula (AQAP) sarcastically commented on this tendency in its online magazine Inspire, rhetorically asking the U.S. government whether it thought the group had no other way to conceal explosives after the TSA prohibited passengers from carrying printer cartridges. Current Threats to Aviation Despite the strenuous efforts by governments to harden commercial aviation in the post-9/11 era, the number of plots illustrates that al-Qa`ida core, its affiliates, and numerous other Islamist extremist groups and self-radicalized individuals maintain a high level of interest in attacking aviation. Despite the organizational disruptions caused by the deaths of numerous senior al-Qa`ida leaders in 2011, and the current preoccupation of several al-Qa`ida affiliates with local conflicts, this ongoing interest in attacking aviation is unlikely to dissipate in the long-term. Furthermore, the evolving tactics utilized in these various plots lend weight to AQAP’s contention that government regulators suffer from a lack of imagination in anticipating and mitigating emergent and existing threats. As indicated by numerous accounts, including the description of the cargo plot contained in Inspire, terrorists constantly seek to analyze existing aviation security measures to probe for weaknesses and develop countermeasures. Terrorists’ ongoing efforts to study and defeat security are further exemplified by the arrest of Rajib Karim, a former information technology employee at British Airways; prior to his arrest, Karim maintained an ongoing dialogue with AQAP operative Anwar al-`Awlaqi and attempted to provide al-`Awlaqi with information on aviation security procedures.[1] Therefore, despite government efforts to improve aviation security, a number of critical tactical threats remain.

NextGen is key to securitize against aviation threats

Joint Planning and Development Office, 4

[“Next Generation Air Transportation System: Integrated Plan,” Department of Transportation, 2004, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

The system is already showing signs of stress and it is clear that projected demand will soon surpass the system’s capacity. The U.S. aviation system must transform itself and be more responsive to the tremendous social, economic, political, and technological changes that are evolving worldwide. We are entering a critical era in air transportation, in which we must either find better, proactive ways to work together or suffer the consequences of reacting to the forces of change. The consequence of a do- nothing approach to this public policy problem is staggering. As the Commission on the Future of the United States Aerospace Industry noted, consumers stand to lose $30B annually due to people and products not reaching their destinations within the time periods we expect today. We are nearing a time when we will have to develop a new approach to air transportation. The current approach – ground based radars tracking congested flyways and passing information from control center to control center on the ground throughout the flight of an aircraft – is becoming operationally obsolete. The density of air traffic is making the current system increasingly inefficient. Bottlenecks are showing up now, and large increases in air traffic will cause mounting delays and increased need for structuring or limiting service in many parts of the nation. Driven by the increasing pace of change, the old evolving approach is insufficient for system modernization. In terms of improving the system over the next 25 years, it is clear that business as usual will not succeed.1 Technology is giving us opportunities for an entirely new approach—one that utilizes modern communication techniques, advanced computers, precision plotting through GPS and modern computer-based decision assistance programs. This new approach to air navigation could open up the sky to much greater and more efficient utilization of airspace. It also holds great promise for improved aviation security. For example, this system opens the possibility for automated protection zones around critical infrastructure sites, where computers would take control of an unauthorized aircraft approaching a critical facility and divert it to land at a nearby airfield where security personnel can take control of the situation.

NextGen secures America from terrorism

Joint Planning and Development Office, 4

[“Next Generation Air Transportation System: Integrated Plan,” Department of Transportation, 2004, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

In light of the continuing threat of terrorism, new defense tactics and technologies must be put in place without compromising efficiency. These measures must address a wider range of threats, while at the same time lowering the cost and impact of these measures on pilots and the traveling public. Growth in air travel and air cargo will challenge our ability to manage security risks while ensuring efficiency of operations. The advent of increased operations at thousands of small airports will increase ease of access to the system and the difficulty of securing it. Similarly, UAVs will be used to aid security monitoring, but could also create a new threat as they become more widely available to commercial users. An integrated, multi-layered security approach for air transportation will help ensure the security of U.S. borders and airspace and minimize risks associated with an expanding range of potential security threats. Effective, seamless countering of these terrorist threats and mitigating their risk will demand the full cooperation and partnership of all air transportation stakeholders. Additionally, security measures will benefit from consolidated threat information and workforce response to protect the system itself from hostile actions without limiting personal liberty. Future air transportation screening and detection systems will enable positive identification of travelers while minimizing unauthorized access. Baggage and cargo screening systems will not only reveal explosives and weapons, but will also detect chemical, biological, radiological, and nuclear threats. The future system will be highly resistant to disruptions, incidents, and false positive alarms. Therefore, in spite of increases in demand for the air transportation system, security systems will process travelers, baggage, and cargo with greater speed, accuracy, and efficiency.

Airport attacks tank the economy

Balvanyos 5

[Tunde Balvanyos, Post-doctoral research engineer at the University of California Berkeley based Partners for Advanced Transit and Highways research institute, “The Economic Implications of Terrorist Attack on Commercial Aviation in the USA,” Homeland Security Center, Create Research Archive, 9/4/05, http://research.create.usc.edu/cgi/viewcontent.cgi?article=1162&context=nonpublished\_reports]

In addition to the airlines, other businesses would suffer losses. Even short disruption in cargo delivery could result in significant economic losses due to perishable goods and because of the time-sensitive nature of many air shipments. In our air transportation dependent economy, even short airport closures can cause major disruptions in just-in-time delivery businesses. Airport businesses, such as terminal shops and in-flight services would have to close immediately and could not reopen until the airport is reopened. Until the airport reopens, even postal services would be affected. DRAFT 24 ￼￼￼Hotels, taxi cabs and rent-a-car businesses would experience a short-term gain due to stranded passengers. However, once these passengers are gone, these industries suffer continuing losses until travel demand returns to pre attack levels. Short run reduction in stock market wealth As a result of the attack on 9/11 the US stock market closed between September 10 and 21. The NYSE and the NASDAQ indexes suffered double digit drops. Other markets around the world also suffered losses. In case of an attack on commercial aircraft, the US stock market need not close down. However, it is likely that the markets would suffer losses. We accept the stock markets response to a natural crash as a lower bound to the loss. However, it is hard to establish an upper bound. It is reasonable to assume that the markets would react stronger to another attack on a commercial aircraft than to a natural crash. Psychological impact of terrorism Navarro and Spencer use contingency valuation to think about how much people would be willing to pay for eliminating the terrorist threat of 9/11. We need to ask the same question as Navarro and Spencer asked: “How much would we pay to be able to fly without fear?” They estimate that if “each of the 100 million households not living in poverty would give up a mere $1000 to be able to forget” about Osama Bin Laden and the threat his personifies, the emotional damage of 9/11 would be measured at $100 billion. The terrorist attack we discuss here would be smaller then that on 9/11. It would only affect those who travel by air or whose jobs are related to the industry. If, for example, all air travelers were willing to pay 1 cent more per mile traveled to eliminate this threat, then the impact would be $6.6 billion per year. LONGER TERM MICROECONOMIC IMPACT Microeconomic impact of airport closure Airport closures can have serious economic impact on each regional economy and disrupt urban services. While there will be federal decisions, regional governments also need to understand the economic and social implications of an airport closure. In this section, we discuss the potential impacts of closure of a major airport due to a terrorist attack; the length of closure and other restrictions would be determined by the federal DRAFT 25 ￼government. Our discussion is mainly based on Chang, Ericson, and Pearce4 in their paper prepared for the Office of Critical Infrastructure Protection and Emergency Preparedness, Government of Canada.

Terrorism results in nuclear great power war

Ayson 10**,** Professor of Strategic Studies and Director of the Centre for Strategic Studies: New Zealand at the Victoria University of Wellington, 2010 (Robert,“After a Terrorist Nuclear Attack: Envisaging Catalytic Effects,” *Studies in Conflict & Terrorism*, Volume 33, Issue 7, July, Available Online to Subscribing Institutions via InformaWorld)

But these two nuclear worlds—a non-state actor nuclear attack and a catastrophic interstate nuclear exchange—are not necessarily separable. It is just possible that some sort of terrorist attack, and especially an act of nuclear terrorism, could precipitate a chain of events leading to a **massive exchange** of nuclear weapons between two or more of the states that possess them. In this context, today’s and tomorrow’s terrorist groups might assume the place allotted during the early Cold War years to new state possessors of small nuclear arsenals who were seen as raising the risks of a **catalytic nuclear war** **between the superpowers** started by third parties. These risks were considered in the late 1950s and early 1960s as concerns grew about nuclear proliferation, the so-called n+1 problem. It may require a considerable amount of imagination to depict an especially plausible situation where an act of nuclear terrorism could lead to such a massive inter-state nuclear war. For example, in the event of a terrorist nuclear attack on the United States, it might well be wondered just how Russia and/or China could plausibly be brought into the picture, not least because they seem unlikely to be fingered as the most obvious state sponsors or encouragers of terrorist groups. They would seem far too responsible to be involved in supporting that sort of terrorist behavior that could just as easily threaten them as well. Some possibilities, however remote, do suggest themselves. For example, how might the United States react if it was thought or discovered that the fissile material used in the act of nuclear terrorism had come from **Russia**n stocks,40 and if for some reason Moscow denied any responsibility for nuclear laxity? The correct attribution of that nuclear material to a particular country might not be a case of science fiction given the observation by Michael May et al. that while the debris resulting from a nuclear explosion would be “spread over a wide area in tiny fragments, its radioactivity makes it detectable, identifiable and collectable, and a wealth of information can be obtained from its analysis: the efficiency of the explosion, the materials used and, most important … some indication of where the nuclear material came from.”41 Alternatively, if the act of nuclear terrorism came as a complete surprise, and American officials refused to believe that a terrorist group was fully responsible (or responsible at all) **suspicion would shift immediately to state possessors.** Ruling out Western ally countries like the United Kingdom and France, and probably Israel and India as well, authorities in Washington would be left with a very short list consisting of North Korea, perhaps Iran if its program continues, and possibly Pakistan. But at what stage would Russia and China be definitely ruled out in this high stakes game of nuclear Cluedo? In particular, if the act of nuclear terrorism occurred against a backdrop of existing tension in Washington’s relations with Russia and/or China, and at a time when threats had already been traded between these major powers, would officials and political leaders not be tempted to assume the worst? Of course, the chances of this occurring would only seem to increase if the United States was already involved in some sort of limited armed conflict with Russia and/or China, or if they were confronting each other from a distance in a proxy war, as unlikely as these developments may seem at the present time. The reverse might well apply too: should a nuclear terrorist attack occur in Russia or China during a period of heightened tension or even limited conflict with the United States, could Moscow and Beijing resist the pressures that might rise domestically to consider the United States as a possible perpetrator or encourager of the attack? Washington’s early response to a terrorist nuclear attack on its own soil might also raise the possibility of an unwanted (and nuclear aided) confrontation with Russia and/or China. For example, in the noise and **confusion during the immediate aftermath of the terrorist nuclear attack,** the U.S. president might be expected to place the country’s armed forces, including its nuclear arsenal, **on a higher stage of alert.** In such a tense environment, when careful planning runs up against the friction of reality, it is just possible that Moscow and/or China might mistakenly read this as a sign of U.S. intentions to use force (and possibly nuclear force) against them. In that situation, the temptations to preempt such actions might grow, although it must be admitted that any preemption would probably still meet with a devastating response.

Case — Boosts Struggling Econ

The U.S. aviation industry is key to the economy

Trupo 6/21

Mary Trupo,  International Trade Administration's Director of the Office of Public Affairs, International Trade Administration, “Aerospace Industry is Critical Contributor to U.S. Economy According to Obama Trade Official at Paris Air Show,” 6/21/12.

PARIS – Francisco Sánchez, Under Secretary of Commerce for International Trade, addressed national and international groups at the 2011 Paris Air Show to reinforce the President’s National Export Initiative (NEI) and support the U.S. aerospace industry.

“The U.S. aerospace industry is a strategic contributor to the economy, national security, and technological innovation of the United States,” Sánchez said. “The industry is key to achieving the President’s goals of doubling exports by the end of 2014 and contributed $78 billion in export sales to the U.S. economy in 2010.”

During the U.S. Pavilion opening remarks, Sánchez noted that the aerospace sector in the United States supports more jobs through exports than any other industry. Sánchez witnessed a signing ceremony between Boeing and Aeroflot, Russia’s state-owned airline. Aeroflot has ordered eight 777s valued at $2.1 billion, and the sales will support approximately 14,000 jobs.

“The 218 American companies represented in the U.S. International Pavilion demonstrate the innovation and hard work that make us leaders in this sector,” said Sánchez. “I am particularly pleased to see the incredible accomplishments of U.S. companies participating in the Alternative Aviation Fuels Showcase, which demonstrates our leadership in this important sector and shows that we are on the right path to achieving the clean energy future envisioned by President Obama.”

The 2011 Paris Air Show is the world’s largest aerospace trade exhibition, and features 2,000 exhibitors, 340,000 visitors, and 200 international delegations.

The U.S. aerospace industry ranks among the most competitive in the world, boasting a positive trade balance of $44.1 billion – the largest trade surplus of any U.S. manufacturing industry. It directly sustains about 430,000 jobs, and indirectly supports more than 700,000 additional jobs. Ninety-one percent of U.S. exporters of aerospace products are small and medium-sized firms.

NextGen boosts struggling economy

FAA, March [Federal Aviation Administration, 2012, NextGen Implementation Plan, Michael P. Huerta, Acting FAA Administrator, http://www.faa.gov/nextgen/implementation/media/NextGen\_Implementation\_Plan\_2012.pdf]

The overall health of the U.S economy is highly dependent on the aviation industry. As recently as 2009, civil aviation contributed $1.3 trillion annually to the national economy and constituted 5.2 percent of the gross domestic product. It generated more than 10 million jobs, with earnings of $394 billion.1 Given the economic challenges faced by the country today, it is imperative that we protect and expand this vital economic engine. By implementing technologies and procedures that enable operators to burn less fuel and operate more efficiently and competitively, NextGen is intended to do just that.

An accelerated NextGen program would save billions of dollars.

Deloitte 11

(Deloitte LLP Annual Report, “Transforming the Air Transportation System- A Business Case for Program Acceleration,” July 2011, http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/AD/us\_ad\_Transforming\_ATS\_06132011.pdf.)

This study is intended to provide input to the current industry dialogue about the cost benefits of accelerating various air traffic control (ATC) and air transportation system (ATS) transformation and modernization initiatives globally. We conducted this study to assist decision makers by using industrial cost benefit and business case analysis techniques, which results in net present value (NPV), internal rate of return (IRR) and payback period investment metrics. We have not conducted this study with methods typically found in a macro-economic analysis, including assessment of dependent variables, statistical analysis or econometric forecasting techniques.

We are mindful that the business case for investment in ATS transformation initiatives is highly dependent on assumptions of variables, such as forecasted fuel costs and air travel demand. We have made reasonably conservative assumptions and have modeled the business case on what we believe is a realistic scenario for the planning horizon.

In some cases, we use parametric forecasting techniques where data is not readily available, in order to create a realistic scenario of cost benefits for transformation initiatives. This study assesses a wide range of potential future scenarios that contemplate differing assumptions and business case sensitivities with associated investment metrics to inform decisions makers.

Also, this study albeit global in scope, focuses proportionately more attention on United States (U.S.) ATS transformation initiatives and metrics, as the data and published reports were readily available and it has been studied to a great depth more recently. We have used U.S. Federal Aviation Administration (FAA) data in some cases as a proxy for rest of world (ROW) data where it was not readily available, with modification where appropriate. We would like to thank our ATS association and industry colleagues, many of whom have informally reviewed this study and provided invaluable comments and input, although these organizations do not formally endorse this study nor vouch for its content in whole or in part.

Deloitte has conducted a business case study for transforming the global ATS by transitioning to satellite based positioning, navigation and timing (PNT) technology, real time digital data communications, advanced weather sensing and precision navigation technologies. The U.S. Federal Aviation Administration (FAA) as well as the European Union (EU) EUROCONTROL ATS agencies are in the process of modernizing through the Next Generation ATS (NextGen) and Single European Sky Air Traffic Management (ATM) Research (SESAR) programs respectively. Other programs globally are in various stages of design and deployment. This study was conducted to provide additional input to the ongoing industry dialogue regarding quantification of benefits and costs, funding, scope, timing and potential merits of these transformation programs and economic value of accelerating these programs, as well as the impact of potential program delays.

Savings: Our study estimated annual savings to include 3 billion gallons of fuel, elimination of 29 million metric tons of carbon emissions and reduction of 4 million hours of delay. These savings amounts to $29 billion of net benefits in the U.S. alone each year and $135 billion globally, in the first year of full system deployment in 2026. These significant fuel savings, lower carbon emissions, time saved and economic benefit should result from the transition to advanced satellite based PNT technologies as well as new ATC procedures. This transition should help in overcoming most weather induced and ATC based delays, allowing for direct flight paths and closely spaced aircraft operations.

NextGen would eventually pay for itself.

Salam 12

(Sakib bin Salam, Policy Intern at Eno Center for Transportation, “NextGen: Aligning Costs, Benefits, and Political Leadership,” April 2012.)

Table 6 summarizes the potential annual NextGen benefits to the aviation community, assuming complete infrastructure and equipage. For commercial airlines, reduced delays and fuel consumption could bring up to $1.45 billion/year of benefits. For passengers, the estimated value of reduced de­lays and travel time is about $852 million/year for a 20 per­cent delay reduction and $1.5 billion/year for a 35 percent delay reduction. The benefits are quite substantial for the general aviation community as well. One important point to note is that even for a small impact of NextGen, benefits can be very high. The value of reduced travel time is esti­mated to be $10.69 million/year for a one percent reduction, and $53.47 million/year for a five percent reduction. The value of reduced fuel consumption is about $45.31 million/year for a one percent reduction and $226.54 million/year for a five percent reduction. Safety benefits could range from $14.21 million/year to $142.2 million/year in terms of reduced accident fatalities, while the cost of lost aircraft can be reduced by up to $2.83 million/year.

It should be noted that in addition to these benefits, there are also likely to be substantial environmental benefits that have not been quantified here. Quantifying these environ­mental benefits would require substantial additional data and analysis that is beyond the scope of this research.

Total annual savings using the one percent impact of Next­Gen for every benefit category yields $353.19 million. For a moderate case of five percent, total annual benefits are about $1 billion. High end estimates yield up to $3.45 billion annually.

Civil aviation critical to GDP.

Grizzle 11

David Grizzle, Chief Operating Officer, Air Traffic Organization, Federal Aviation Administration, “The Economic Impact of Civil Aviation on the U.S. Economy,” August 2011.

From live traffic reports sent from helicopters to just in-time delivery of life saving organs for transplant, civil aviation has become an integral part of the U.S. lifestyle and commerce. In challenging economic times, the services that air transportation provides are essential among the building blocks for recovery and economic growth. The financial crisis and ensuing recent recession affected the whole world. Global real GDP growth slowed from 3.9 percent to 1.6 percent between 2007 and 2008, while real GDP growth in the U.S. dropped from 1.9 to zero percent during the same period. Although June 2009 marked the end of the recent recession in the United States, real GDP growth fell by 2.6 percent by the end of 2009 and unemployment rates reached double digits. However, despite the dramatic slowdown of the economy and impact on the aviation industry, the U.S. economy produced $14.1 trillion in value-added economic activity and sustained 140 million jobs. At the same time, civil aviation economic activity supported 10.2 million jobs, contributed $1.3 trillion in total economic activity, accounted for 5.2 percent of total U.S. GDP.

NextGen’s new technology will generate business and aid the economy.

Dorgan and Hunter 6/4

Byron Dorgan, Arent Fox LLP senior policy adviser and co-chair of the firm’s Government Relations Department, and James Hunter, Government Relations Director at the firm. “Federal Aviation Administration Bill Will Help the Economy,” 6/4/12.

There are several reasons why the FAA bill is important to the business community. First, our air transportation system is outdated and inefficient, which increases the cost of traveling and transporting goods. It is estimated that air traffic delays now cost the economy more than $40 billion annually. To address this, the FAA has been working for years to transform its World War II-era, ground based, radarair traffic control system to a satellite-based system through its NextGen program. NextGen will ultimately

require most aircraft to carry sophisticated surveillance and communications systems that will track flights more accurately and allow them to fly more directly to their destinations. The FAA bill helps advance NextGen in several ways. It creates a leadership position within the FAA to oversee and manage all aspects of NextGen and to report di-rectly to the FAA administrator to Congress. Although NextGen is thought of as one program, it is actually a combination of many different initiatives within the FAA, which will benefit from direct oversight. The bill also requires the FAA to develop a plan to respond to the expected increase in applications from manufacturers to certify NextGen-related technologies, which have to be approved in a timely manner to ensure the program stays on track. In addition, the bill requires the FAA to establish performance metrics and advanced navigation procedures for NextGen operations, with priority given to airspace surrounding the busiest airports that are responsible for the majority of delays. Despite these advancements, the bill does not resolve the question of who pays for all the sophisticated new equipment that will be in the cockpit. The airlines and private operators have argued that the government should foot the bill (which could be as high as $6 billion), since much of the surveillance technology that was once on the ground will now be in the aircraft. The administration has said that aircraft operators are responsible for these costs, and has already set a deadline requiring aircraft to be equipped with an essential surveillance technology by 2020. Given the high cost of ‘‘equipage,’’ it is unlikely that the federal government will end up footing a portion of the cost. However, the FAA bill includes language authorizing ‘‘public-private partnerships’’ to help incentivize early equipage, including the use of federal loan guarantees to leverage private sector capital. This, along with better management of the program, should provide an opportunity to complete NextGen ahead of schedule. There are more than 230,000 aircraft registered in the United States, a majority of which will have to be equipped with NextGen technologies. That means a steady stream of business for avionics manufacturers that produce this equipment and maintenance providers that must retrofit aircraft with the new technologies. Although much remains to be done to fully modernize our air traffic control system, the policy advancements made in the FAA bill are important, and they demonstrate the federal government’s commitment to improving our aviation system and its understanding of the role aviation plays in our economy.

Now is key – aviation industry reform is necessary for US soft power and economic competetiveness

Stevens 3/14/12

[Robert J. Stevens, Fellow of the American Astronautical Society, the American Institute of Aeronautics and Astronautics (AIAA), the Royal Aeronautical Society, and the International Academy of Astronautics, CEO of lockheed martin, http://www.lockheedmartin.com/us/news/speeches/031412-stevens.html]

The sequestration process has occurred independent of any correlation with strategy, force structure, technology needs or operational reality. While the precise detailing of the adverse impacts of sequestration are yet to be determined, the United States would likely have the smallest ground force since 1940, the fewest number of ships since 1915, and the smallest Air Force in our history. The impact on industry would be devastating, with a significant disruption of ongoing programs and initiatives, facility closures and substantial additional personnel reductions that would severely impact advanced manufacturing operations, erode engineering expertise, and accelerate the loss of skills and knowledge, directly undermining a key provision of our new national security strategy, which is to preserve the industrial base, not dismantle it. Our petition to you today on sequestration is very clear. We ask that we not let an automatic budget trigger, a default position, become the dominant force for allocating resources that will shape our nation's security posture and our industry, and we strongly urge action to stop this process. In the same breath, we would like to take this opportunity to thank the Congress for passing a four year FAA reauthorization bill. This multiyear authorization provides stability to allow the next generation, air transportation system, or Next Gen, to thrive, and allows the FAA, the aviation community, to plan effectively. We are certain that Next Gen offers significant improvements in safety and efficiency of the air traffic system and encourage sustained investment in this essential capability that will offer superior returns.

Case — Inherency

Despite FAA reauthorization, NextGen is still underfunded and faces congressional obstacles.

Carey 12 (Bill Carey is senior editor with Aviation International News, based in Washington, D.C. He covers the airline and defense industries as well as business aviation.)

The FAA reauthorization legislation passed by Congress and signed by the President in February after more than four years of delay and 23 temporary extensions is a good-news-and-bad news story, Jones said. The good news: it finally provides the FAA with funding stability of $63 billion over four years, with $11 billion directed to ATC modernization. It moves forward “discrete” NextGen programs such as ADS-B and DataComm, and provides a “first framework” for the introduction of unmanned aircraft into civilian airspace. “The bad news,” Jones said, “is that out of the $11 billion designated for modernization of the ATC system in February, only about one-third, or $4 billion, will likely be dedicated to NextGen programs and will require four years of annual Congressional appropriations.” He then begged the question: did anybody in the room really believe our broken, ineffectual Congress could make that happen?

Budget cuts put NextGen implementation at risk.

Turner 7/18

(Aimee Turner, Staff writer, Air Traffic Management, “Sequestration’s ‘crippling’ effect on NextGen: AIA,” 7/18/12, http://www.airtrafficmanagement.net/2012/07/sequestrations-crippling-effect-on-nextgen-aia/)

The devastating cuts to US defence spending set to impact in a matter of months could cripple a number of non-defence programmes including the Next Generation Air Transportation System, according to a US aerospace industry expert.

Richard Efford, a legal affairs chief at the US industry group Aerospace Industries Association insists that US attempts to balance the budget through the 2011 Budget Control Act could mean a potential loss of $1 billion or more from the Federal Aviation Administration’s (FAA) budget to overhaul its air traffic control system. “The FAA – the agency responsible for monitoring and safely guiding 85,000 aircraft each day through our nation’s skies – has never faced a budget cut of this magnitude,” said Efford. “Because the NextGen portfolio provides state-of-the-art capabilities, it will be hit the hardest. AIA believes that as a result of sequestration, NextGen could lose 30-50 per cent of its funding, not the eight per cent many believe,” said Efford who reasons that to protect the operating accounts, FAA could be forced to slash the budgets of its procurement and research programmes. At a US Congressional hearing on aviation to  to review the FAA’s Contract Tower programme today, the chief operating office of the Air Traffic Organization David Grizzle was grilled on the likely impact of the budget cuts – or sequestration – on the FAA service. “We have received no specific direction as to the impact of sequestration on the FAA. We have done a great deal of internal planning looking at different scenarios and how we would be required to shift our priorities in the event that different sequestration scenarios came into place,” he told the hearing. “We have not begun sharing those with anyone because we are not far enough along in designing those priorities. But suffice it to say that it would require a significant re-prioritisation of what we currently do. It could be a large impact, we just don’t know. We are in communication with various parts of the Administration and our perceptions are developing.” Efford points to Congressional Budget Office estimates that non-defence agencies would suffer an immediate 7.8 per cent budget cut from sequestration with Center for Budget and Policy Priorities’ estimates coming in even higher at 9.1 per cent.“Two-thirds of FAA’s budget is allocated to operating expenses – most of which pays the salaries of air traffic controllers, safety inspectors and other federal employees whose skills are required each day to ensure safe flights of aircraft through US airspace,” said Gifford. “The House Appropriations Committee’s Democratic staff estimated that sequestration would cause the layoff of 1,200 air traffic controllers, the closure of almost 250 airport control towers and the loss of 600 safety inspectors and certification staff.” Efford said it is unlikely that senior officials will allow a nationwide layoff of air traffic controllers that will have a large negative impact on the US economy. “An option the agency could exercise to prevent this from happening is the ‘transfer authority’ provided in its annual appropriations bills that could be used to modify sequestration’s across-the-board cuts,” he said. Even so, Efford argues that forcing today’s air travellers to choose between today’s flight and tomorrow’s safety and efficiency is a poor choice. “The shock wave of sequestration will rattle windows far beyond the Pentagon’s walls, shaking our vital domestic programmes and technologies to their core,” he said. The FAA’s David Grizzle told the aviation hearing: “We are committed to maintaining the highest level of safety and we will not undertake any change that will diminish that.”

NextGen is losing investor confidence due to cost overruns and delays.

Salam 12

Sakib bin Salam, Policy Intern at Eno Center for Transportation, “NextGen: Aligning Costs, Benefits, and Political Leadership,” April 2012.

On-board equipage could allow improved decision-making capabilities and accessibility during adverse weather, as well as better data communications between cockpit and ATC. This more precise system has the potential to reduce the minimum aircraft separation standard and allow more direct flight patterns, thus decreasing fuel consumption, carbon emissions, and congestion.

On the policy-side, there are several obstacles to NextGen that hinder progress and the likelihood of a timely and cost-efficient implementation. First of all, there are uncertainties regarding the extent of the benefits NextGen can potentially provide. It is difficult to make forecasts about how much congestion or fuel consumption can be reduced to make the infrastructure investment worthwhile. This makes it chal­lenging to create sustained political, financial, and industry support for the project.

Secondly, there are doubts about costs and the FAA’s ability to deliver technology solutions of this magnitude. In the early 1980s, aviation modernization projects were pro­jected to cost $12 billion and be ready in 10 years. NextGen infrastructure and equipage is now estimated to cost about $40 billion with expected completion by 2025.1 Testimony by the US Department of Transportation Inspector Gen­eral and a recent report by the Government Accountability Office (GAO) have pointed out cost overruns and delays in several NextGen programs. This continued uncertainty regarding the total infrastructure and equipage cost figure of NextGen has planted seeds of doubt amongst stakeholders and potential NextGen beneficiaries.

Aviation operators’ reluctance to invest in incomplete infrastructure renders the project useless

Salam 12

Sakib bin Salam, Policy Intern at Eno Center for Transportation, “NextGen: Aligning Costs, Benefits, and Political Leadership,” April 2012.

Third, the airlines and general aviation users have been hesi­tant to bear equipage costs due to low profitability, econom­ic turmoil, and a lack of clear incentives to justify investing in NextGen. Operators are unlikely to invest until, at a minimum, the FAA is ready to deliver the promised benefits. This leads to a stalemate: operators are uncertain whether investing in NextGen is worthwhile, when the infrastructure is not yet fully in place, and without equipage the infrastruc­ture by itself is ineffective. The FAA has mandated equi­page of Automated Dependent Surveillance-Broadcast Out (ADS-B) that allows the equipped aircraft to send transmis­sion to other equipped aircraft ADS-B ground stations for all operators by 2020. However, there is uncertainty over when other NextGen on-board equipment will be required, particularly ADS-B In which allows the equipped aircraft to receive transmission from other ADS-B ground stations and other aircraft.

Fourth, NextGen faces funding issues that pose some very difficult policy decisions. Work on the ground infrastruc­ture aspect of NextGen is currently funded by the Facilities and Equipment account of the AATF and some progress, albeit slow, has been made on this project. However, recent reports by the Congressional Budget Office and the Gov­ernment Accountability Office show that current AATF revenues are inadequate to fund NextGen.2 Despite recent resolution over the long overdue FAA reauthorization bill, little progress has been regarding securing a full-fledged modernization funding plan. The current bill authorizes a flat amount of $2.731 billion over four years for Next­Gen and funding is still subject to annual appropriation. A project that is already endangered by uncertainties regarding its worth would benefit from a stable and adequate funding source.

Congress won’t enact NextGen

Salam, April [Sakib bin, Policy Intern at Eno Center for Transportation, “NextGen: Aligning Costs, Benefits, and Political Leadership,” April 2012.]

A fifth problem facing NextGen is lack of Congressional political leadership in prioritizing a project of such potential value. In July 2011 the House of Representatives passed a short-term extension bill that failed to pass the senate, resulting in a shutdown that lasted a fortnight. The AATF received no tax revenues during the shutdown. As Con­gressional leaders argued over the Essential Air Services program, the trust fund lost over $400 million in foregone tax revenues. Those are funds that could have potentially been used towards an investment like NextGen. Further­more, according to the FAA some of the NextGen program delays can be attributed to the furlough of some of the FAA employees in July 2011 and a freeze on contractor funding which resulted in work stoppage orders for several projects.3 This impact of the impasse on NextGen was also docu­mented on the GAO report on the FAA’s NextGen cost-management.4 In order for NextGen to succeed, there must be greater certainty about potential benefits and costs. In the highly competitive low profit-margin airline industry, few want to take on the burden of paying for something that spreads speculative benefits so widely. It will also be essential to have a mechanism that raises sufficient capital for NextGen infrastructure in a transparent and equitable manner, while imposing minimal burdens on those who pay for it. Without a sustainable, stable, and reliable strategy for both continued infrastructural improvements and incentives for equipage, there is no guarantee that NextGen can be implemented in a timely and cost-effective manner. Without strong politi­cal leadership, a clear and unbiased delineation of costs and benefits, a transparent source of funds, and incentives for operators to equip, it is unlikely that NextGen benefits can be delivered in a timely manner if at all.

NextGen’s funding won’t be continued.

Dorgan and Hunter 6/4

Byron Dorgan, Arent Fox LLP senior policy adviser and co-chair of the firm’s Government Relations Department, and James Hunter, Government Relations Director at the firm. “Federal Aviation Administration Bill Will Help the Economy,” 6/4/12.

Like the highway bill, the FAA bill is a multiyear infrastructure bill that authorizes federal funding and user-fee derived revenue to support our national transportation system. It helps fund runways, airport expansions, technology upgrades, surveillance systems, and other parts of our aviation infrastructure. This, in turn, helps employ engineers, construction workers, technology specialists, researchers, and many other Americans in jobs tied directly and indirectly to aviation. To be sure, there are limits to what the FAA bill will accomplish. Funding for the FAA through 2015 will likely be flat, or at best achieve minimal growth, and there are major regulatory and financial hurdles to overcome before NextGen can be completed. Still, the bill makes significant changes to aviation policy that will have positive consequences for the aviation industry and the economy at large, and it stands as a good example of what lawmakers can accomplish if they work together cooperatively.

NGATS must be enacted

**Arbuckle et al, 06** [Doug, January-March Issue of the ACTA Journal of Air Traffic Control, <http://www.jpdo.gov/library/vision_2025_air_trans.pdf>]

Today’s U.S. air transportation system1 is under stress. The demands on air transportation are outpacing our ability to increase system capacity. Operating and maintenance costs of the air traffic system are outpacing revenues and the air carrier industry is going through a period of dramatic change. Security requirements established in the wake of the 9-11 attacks significantly impact costs and the ability to efficiently move people and cargo. In addition, growth in air transportation is provoking community concerns over aircraft noise, pollution, and congestion. Adapting our current air transportation paradigm will not be sufficient to meet these challenges. Instead, transformation of today’s system is required to ensure a healthy, environmentally friendly, globally interoperable air transportation system for 2025. Over the past two years, the Joint Planning and Development Office has developed strategies for developing the Next Generation Air Transportation System (NGATS). The NGATS vision for 2025 enables the safe, efficient and reliable movement of large numbers of people and goods throughout the air transportation system in a way that is consistent with national security objectives. Our NGATS vision is founded upon an underlying set of principles and enabled by a series of key capabilities that will free the U.S of many current system constraints, support a wider range of operations, and deliver an overall system capacity up to 3 times current operating levels.

America can’t meet growing aviation demand

Pearce 2006 [Robert A., Mr. Pearce is a NASA executive serving as the Acting Director of the Next Generation Air Transportation System Joint Planning and Development Office. For the past two years, Mr. Pearce served as the Deputy Director of the office.

Previously, Mr. Pearce was responsible for strategy and program development for NASA’s Aeronautics Research Mission Directorate. January- March, ATCA Journal of Air Traffic Control.“The Next Generation Air Transportation System: Transformation Starts Now” http://www.jpdo.gov/library/ngats\_transformation.pdf]

There is already consensus on our starting point. The current U.S. aviation system cannot meet 21st century needs. That was the conclusion of numerous studies and blue ribbon panels, including most recently, the National Research Council and the Walker Commission on the Future of the United States Aerospace Industry. And if we do not quickly take action, things could get much worse and the effect on our economy and global leadership in aviation could be devastating. We already have a capacity tinder box, not just at traditional hot spots like O’Hare, but throughout the entire system. Think of new choke points like Atlanta, Phoenix and even Ft. Lauderdale. The list keeps growing. Most forecasts show that 20 years from now there will be two to three times the passengers, flights and cargo. The FAA predicts that even more airports will be congested in the 2020 time frame. By then, eight metro areas and 19 airports will need more capacity, and an additional 23 may need more. Meanwhile, low-cost carriers, which use smaller aircraft that carry fewer passengers, are now major players, and are sending the number of daily domestic operations through the ceiling at airports like Dulles. Throw in a mix of new aircraft such as very light jets, jet taxis and unmanned aerial vehicles and there is the making of gridlock in our skies. We could even lose the cherished ability to fly anywhere on the same day. Clearly, the existing system was not designed to meet this growing demand for air service. It was not designed to handle all of the new security enhancements that were layered over old ones. It was not designed to allow for anything the future can throw at us. The paradigms we have relied upon for almost 50 years cannot accommodate the massive change that has already begun.

Case — Ext. Congestion

NextGen alleviates aviation deficiencies - sustains competitiveness

Calio 11

[Nicholas Calio, President and CEO of the Air Transport Association of America, The Hill, “Aviation infrastructure is vital to winning the future,” 2/9/11, http://thehill.com/blogs/congress-blog/technology/143033-aviation-infrastructure-is-vital-to-winning-the-future]

In his State of the Union address, President Obama focused the nation’s attention on the economic importance of investing in infrastructure. America can win the future, and successfully compete against emerging powers such as China if we transform our economy with modern technology and infrastructure. As Congress moves forward with the reauthorization of the Federal Aviation Administration (FAA), lawmakers have an opportunity to pass a jobs bill that will enhance the global competitiveness of the U.S. economy. It is vital that our government better utilize aviation policy to fuel economic growth, mindful that our competitors are effectively using commercial aviation to further their national ambitions. The growth markets of the world understand how commercial aviation can transform an economy and they are investing accordingly. Just a few weeks ago, China announced plans to pour a total of 1.5 trillion Yuan, roughly $228 billion, into its aviation sector over the next five years, including the construction of 11 new commercial airports and the acquisition of 290 new planes in 2011 alone. We must meet the challenge with government investment in our nation’s air traffic control system. This is critical infrastructure that will allow us to keep pace with our competitors. We have the technology. Now it is time for America to step into the future by fully deploying a modern system that supports the national goals of global competitiveness and putting people back to work.

Gridlock costs billions

Joint Planning and Development Office, 04 [2004, “Next Generation Air Transportation System: Integrated Plan” Department of Transportation, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

Paradoxically, aviation’s own success will erode the unique speed, predictability, and affordability benefits of air travel if the air transportation system does not expand and adapt at the same pace as the market demands. Historically, growth in aviation was possible because significant investments were made to expand the national airport system and because of our ability to incorporate productivity enhancing technologies into the system. Today, in the most densely populated areas of the U.S., we are barely keeping pace with demand. In the year 2000, millions of Americans were stranded in airports experiencing delays of more than an hour and, in rare cases, to six hours or more. Using present forecasts and maintaining aggressive plans for improvements, the Federal Aviation Administration (FAA) predicts that even more major airports will be congested in the 2020 time frame3 (see Figure 1). Failure to address the impact of air travel congestion on the mobility of Americans could cost consumers up to $20 billion a year by 2025.4

Aviation gridlock alienates local communities

Joint Planning and Development Office, 04 [2004, “Next Generation Air Transportation System: Integrated Plan” Department of Transportation, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

Finally, the growth in air transportation has stressed the balance between local aviation and other interests. This could deprive communities of the opportunity for direct access to the global marketplace. Worse, many communities may even be unable to sustain satisfactory, affordable service.

Airport congestion crushes American competitiveness – NextGen is key to solve

Schank 6/23/12

[Joshua L. Schank President & CEO Eno Center for Transportation http://www.enotrans.org/eno-brief/the-federal-role-in-transportation-four-ideas-for-greater-federal-involvement]

We often think of airports as local economic generators, and they are that, but some also have substantial national importance. The aviation network is dependent on large hub airports for the efficient and timely movement of passengers across the country and the world. A safe and reliable aviation network is essential for maintaining our competitiveness in the global economy. Unfortunately, we are in danger of losing our edge in this area because of congestion. Successful NextGen implementation could greatly alleviate the problem, but even if that happens airlines could take advantage of the new capacity and provide more frequent flights. Once economic growth picks up again we are likely to see airport congestion and delays increase as well. Airports such as Newark, San Francisco, and Chicago O’Hare already have approximately 30-40 percent of their flights delayed. Airports face substantial challenges in trying to tackle this issue on their own. The most widely recommended solution is pricing airport runways by time of day. But this politically unpopular solution has faced substantial opposition from communities such as smaller cities flying into hubs, or general aviation aircraft that are concerned about being effectively priced out of the market for a given airport. Congested airports would have a much greater chance of success if they were trying to tackle congestion in partnership with the federal government and other local transportation agencies. The federal role could be improved by dedicating a portion of the Airport Improvement Program (AIP) to provide grants to airports in regions that have a plan to work collaboratively to reduce congestion and overcome some of the political barriers to more effective pricing. Or the AIP could be retooled to set specific performance goals for airports and rewarding achievement. However it is done, there is a clear national interest at play here and the federal government needs to be more involved.

NextGen sustains economic competitiveness

Calio, 11 [Nicholas, Calio is the president and CEO of the Air Transport Association of America, 2/9/11, “Aviation infrastructure is vital to winning the future,”

http://thehill.com/blogs/congress-blog/technology/143033-aviation-infrastructure-is-vital-to-winning-the-future]

In his State of the Union address, President Obama focused the nation’s attention on the economic importance of investing in infrastructure. America can win the future, and successfully compete against emerging powers such as China if we transform our economy with modern technology and infrastructure. As Congress moves forward with the reauthorization of the Federal Aviation Administration (FAA), lawmakers have an opportunity to pass a jobs bill that will enhance the global competitiveness of the U.S. economy. It is vital that our government better utilize aviation policy to fuel economic growth, mindful that our competitors are effectively using commercial aviation to further their national ambitions. The growth markets of the world understand how commercial aviation can transform an economy and they are investing accordingly. Just a few weeks ago, China announced plans to pour a total of 1.5 trillion Yuan, roughly $228 billion, into its aviation sector over the next five years, including the construction of 11 new commercial airports and the acquisition of 290 new planes in 2011 alone. We must meet the challenge with government investment in our nation’s air traffic control system. This is critical infrastructure that will allow us to keep pace with our competitors. We have the technology. Now it is time for America to step into the future by fully deploying a modern system that supports the national goals of global competitiveness and putting people back to work.

NextGen boosts the economy

Calio, 11 [Nicholas, Calio is the president and CEO of the Air Transport Association of America, 2/9/11, “Aviation infrastructure is vital to winning the future,”

http://thehill.com/blogs/congress-blog/technology/143033-aviation-infrastructure-is-vital-to-winning-the-future]

With broad consensus in the business community and organized labor that Congress should work with the president to improve the nation’s aging infrastructure, it is timely for bipartisan actions that support strategic investments to grow the economy. With deficit reduction a national priority, investing in infrastructure is not at cross purposes with cleaning up the nation’s finances. In fact, they go hand-in-hand. Making real progress on the deficit requires that we spark economic growth that drives job creation and generates additional tax revenue. It is essential that key infrastructure projects receive funding now so that industries like commercial aviation that enable businesses to grow can contribute more to the economic recovery. Providing the funding to accelerate implementation of modern air traffic infrastructure should be a top priority in the 112th Congress. The antiquated, ground-based system in place today is a major drag on productivity. As Ben Franklin famously proclaimed, time is money. Unfortunately, the nation has been losing both for years because our archaic air traffic control system has been unable to meet the demands placed upon it – let alone the demands of the future. According to a recent study commissioned by the FAA, flight delays cost the U.S. $31 billion in 2007. With a satellite-based system, airline efficiency will increase and flight delays will be minimized. Safety and customer satisfaction will improve and businesses - large and small - will reap the benefits of greater efficiency and be better positioned to create jobs. Commercial aviation already provides key connections that make the economy grow. The industry contributes $1.2 trillion to the economy, is responsible for 5.2 percent of the nation’s GDP and supports nearly 11 million jobs. A fully operational, NextGen air traffic management system will unleash the true economic power of commercial aviation and benefit every industry in this country. Conservative estimates predict that implementation of this system will lead to the creation of more than 150,000 jobs. In reality, the economic impact of this investment in modern infrastructure will be exponentially bigger. The sky is the limit for what this industry can contribute to the economy. Now it is up to our leaders in Washington to provide airlines with the infrastructure needed to compete successfully and support the U.S. in our national ambition to win in the global economy.

Case — Ext. Accidents

Even marginal safety improvement from NextGen would save billions of dollars.

Salam 12

(Sakib bin Salam, Policy Intern at Eno Center for Transportation, “NextGen: Aligning Costs, Benefits, and Political Leadership,” April 2012.)

With more precise location information on all aircraft, con­trollers can have a much better sense of their location with respect to the location of other moving and non-moving aircraft in their vicinity. NextGen provides precision verti­cally guided approaches with no equipment expenditure on the ground. The direct result of the improved information is less of a risk of collisions on the ground or in the air, especially in times of low visibility.

While commercial aviation in the United States has an unparalleled safety record, general aviation still faces sub­stantial flight incidents and casualties annually. An analysis of the National Transportation Safety Board’s (NTSB) data for general aviation accidents shows over 1,000 cases in 2010, including 245 casualties.25 A common probable cause for accident according to the NTSB’s investigation reports is pilot error due to lack of situational awareness, particularly during times of poor visibility.

In quantifying the cost of fatalities, the USDOT’s recom­mended value per casualty is $5.8 million, or a range of $3.2-$8.4 million due to uncertainty.26 Based on this estimate, the cost of general aviation accidents in terms of lives lost is about $1.421 billion or between $784 million-$2.058 billion annually.27

The database indicates damage to the aircraft as “substan­tial” or “destroyed”. In 2010 there were 38 cases where the aircraft was completely destroyed, and 981 cases of substantial damage. Using a roughly estimated price of a used Cessna 180 aircraft of $100,000, the cost of destroyed aircraft is approximately $3.8 million. The cost of damaged aircraft is about $24.5 million, assuming the per-aircraft cost to be a quarter of damaged aircraft.

Based on these estimates, the total cost of accidents to the general aviation community in 2010 was about $1.449 bil­lion.

Even with on-board ADS-B, the prospect of greater situ­ational feedback and data could be undermined by human error of judgment. However, a reasonably moderate esti­mate can be made where greater situational awareness does contribute to preventing some accidents. Table 5 shows savings to the general aviation community under various levels of NextGen’s impact on safety. Even if NextGen plays a small role in improving safety and reduc­ing incidents in general aviation, the potential benefits are substantial.28

Case — Al Qaeda Strong

**Terrorists are trying to attack Aviation System**

CBS News, 7/2

[“Norwegian at center of new al Qaeda plot fears,” CBS This Morning, 7/2/12, http://www.cbsnews.com/8301-505263\_162-57464755/norwegian-at-center-of-new-qaeda-plot-fears/]

There are reports of concern over another terror plot involving Al Qaeda targeting a U.S. airliner. Sources say that the bomber that Al Qaeda in the Arabian Peninsula (AQAP) has recruited is a Norwegian convert to Islam, who is believed to be in his thirties, with no criminal record. The Times of London reports that the airliner attack is believed to be timed to the upcoming Olympics, though a U.K. intelligence official told the paper that the plot would be pursued regardless of the London Games: "The only thing that connects this to the Olympics is the fact that they are about to happen," the official said. An earlier AQAP plot to blow up a plane was foiled two months ago when a man working with British intelligence infiltrated the group and volunteered to be a suicide bomber - then delivered the bomb to intelligence officials. CBS News senior correspondent John Miller, a former Deputy Director of National Intelligence, said that despite foiled bomb plots targeting airliners, al Qaeda has not lost its fascination with commercial aviation - and that AQAP (al Qaeda's branch based in Yemen) has been specifically assigned to find a way to blow up a U.S. plane. "They were the architects of the first underwear bomb, they were the architects of the ingenious printer bomb which was interdicted before it could go off," Miller said. "And I think what we're seeing once again is they've tried to put a bomb on a person and get them on a plane. Whether it has anything to do with the Olympics or the Fourth of July - one of the chosen target holidays by bin Laden - is something we don't yet know. "Another thing that AQAP and Yemen developed was a surgically implanted bomb," Miller added. "Now, we've seen the design for that, but we haven't seen it used in a commercial airline threat yet." On "CBS This Morning" Miller said using a Norwegian convert matches al Qaeda's efforts to find operatives who don't fit the profile of terrorists for whom Western intelligence is searching, who are radicalized via the Internet. Miller said intelligence agencies must now find an individual who fits the profile of an al Qaeda convert: "Someone 18 to 35, someone who is from Norway, someone who has traveled to places that are jump-off spots to go to Yemen. Now, you've got maybe tens of thousands of people, or thousands. But you want to crunch that down to who has connection somewhere else in the database, and focus on those people." Miller said there are two ways to investigate the pool of possible suspects: "One, the traditional way, which is you have intelligence officers overseas who run intelligence agents in the field and you say, 'Now bang against your sources and see if we can come up with a real name on this guy and where he is.' "And the less traditional and perhaps the more interesting way is the data crunching piece where you take what you do know about him and then what you know about the geography, and then you use supercomputers to crunch through those records and say 'How do we narrow this pool down and then how do we look for further connections?'

**Al Qaeda is growing stronger**

Jones, June [Seth G., April/June, 2012, “Think Again: Al Qaeda,” Foreign Policy, http://www.foreignpolicy.com/articles/2012/04/23/think\_again\_al\_qaeda]

These declarations of victory, however, underestimate al Qaeda's continuing capacity for destruction. Far from being dead and buried, the terrorist organization is now riding a resurgent tide as its affiliates engage in an increasingly violent campaign of attacks across the Middle East and North Africa. And for all the admiration inspired by brave protesters in the streets from Damascus to Sanaa, the growing instability triggered by the Arab Spring has provided al Qaeda with fertile ground to expand its influence across the region. Al Qaeda's bloody fingerprints are increasingly evident in the Middle East. In Iraq, where the United States has withdrawn its military forces, al Qaeda operatives staged a brazen wave of bombings in January, killing at least 132 Shiite pilgrims and wounding hundreds more. The following week in Yemen, fighters from al Qaeda in the Arabian Peninsula seized the town of Radda, while expanding al Qaeda's control in several southern provinces. "Al Qaeda has raised its flag over the citadel," a resident told Reuters. Beyond these anecdotes, several indicators suggest that al Qaeda is growing stronger. First, the size of al Qaeda's global network has dramatically expanded since the 9/11 attacks. Al Qaeda in Iraq, al Qaeda in the Arabian Peninsula, al Qaeda in the Islamic Maghreb, and Somalia's al-Shabab have formally joined al Qaeda, and their leaders have all sworn bayat -- an oath of loyalty -- to bin Laden's successor, Ayman al-Zawahiri. These al Qaeda affiliates are increasingly capable of holding territory. In Yemen, for example, al Qaeda in the Arabian Peninsula has exploited a government leadership crisis and multiple insurgencies to cement control in several provinces along the Gulf of Aden. Al Qaeda's affiliates in Somalia and Iraq also appear to be maintaining a foothold where there are weak governments, with al-Shabab in Kismayo and southern parts of Somalia, and al Qaeda in Iraq in Baghdad, Diyala, and Salah ad Din provinces, among others. The number of attacks by al Qaeda and its affiliates is also on the rise, even since bin Laden's death. Al Qaeda in Iraq, for instance, has conducted more than 200 attacks and killed more than a thousand Iraqis since the bin Laden raid, a jump from the previous year. And despite the group's violent legacy, popular support for al Qaeda remains fairly high in countries such as Nigeria and Egypt, though it has steadily declined in others. If this is what the brink of defeat looks like, I'd hate to see success. Wishful thinking. In recent years, al Qaeda leaders have consciously developed a strategy to expand their presence in North Africa, the Middle East, and South Asia. Rather than weakening the organization, this mergers-and-acquisitions strategy has been fairly successful in allowing al Qaeda to expand its global presence. Today, al Qaeda has evolved from a fairly hierarchical organization at its 1988 founding to a more decentralized one composed of four main tiers. First, there's al Qaeda's core leadership in Pakistan. Zawahiri took over as emir after bin Laden's death, and Abu Yahya al-Libi, the head of al Qaeda's religious committee, became his deputy. They are flanked by a new cast of younger operatives, such as Hassan Gul, Hamza al-Ghamdi, Abd al-Rahman al-Maghrebi, and Abu Zayd al-Kuwaiti al-Husaynan -- figures charged with plotting al Qaeda operations, managing its media image, and developing its religious dogma.

**Al Qaeda is globally strong**

Habeck, 4/17 [Foreign Policy, Mary, 2012, “Evaluating the war with al Qaeda, part IV: How well are we doing?” http://shadow.foreignpolicy.com/posts/2012/04/17/evaluating\_the\_war\_with\_al\_qaeda\_part\_iv\_how\_well\_are\_we\_doing]

Al Qaeda's leadership, on the other hand, considers itself to be much more than just a core of terrorists, but rather the "high command" of a global organization. In their view, the affiliates (or branches), as well as many fighters in Afghanistan-Pakistan, are integral members of al Qaeda. They have publicly described expansive objectives that include overthrowing the rulers of every Muslim-majority country (whether part of an earlier Islamic state or not), imposing their version of sharia, and then setting up "amirates," or Islamic states in these countries. Al Qaeda believes that they have achieved many of these goals already and are pressing forward to seize more territory and set up new shadow governments. So how do we reconcile these very different versions of the war and determine where we are at in this conflict? I believe that the most important question we can ask ourselves is this: Is al Qaeda better off now than it was ten years ago? If we just look at attacks on the U.S., its citizens, and even its allies, we will agree with the current majority view of al Qaeda and answer "no." Unlike before 9-11, when al Qaeda and terrorists trained by the group were able to carry out devastating attacks against the U.S. and its interests in 1993, 1995, 1998, and 2000, the period since 9-11 has been marked by one CT triumph after another. The planned follow-up attacks (the so-called "second wave") were foiled or failed to materialize and other serious plots have been stopped on a regular basis. The only large-scale attacks that succeeded were abroad (Bali (2002), Spain (2004), London (2005) -- no other major attempts since 2005 have made it past the CT nets of the U.S. and our allies. We will, however, draw quite a different conclusion if we look at how al Qaeda is faring in the rest of the world. On September 11, al Qaeda controlled perhaps a half-dozen camps in one safe-haven (Afghanistan) and had a few tentative alliances with other jihadist groups that had mostly local concerns. Today al Qaeda has multiple safe-havens (in northern Pakistan, Somalia, Yemen, the Sahel); controls branches in many countries that share al Qaeda's global aspirations; holds territory through shadow governments that force local Muslims to follow al Qaeda's version of sharia; and is waging open war on numerous battlefields (Afghanistan, Somalia, Yemen, Mali, etc.). Most tellingly, it is involved -- sometimes weakly, at other times in strength -- in every Muslim-majority country in the world. Based on these facts, any net assessment of al Qaeda would conclude that, despite its failure to carry out a mass-casualty attack on the U.S. since 9-11, the group is in far better condition on a global scale than at any time in its history. And if, as al Qaeda itself has always argued, attacking the U.S. was just one means toward the greater ends of overthrowing Muslim rulers, imposing their version of sharia, and controlling territory, then they have made real progress toward achieving their strategic goals.

Case — Ext. Terrorism Impact

**Terrorism crushes the economy and leads to retaliation and global war**

Diamond 8 [USA Today, 10/9, “A financial apocalypse isn't nearly as scary as a nuclear one”] LexisNexis

Nuclear terrorism, the most serious existential threat to our homeland, has fallen off our priority list. The startling crisis on Wall Street, and the threat it poses to Main Street, has relegated national security to an afterthought -- when it should be anything but. Four years ago, during the presidential campaign, President Bush and Sen. John Kerry, D-Mass., agreed that the possibility that a terrorist group could obtain fissile material, fashion a crude nuclear weapon and set it off in an American city was our greatest threat. This year, the topic barely got a mention in the presidential debates. Go to the websites of Barack Obama and John McCain and click on the "Issues" buttons. In neither case does the drop-down list include a separate category called "terrorism." Once you click through enough layers, you discover that they both agree on the importance of securing nuclear weapons material. Both have endorsed the concept of "a world without nuclear weapons." And they both support gradual but significant reductions in the U.S. and Russian arsenals. The absence of a sharp disagreement between the candidates on responding to the nuclear terror threat might explain why it has all but disappeared from view as the fall campaign approaches. Yet perhaps our leaders and their constituents have not fully grasped the consequences of such an attack beyond the grim image of a mushroom cloud over an American city. The aftershocks As the Saga Foundation -- a non-profit organization focused on the threat of terrorism involving weapons of mass destruction -- argued in a recent white paper, the vast damage at and around a nuclear ground zero would be dwarfed in scope by the national and global economic aftershocks. These aftershocks would stem not only from the explosion itself but also from a predictable set of decisions a president would almost certainly have to make in grappling with the possibility of a follow-on attack. Assuming, as the experts believe likely, that such a weapon would have to be smuggled into the country, the president could be expected to close the nation's borders, halt all freight commerce and direct a search of virtually any moving conveyance that could transport a nuclear weapon. Most manufacturing would then cease. In a nation that lives on just-in-time inventory, these developments could empty the nation's shelves in days. The effects of post-attack decision-making go far beyond this example. If U.S. intelligence determined that one or more countries had somehow aided and abetted the attack, we would face the prospect of full-scale war. Even short of that, the nation would demand, and the president would almost certainly order, a level of retaliation at the suspected locus of the attacking group that would dwarf the post-9/11 military response. The possibility of follow-on attacks could transform our notions of civil liberties and freedom forever. And as former 9/11 Commission co-chairman Lee Hamilton has pointed out, a nuclear terrorist attack would prompt a collapse in public faith in the government's ability to protect the American people. Think your 401(k) hurts now? The presidential nominees, and the American people, should reconsider the tendency to view these two issues -- economic crisis and the threat of catastrophic terrorism -- as separate problems. A nuclear attack on a U.S. city would not only devastate the target and kill possibly hundreds of thousands, it would also create instantaneous national and global economic ripple effects with incalculable consequences. To put it in personal terms, if you think things are tough in the nation's financial sector now, imagine what your 401(k) -- or your paycheck -- might look like six months after a nuclear detonation in Lower Manhattan or downtown Washington. Saga's study merely began what must become a much larger-scale effort to understand in the fullest detail possible the consequences of an act of nuclear terrorism, not only the attack itself but also the decisions that would almost certainly follow. The idea is not to depress people but to motivate them. While some of the consequences are obvious, others are not, and it is the less understood aftershocks that could damage our world as well as transform it -- and not for the better. John Diamond is a Washington fellow of the Saga Foundation. He is also a former national security reporter for USA TODAY and author of The CIA and the Culture of Failure.

Case — Environment

NextGen protects the environment

Joint Planning and Development Office, 2007 [February 28, “Concept of Operations

for the Next Generation Air Transportation System” http://www.jpdo.gov/library/nextgenconopsv12.pdf]

Environmental interests are proactively addressed through the development and implementation 89 of an integrated Environmental Management System (EMS). Technologies are incorporated 90 before and during operations to enable optimized route selection, landing, and take-off 91 procedures based on a range of data feeds including noise, air emission, fuel burn, cost, and route 92 efficiency. At airports, a flexible, systematic approach is developed to identify and manage 93 environmental resources that are critical to sustainable growth. Environmental considerations 94 continue to be incorporated into aircraft design to proactively address issues including noise 95 reduction and aircraft engine emissions.

NextGen would reduce carbon dioxide emissions.

Salam 12

(Sakib bin Salam, Policy Intern at Eno Center for Transportation, “NextGen: Aligning Costs, Benefits, and Political Leadership,” April 2012.)

Another criticism is that the operators cause most of the de­lays in some airports through flight scheduling for business reasons as opposed to due to airport capacity limitations. As a result it is argued that NextGen could do little to alleviate delays.

In part to counter these concerns, the FAA released its NextGen Implementation Plan in March 2011 where it esti­mated benefits from NextGen in terms of reduced conges­tion and increased fuel efficiency based on both simulations and in some case actual data: In Atlanta, arrivals making use of Performance Based Navi­gation (PBN) procedures have saved hundreds of thousands of gallons of fuel and thousands of tons of carbon dioxide and air pollutants. Similar fuel savings and reductions in emissions have resulted from the use of precise, continuous descents into Los Angeles and customized descents into San Francisco. Preliminary results from a surface management initiative in Boston point to a fuel savings of 5,100 gallons and a reduction in carbon dioxide emissions of 50 tons dur­ing periods of heavy congestion. Shared surface surveillance data coupled with aircraft metering techniques are creating taxi-out time savings of up to 7,000 hours a year at New York’s John F. Kennedy airport and 5,000 hours a year at Memphis, Tenn.6

Case-Nat Security

Air transportation is on the brink

Joint Planning and Development Office, 04 [2004, “Next Generation Air Transportation System: Integrated Plan” Department of Transportation, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

The U.S. air transportation system as we know it is under stress. The demand for air transportation is outpacing our ability to increase capacity in our airports. Operating and maintenance costs of the air traffic system are outpacing revenues and the air carrier industry is going through significant change. The terrible events of September 11, 2001, radically altered our country and they exposed a new impediment to the future of the air transportation industry. New security requirements are significantly impacting costs and the ability to efficiently move people and cargo. In addition, the growth in air transportation has provoked community concerns over aircraft noise, pollution, and congestion that affect our ability to respond adequately or rapidly enough to our changing world.

NextGen eases air transportation’s stress

Joint Planning and Development Office, 04 [2004, “Next Generation Air Transportation System: Integrated Plan” Department of Transportation, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

The system is already showing signs of stress and it is clear that projected demand will soon surpass the system’s capacity. The U.S. aviation system must transform itself and be more responsive to the tremendous social, economic, political, and technological changes that are evolving worldwide. We are entering a critical era in air transportation, in which we must either find better, proactive ways to work together or suffer the consequences of reacting to the forces of change. The consequence of a do- nothing approach to this public policy problem is staggering. As the Commission on the Future of the United States Aerospace Industry noted, consumers stand to lose $30B annually due to people and products not reaching their destinations within the time periods we expect today. We are nearing a time when we will have to develop a new approach to air transportation. The current approach – ground based radars tracking congested flyways and passing information from control center to control center on the ground throughout the flight of an aircraft – is becoming operationally obsolete. The density of air traffic is making the current system increasingly inefficient. Bottlenecks are showing up now, and large increases in air traffic will cause mounting delays and increased need for structuring or limiting service in many parts of the nation. Driven by the increasing pace of change, the old evolving approach is insufficient for system modernization. In terms of improving the system over the next 25 years, it is clear that business as usual will not succeed.1 Technology is giving us opportunities for an entirely new approach—one that utilizes modern communication techniques, advanced computers, precision plotting through GPS and modern computer-based decision assistance programs. This new approach to air navigation could open up the sky to much greater and more efficient utilization of airspace. It also holds great promise for improved aviation security.

NextGen ensures air superiority

Joint Planning and Development Office, 04 [2004, “Next Generation Air Transportation System: Integrated Plan” Department of Transportation, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

Achieving the vision of a transformed air transportation system requires us to open our minds to new possibilities, embrace new approaches and create new ways to work together. To secure America’s place as a global leader in aviation’s second century, we need an air transportation system that supports a strong commercial capability, facilitates private-sector expansion, and creates jobs.

NextGen protects the environment and boosts heg

Joint Planning and Development Office, 04 [2004, “Next Generation Air Transportation System: Integrated Plan” Department of Transportation, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

As aviation grows, we must reduce aircraft noise and emissions as well as contaminants from airports. Aviation simply must become a better neighbor. Improved environmental protection will be a vital element to ensure U.S. air transportation viability and global leadership. Certain regions of the world already have adopted policies that limit aviation growth to protect the environment. Noise and emissions at the Nation’s largest airports would limit capacity if they are not aggressively addressed. his environmental compatibility will be achieved through a combination of improvements in aircraft performance and operational procedures, land use around airports, policies and incentives to accelerate technology introduction into the fleet, and aircraft de-icing procedures. The Next Generation Air Transportation System (NGATS) will apply advances in design, engineering, and emerging technologies to ensure that growth in the number of aircraft and airports does not exceed approved environmental limits. Further gains will be realized from new policies and approaches in regulation and mitigation. Long-term, reinvigorated research and development and refined technology implementation strategies will help to keep pace with changing environmental requirements. Policy and financial incentives will be used to accelerate the introduction of environmental technology improvements in aircraft, including propulsion technologies, materials development, and airframe designs. Intelligent flight planning, coupled with improved flight management capabilities, will enable more fuel-efficient profiles throughout the flight envelope. Noise and local emission reduction efforts will be coordinated among multiple aviation operations in large metropolitan areas. By 2025, the impact of aviation on community noise and local air quality will be reduced in absolute terms, even with anticipated growth in air traffic. Uncertainty in the emerging issues of climate change and health effects of emissions will be reduced to a level that enables appropriate actions to be undertaken to address these effects. Airports will be valued neighbors keeping the public well informed about aviation and environment issues. Airlines and airframe/ engine manufacturers will be recognized as global leaders in jointly addressing mobility and environmental needs.

NextGen enhances security

Joint Planning and Development Office, 2007 [February 28, “Concept of Operations

for the Next Generation Air Transportation System” http://www.jpdo.gov/library/nextgenconopsv12.pdf]

Security services are provided by a risk-informed security system that depends on multiple 83 technologies, policies, and procedures adaptively scaled and arranged to defeat a given threat. 84 New technologies and procedures aid in passenger screening and checkpoint responsibilities. 85 Baggage screening improvements include integrated chemical, biological, radiological, and 86 nuclear explosives (CBRNE) detection and sensor fusion systems ranging in size for increased 87 portability and remote screening.

SSA prevents aviation attacks

Joint Planning and Development Office, 2007 [February 28, “Concept of Operations

for the Next Generation Air Transportation System” http://www.jpdo.gov/library/nextgenconopsv12.pdf]

The major objective of Secure Airspace is to prevent or counter external attacks on aircraft and 3531 other airborne vehicles anywhere in the NAS or using an aircraft as a weapon to attack assets and 3532 people on the ground. In order to reduce the security risk within the air domain, NextGen Secure 3533 Airspace systems and procedures detect and prevent or mitigate (1) anomalies in aircraft 3534 operation that indicate unauthorized use or attempted unauthorized use, (2) aircraft not providing 3535 the appropriate cooperative data concerning identity and intentions, (3) external attacks on 3536 aircraft, and (4) aircraft that can pose a threat from operating in the NAS. These risk 3537 management requirements include defining (almost always dynamically) the boundaries of SUA 3538 and temporary flight restrictions (TFR), the cooperative division of responsibilities between the 3539 DSP, SSP, and ANSP in the event of security events in flight or by airborne threat aircraft, and 3540 the security personnel on flights and modifications/equipage to the aircraft. [R-118], [R-119], [R- 3541 120], [R-121], [R-122], [P-57], [P-58], [P-59] In addition, Secure Airspace implements airspace 3542 access and flight procedures based on a verification process that dynamically adjusts for aircraft 3543 performance capabilities. [P-60] The model combines credentialing data with performance data 3544 as part of developing the risk profile of the aircraft. [R-123], [P-61] One objective is to permit 3545 increased NAS access by low-performance aircraft through most restricted zones since the 3546 reaction time to intercept is correspondingly greater than with high-performance aircraft. Refer 3547 to Chapter 2 for additional information. A depiction of secure airpace is provided in Figure 6-1.

Integration is essential to national defense

Joint Planning and Development Office, 04 [2004, “Next Generation Air Transportation System: Integrated Plan” Department of Transportation, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

The future air transportation system must be able to facilitate the nation’s ability to respond rapidly to emerging threats while maintaining commercial and civilian access to our airspace. Integrating the information and communication systems of defense agencies is essential to ensuring that our nation is prepared to combat threats. Integrated capabilities will support national defense by improving our ability to share information among agencies and organizations responsible for protecting our country. Sharing information and obtaining a common picture of our skies will enable a proactive approach to protection. It also will facilitate rapid responses to a variety of threats. For example, improved information regarding aircraft that may be entering restricted airspace will likely reduce the need for combat air patrols. The future air transportation system also will improve support for military missions. Commercial carriers will be able to provide more capable and economical transportation services and access to global airspace. Additionally, global harmonization of standards, procedures, and operations will reduce the investment necessary to ensure U.S. military access to international airspace. The availability of improved tracking and surveillance technologies will allow continued commercial and civilian access to our national airspace while mobilizing defense activities. The future system will feature the ability to define flexible airspace, quickly changing boundaries required by military and civilian operations. This will enhance the ability to support military missions and ensure continuous quality service to other airspace users.

States CP — FG Key

And - Only the federal government has the authority to enact the plan.

Court of Appeals 98

(137 F.3d 81, National Helicopter Corp. of America, Plaintiff-Appellee-Cross-Appellant, v. the CITY OF NEW YORK; The Council of the City of New York; The City Planning Commission of the City of New York; The New York City Economic Development Corporation, Defendants-Appellants-Cross-Appellees. Dockets 97-7082, 97-7142, United States Court of Appeals, Second Circuit, argued Sept. 8, 1997, decided Feb. 17, 1998, http://bulk.resource.org/courts.gov/c/F3/137/137.F3d.81.97-7142.97-7082.html)

The City claims the invasive nature of helicopter noise justifies the condition restricting sightseeing routes to the East River and the Hudson River. This argument, as the trial court recognized, evidences a misunderstanding of federal aviation law. Congress, the Supreme Court, and we have consistently stated that the law controlling flight paths through navigable airspace is completely preempted. See, e.g., Concorde I, 558 F.2d at 83 ("[L]egitimate concern for safe and efficient air transportation requires that exclusive control of airspace management be concentrated at the national level."); City of Burbank, 411 U.S. at 626-27, 93 S.Ct. at 1856-57 (recognizing the federal government's possession of exclusive national sovereignty in U.S. airspace); 49 U.S.C. § 40103(a)(1) (stating that the federal government has "exclusive sovereignty of airspace of the United States"). The proprietor exception, allowing reasonable regulations to fix noise levels at and around an airport at an acceptable amount, gives no authority to local officials to assign or restrict routes. As a result, the City unlawfully intruded into a preempted area when it curtailed routes for the flights of certain Heliport aircraft. This condition was properly enjoined.

**Federal government key to security**

FAS, 2007 [March 26th, The Federation of American Scientists (FAS) is a nonpartisan, 501(c)(3) organization intent on using science and scientific analysis to attempt make the world more secure.“The National Strategy for Aviation Security” http://www.fas.org/irp/offdocs/nspd/nspd-47.pdf]

Aviation security is best achieved by integrating public and private aviation security global activities into a coordinated effort to detect, deter, prevent, and defeat threats to the Air Domain, reduce vulnerabilities, and minimize the consequences of, and expedite the recovery from, attacks that might occur. The Strategy aligns Federal government aviation security programs and initiatives into a comprehensive and cohesive national effort involving appropriate Federal, State, local, and tribal governments and the private sector to provide active layered aviation security for, and support defense in-depth of, the United States.

NextGen needs government involvement

Scovel, 2009 [March 18th, Statement of The Honorable Calvin L. Scovel III Inspector General. Before the Committee on Transportation and Infrastructure Subcommittee on Aviation United States House of Representatives, U.S. Department of Transportation “Federal Aviation Administration: Actions Needed To Achieve Mid- Term NextGen Goals”

http://www.oig.dot.gov/sites/dot/files/pdfdocs/WEB\_FILE\_NextGen\_Statement.pdf]

We appreciate the opportunity to discuss the Federal Aviation Administration’s (FAA) development of the Next Generation Air Transportation System (NextGen) and what the Agency can achieve toward this effort in the near and mid term. The National Airspace System is an integral part of the Nation’s economy and handles almost 50,000 flights per day and more than 700 million passengers per year. Developing NextGen is a high-risk effort involving billion-dollar investments from both the Government (new ground systems) and airspace users (new avionics). The challenges with NextGen are multi-dimensional and involve research and development, complex software development and integration for both existing and new systems, workforce changes, and policy questions about how to spur aircraft equipage.

Federal government key to security

FAS, 2007 [March 26th, The Federation of American Scientists (FAS) is a nonpartisan, 501(c)(3) organization intent on using science and scientific analysis to attempt make the world more secure.“The National Strategy for Aviation Security” http://www.fas.org/irp/offdocs/nspd/nspd-47.pdf]

In this ambiguous security environment, responding to these unpredictable threats requires teamwork to prevent attacks, protect people and infrastructure, minimize damage, and expedite recovery. The response necessitates the integration and alignment of all aviation security programs and initiatives into a far-reaching and unified national effort involving Federal, State, local, and tribal governments, as well as private sector organizations. Since September 11, 2001, Federal departments and agencies have risen uncompromisingly to the challenge of ensuring aviation security. The challenges that remain ahead for the Nation, the adversaries it confronts, and the environment in which it operates compel the United States to strengthen its ties with international partners and to seek new relationships with others. Therefore, international cooperation is critical to ensuring that lawful private and public activities in the Air Domain are protected from attack and hostile or unlawful exploitation. Such collaboration is fundamental to worldwide economic stability and growth, and it is vital to the interests of the United States. It is only through such an integrated approach among all aviation partners, governmental and non-governmental, public, and private, that the United States can improve the security of the Air Domain.

Federal government key to aviation’s collaboration

Joint Planning and Development Office, 04 [2004, “Next Generation Air Transportation System: Integrated Plan” Department of Transportation, http://www.jpdo.aero/pdf/NGATS\_v1\_1204r.pdf]

While achieving the vision for air transportation will be done via collaboration among federal, state, and local governments and private industry, the essential purpose of the vision will be to establish a stable and transparent framework that encourages private sector innovation. All of these efforts will be coordinated through eight major strategies that broadly address the goals and objectives for the Next Generation Air Transportation System (NGATS). Supporting these strategies will be a combination of research, development, and implementation activities. These activities will involve a review of policy and financial mechanisms as well. The eight major strategies, along with their key research areas, are presented in this next section.

Oil DA — No Link

**NextGen reduces fuel consumption but increases aviation capacity and efficiency**

AIA, 2010 [Aerospace Industries Association”“Aerospace and Defense: THE STRENGTH TO LIFT AMERICA” http://www.aia-aerospace.org/assets/NAD\_Booklet.pdf]

NextGen’s satellite-based air transportation network stresses adaptability by enabling aircraft to

immediately adjust to everchanging factors, such as weather, traffic congestion, aircraft position, flight trajectory patterns and security issues. By 2025, all aircraft and airports in U.S. airspace will be connected to the NextGen network and will continually share information in real time using cutting-edge innovations in areas such as weather forecasting and digital communications to improve efficiency and safety as well as absorb the predicted increase in air traffic.

NextGen will enable more aircraft to fly more closely together on more direct routes, thus reducing delays and helping to reduce aviation’s carbon emissions, fuel consumption and noise. Through targeted improvements in ground infrastructure, air traffic procedures and aircraft equipment, maximum benefits will be realized by the flying public. To take in NextGen’s full potential, experts believe an allocation from the U.S. Treasury’s general fund above 25 percent is needed until the program is fully implemented.