# TI Tradeoff DA – Cal 2012

#### This disadvantage argues that new increases in transportation infrastructure investment trade off with the funding for existing forms of TI. The scenario that’s included in this file has to do with NextGen Aviation Technology. There are a number of other scenarios – including the California HSR, the Columbia River Crossing, and the 2nd Avenue Subway System – that could be developed for a second wave of this DA. At the time of production, however, only the NextGen work was truly ready to be turned out.

[\*\*\*Negative 3](#_Toc328429051)

[\*\*Uniqueness Debate – General 4](#_Toc328429052)

[No New Infrastructure Spending – 1st Line 5](#_Toc328429053)

[Ext. Yes Gridlock 6](#_Toc328429054)

[AT//New Infrastructure Legislation 7](#_Toc328429055)

[AT//Boehner / Short-Term Extension 8](#_Toc328429056)

[AT//Transportation / Highway Bill 9](#_Toc328429057)

[AT//Keystone XL Funding 11](#_Toc328429058)

[AT//New Spending – General 12](#_Toc328429059)

[AT//New Transportation Spending / TIGER 13](#_Toc328429060)

[\*\*Link Debate 14](#_Toc328429061)

[1NC Link 15](#_Toc328429062)

[2NC Link Wall 16](#_Toc328429063)

[Ext. Yes Tradeoffs 19](#_Toc328429064)

[\*\*\*NextGen DA 21](#_Toc328429065)

[N/G 1NC 22](#_Toc328429066)

[\*\*NextGen Uniqueness 25](#_Toc328429067)

[\*\*NextGen Internal Links 27](#_Toc328429068)

[\*\*NextGen Impacts 30](#_Toc328429069)

[Impact 2NC 31](#_Toc328429070)

[Turns Case: Climate Change 33](#_Toc328429071)

[Turns Case: Competitiveness 36](#_Toc328429072)

[Ext. NextGen K2 Growth 37](#_Toc328429073)

[AT//Alternative Causalities 39](#_Toc328429074)

[Miscalculation 2NC 41](#_Toc328429075)

[\*\*\*Affirmative 44](#_Toc328429076)

[Non-Unique 45](#_Toc328429077)

[Link Answers 46](#_Toc328429078)

[Doesn’t Solve Aviation 47](#_Toc328429079)

[Economic Collapse Defense 49](#_Toc328429080)

[Space Interoperability Defense 51](#_Toc328429081)

[Accidental Launch Defense 52](#_Toc328429082)

[Not a N/B to States 53](#_Toc328429083)

# \*\*\*Negative

## \*\*Uniqueness Debate – General

#### \*\*This section of the file does not include issue-specific uniqueness – rather, it’s intended to provide evidence that helps you make overarching uniqueness claims like “no new infrastructure spending now”

### No New Infrastructure Spending – 1st Line

#### ( ) Nothing’s getting done until after the election

**Lowy 6-21**

[Joan. Staffer for Assc Press. “Lawmakers Try to Save Stalled Transportation Bill” The AP, 6/21/12 ln//Cal-JV]

House and Senate leaders made a last-ditch effort Tuesday to revive stalled legislation to overhaul federal transportation programs — Congress' best bet for passage of a major jobs bill this year — but prospects for approval before the November elections are chancy at best. Senate Majority Leader Harry Reid, D-Nev., and House Speaker John Boehner, R-Ohio, as well as two key committee chairmen, Sen. Barbara Boxer, D-Calif., and Rep. John Mica, R-Fla., held a closed-door meeting at which the senators made a new offer on how to handle a collection of sensitive policy and financing matters still in dispute. The two party leaders told the chairmen to "redouble our efforts," Mica told reporters as he left the meeting. "We're going to take it hour by hour to see if we can get the job done," he said. A 47-member House-Senate committee has been holding negotiations on the bill for over a month, but it has been unable to reach agreement on a host of difficult issues, lawmakers involved in the process and their staffs said. Those include easing environmental regulations to speed up construction projects, reducing the number of transportation programs and providing funding for bike paths, sidewalks and other "transportation enhancements." Time is running extremely short. Authority to spend money from the Highway Trust Fund — the main source of federal transportation aid to states — expires June 30. As a practical matter, congressional leaders need to make a decision by about Wednesday on whether to continue to try to pass a comprehensive bill, or whether seek a temporary extension of transportation programs. There are only about a half dozen days left in the month in which Congress is scheduled to be in session, and it takes time to prepare an extension bill and pass it. Boehner has already signaled that if there is to be an extension, it should be at least six months long. That would push off the question of how to shore up the trust fund — which is forecast to go broke sometime next year — until after the election. Highway and transit programs have limped along under a series of nine extensions since the last long-term transportation bill expired in 2009. The Senate passed a bipartisan, $109 billion transportation bill earlier this year that would consolidate current programs, give states more flexibility on how they spend federal aid and streamline environmental regulations to speed up completion of highway projects. House Republicans also crafted a comprehensive bill, but were unable to pass the measure. There are deep divisions within the GOP about whether transportation programs should be forced to live entirely with the revenue generated by federal gas taxes and other user fees, even if it means cutting programs by more than a third. After several tries, House leaders gave up trying to pass their bill, and instead passed what was effectively a shell bill designed to meet legislative requirements necessary to begin negotiations with the Senate. Included in the shell bill was a provision to accelerate approval of the controversial Keystone XL Senate Democrats have blamed intransigence by House Republicans for the stalemate in negotiations. Reid has suggested that House Majority Leader Eric Cantor, R-Va., is trying to delay the transportation bill in order to sabotage the economy. Road-building and other industries dependent on highway programs have also identified House Republicans as the main obstacle to passage of a bill. A coalition of industry groups launched radio ads last week in the congressional districts of four House negotiators. "With billions of dollars at stake, and thousands of good paying jobs, it is time for Congress to take action," the ads said. "Will your congressman be part of the problem, or part of the transportation solution?"

###  Ext. Yes Gridlock

#### ( ) More evidence – Congress has hit a dead end on transportation funding

**MH 6-7**

[The Miami Herald. “A Dead End on Transportation” The Miami Herald, 6/7/12 ln//Cal-JV]

If you think our roads and bridges are in terrible shape, along with mass transit, you’re right. And it’s altogether possible you ain’t seen nuthin’ yet. A critical renewal of federal support for transportation is going nowhere fast, with the clock ticking down toward a June 30 expiration date while House and Senate leaders fight over who’s to blame for the partisan gridlock. For decades, federal legislation has supported the nation’s transportation infrastructure, although at a level that increasingly falls short of the need. The organization representing the nation’s civil engineers says the U.S. road system rates a D-minus as conditions deteriorate “to the point at which Americans spend 4.2 billion hours a year stuck in traffic at a cost of $78.2 billion a year in wasted time and fuel costs — $710 per motorist.” The poor condition of roads adds another $67 billion in repairs and operating costs to the bill. This affects South Florida in several ways. Annual surveys, like the one by the Texas Transportation Institute, consistently rate congestion on Miami’s roads and streets among the 10 worst in the country. As for mass transit, Congress’ dysfunction jeopardizes about $184 million in funding for Miami-Dade County, the current allocation for trains and buses. In the past, Congress dealt with the issue by approving transportation bills covering five or six years, which allowed for orderly planning. Since 2009, when the last multi-year extension expired, it’s limped along on at least nine short-term fixes, making the dispute over transportation funding a case study in congressional dysfunction. The inability to win agreement requires repeated confrontations in Congress over extensions, makes planning impossible and raises the prospect that one day there will indeed be a cutoff.

###  AT//New Infrastructure Legislation

#### ( ) No new infrastructure legislation will pass – if it gets to the floor, the GOP will kill it

Baltimore Sun 6-10-12

(“Transportation bill: Do Republicans want to sabotage the economy?,” <http://articles.baltimoresun.com/2012-06-10/news/bs-ed-transportation-20120610_1_transportation-bill-transportation-projects-transportation-spending>, AMukund)

Senate Majority Leader Harry Reid recently said aloud what many Americans must be thinking these days — that at least some Republicans in Congress would like to see the U.S. economy worsen in order to boost their chances of success in the November election. The evidence? The GOP's continued resistance to approving a multiyear transportation authorization bill. Senator Reid told The Hill that he's heard House Majority Leader Eric Cantor is leading the charge to delay the Senate bill — and the tens of thousands of jobs it would create. House Speaker John Boehner denies the allegation, but he has also announced that he's ready to pull the plug on negotiations over the measure until after the election if the two sides fail to work out an agreement before June 30. That gives negotiators less than three weeks to shake hands on something that's had them at odds for years. What's frustrating is that the bill — which has been whittled down to a mere 15-month extension (and might even be trimmed to six months, according to Mr. Boehner) — should be a fairly routine matter. That has been the case in years past, when preserving and expanding U.S. transportation infrastructure, including roads, bridges, mass transit, ports and airports was seen as too important to the national interest to be derailed by partisan bickering. But that was then. The problem now is that too many extraneous issues have been tied to the measure, including various "offsets" and "pay-fors" to finance the bill instead of merely updating the federal gasoline tax to allow for inflation over the last two decades. In reality, there's a lot of accounting gimmickry involved. There's billions of dollars, for instance, from a decrease in federal contributions to employee pensions and billions more taken out of the Gulf oil spill compensation fund. There's even an allocation from the expected fines and penalties paid by tax delinquents who have their passports revoked. And that's only the financing side. Republicans have tried to attach a provision to force the federal government to approve the Keystone XL pipeline from Canada — never mind that experts say it would do nothing to reduce U.S. gas prices or improve transportation, while circumventing the normal environmental review process. There's also been a robust debate over how states can spend the "transportation enhancement" funds that are often used for such things as bike lanes, land preservation and roadside beautification.

###  AT//Boehner / Short-Term Extension

#### ( ) Congress is gridlocked and short-term extensions *won’t* trigger the link

**Gallagher 6-14**

[Pat. Staffer for the Fairfield County Business Journal. “Congressional Gridlock Stalls Highway Funding” The FCBJ, 6/14/12 ln//Cal-JV]

The Hudson Valley construction industry, pummeled by job losses since the recession, could be in for yet another blow if Congress fails to pass a long-term transportation funding measure that could create 113,000 jobs in New York state. Talks under way since May between the U.S. Senate and the House of Representatives over a long-term extension of the federal transportation appropriations bill have stalled over a disagreement on how the measure should be funded. With the current bill set to expire June 30, Senate and House leaders have set a mid-June deadline for any long-term agreement to be reached. House Speaker John Boehner of Ohio last week proposed a six-month extension of the current bill if the stalemate drags on, which would effectively make transportation funding a non-issue until after the November election. Several New York Democrats and transportation and construction industry advocates have said such a short-term extension is not adequate. “Traditionally, the way to get an economy going and jump-started is to get our roads and bridges built, and they need repairs here and everywhere else,” said Sen. Charles Schumer at a June 4 breakfast hosted by the Business Council of Westchester. “This is close to happening,” Schumer said. “We just need the House leadership to stand up to the small but very ideologically fervent group that says we shouldn’t have a highway bill.” Schumer is on the 47-member conference committee tasked with reconciling separate versions of the surface transportation bill that have been passed by the House and Senate. In March, the Senate passed an 18-month extension of the highway bill by a bipartisan 74-22 majority that would maintain current funding for highway and mass transit projects that are eligible for federal aid. Additionally, the bill prescribes a funding level of at least $1 billion under the Transportation Infrastructure, Finance and Innovation Act (TIFIA), which provides for direct loans and loan guarantees to vital national infrastructure projects such as a new Tappan Zee Bridge. Democratic Rep. Nita Lowey of Harrison said it is “absolutely vital” for a long-term agreement, and called on Boehner to bring the Senate measure to a vote should the conference committee fail to come to a consensus. Lowey is co-sponsor of a House version that mirrors the Senate-passed legislation that would support the creation of 113,000 jobs in New York state without adding to the federal deficit, she said in an email. Thirteen members of New York’s congressional delegation, plus Democratic Sen. Kirsten Gillibrand, addressed a letter to the members of the conference committee in May requesting that TIFIA funding be preserved should Congress resort to a short-term extension. Republican Rep. Nan Hayworth of Mount Kisco, one of the 14 signers, said she supports the conference committee’s efforts and said she would like to see the Keystone Pipeline – sought by many members of her caucus – accounted for in any long-term bill. New York state transportation officials and industry advocates are concerned about how another short-term extension – which would be the 10th consecutive temporary measure – would affect ongoing and future transportation projects. “It’s not a good situation right now because the state is actually breathing on fumes when it comes to federal funds,” said Ross J. Pepe, president of the Construction Industry Council of Westchester & Hudson Valley Inc. “It’s a serious problem and New York is very vulnerable – not only on the transportation, highway and bridge side but also on the mass transit side of the equation.” “We’re hoping Congress can pull it together, but at the moment it doesn’t appear they will

,” Pepe said.

###  AT//Transportation / Highway Bill

#### ( ) Congress’ highway bill is on life support – anything that passes would be too watered down to trigger the link

**Laing 6-14**

[Keith. Staffer for the Hill. “Highway Talks Veer Toward Stalemate” The Hill, 6/14/12 ln//Cal-JV]

House Speaker John Boehner’s (R-Ohio) suggestion of a possible six-month highway bill extension last week is causing transportation observers to worry that a multiyear bill is now out-of-reach. A 47-member conference committee has been trying for a month to find a compromise between the House and Senate on a bill that would provide transportation funding for at least the next 18 months. But one transportation industry source said on Friday that Boehner raising the possibility of what would be a tenth temporary extension of current highway funding, as well as the recent barbs thrown between Senate Majority Harry Reid (D-Nev.) and House Majority Leader Eric Cantor (R-Va.), showed the talks are now on “life support.”

#### ( ) Gridlock now means no new infrastructure spending

Lawder and Rampton 6/19

[ Reuters (David and Roberta, “Lawmakers fail to break US transport bill deadlock,” <http://www.reuters.com/article/2012/06/20/usa-congress-transportation-idUSL1E8HJ5SC20120620>, AMukund)

U.S. congressional leaders failed on Tuesday to break a deadlock on a long-stalled transportation funding measure, and Republicans now may need to find a new legislative vehicle to carry their plan to approve the controversial Keystone XL oil pipeline. With a June 30 deadline for new transportation funds looming, many lawmakers and aides now see it as inevitable that the controversial Canada-to-Texas pipeline provision be removed to make way for a short-term extension of current transportation law. House of Representatives Speaker John Boehner and Senate Majority Leader Harry Reid could not resolve differences in a late afternoon meeting over the road, bridge and rail bill that could create or save millions of jobs and give a lift to the struggling U.S. economy. "Hope springs eternal," Boehner, the top Republican in Congress, quipped as he left his office in the Capitol. Failure to reach a deal in Congress could trigger layoffs of nearly 3 million U.S. construction workers and increase unemployment less than six months before the November elections. HOPES DIM FOR FULL BILL, KEYSTONE Republican Representative Ed Whitfield, one of the negotiators trying to iron out House-Senate, said he feels that a short-term extension of current transportation funding is unavoidable at this point, and neither the Keystone pipeline nor a Republican provision aimed at ensuring that coal ash can continue to be used in cement for road projects would be included. Whitfield said both provisions have been rejected by Democrats, adding, "It's really disappointing that we couldn't get this resolved." But Republican House Transportation Committee Chairman John Mica said Boehner and Reid instructed negotiators "to redouble our efforts," and the Democratic-led Senate had offered a new proposal. He declined to comment on any discussions of a temporary extension, which would be the 11th since the most recent transportation bill expired in 2009. "We're going to take it hour by hour, see if we can get the job done," Mica said. Michael Steel, a spokesman for Boehner, said House negotiators were still working towards a joint bill. "We believe it is crucial that we have real reforms in how we spend taxpayers' highway dollars, and we continue to support bipartisan jobs initiatives like Keystone," Steel said. President Barack Obama has opposed fast-tracking approval for TransCanada Corp's Keystone XL oil pipeline project until an environmental review of its new route is completed. The House lawmaker who authored the pipeline provision, Nebraska Republican Lee Terry, also said it is now unlikely to be part of a short-term, stopgap funding extension. "He doesn't see it happening at this point," a Terry aide told Reuters, noting Terry continued to work with Boehner to see what other legislative vehicles could be used to advance approval for the oil pipeline. A Senate Democratic aide said the Keystone provision might have another chance if lawmakers complete a highway bill this summer or autumn. Republicans would "explore every option," for Keystone, said Whitfield, including attaching it to spending needed to keep the government running in the new fiscal year that starts on Oct. 1. Many observers believe that Obama will approve Keystone sometime after the election, possibly in 2013. But House Republicans are not ready to take that on faith, said Garrett Golding, an analyst with The Rapidan Group, a Washington-based oil consultancy. "They really want the security blanket that legislative approval would bring," said Golding, who until recently was a policy advisor to the House Energy and Commerce Committee. DOWN WITH FLOWER BEDS Deep differences still remain on core parts of the transportation bill. House Republicans have insisted on consolidating some federal transportation programs and streamlining environmental reviews of road projects in order to speed up their construction. They also want to drop a proposal to use gasoline taxes to help pay for ancillary transportation "enhancements" such as flower beds and other streetscape improvements. Earlier this month, Boehner floated the idea of a six-month extension of current funding, which would remove the threat of a halt in road and rail construction until after the Nov. 6 elections. Democrats have balked at that idea, saying it would deplete the Highway Trust Fund because falling gasoline tax collections were insufficient to fund current projects. They say U.S. states also would delay the start of new longer-term projects - and the hiring of hundreds of thousands of workers - due to the lack of funding certainty.

###  AT//Keystone XL Funding

#### ( ) Keystone won’t get funding – last issue to be resolved

**Sanchez 6-21**

[Humberto. Staffer for Roll Call. “Keystone XL Decision Likely Last to be Made” Roll Call, 6/21/12 ln//Cal-JV]

As lawmakers scramble to reach agreement on a highway bill by week’s end, they appear to be leaving decisions on many big, politically tricky questions for last, such as whether to include language to approve the Keystone XL pipeline. “We’ll take all that up after” the transportation-focused issues are resolved, Environment and Public Works Chairman Barbara Boxer (D-Calif.) said off the Senate floor Wednesday. On orders from their leadership, Boxer and House Transportation and Infrastructure Chairman John Mica (R-Fla.) are pushing to reach a deal on a transportation infrastructure bill by the end of the week. Rep. Reid Ribble (R-Wis.), a member of the conference committee working on the bill, agreed that decisions on Keystone and other non-transportation-related issues would be left for last with leaders expected to weigh in.

###  AT//New Spending – General

#### ( ) Fiscal discipline now

**Bloomberg, 2012**

(2/26/12, Caroline Salas Gage, “Bernanke Pessimism Drives Credit With Forced Government Cutbacks,” Bloomberg, http://www.bloomberg.com/news/2012-02-27/bernanke-pessimism-drives-easy-credit-with-forced-government-spending-cuts.html)

The potential drag from fiscal restraint contributed to the rationale behind policy makers’ reduced forecasts for growth this year and in 2013, according to the minutes of their Jan. 24-25 meeting. They also decided to extend their commitment to keep interest rates near zero through at least late 2014 instead of mid-2013 to provide “more accommodative financial conditions,” the minutes said. Bush-era tax cuts and expanded unemployment benefits are set to expire at the end of the year, and a deficit-reduction law requiring $1 trillion of cutbacks also kicks in if lawmakers can’t agree on a new plan. The Fed may keep rates low for longer because the budget-balancing measures slated for 2013 -- including those automatic cuts, known as sequestration -- threaten to weigh on expansion, said Ward McCarthy, chief financial economist at Jefferies & Co.

###  AT//New Transportation Spending / TIGER

#### ( ) The totality of new TIGER funding only totaled $500Million – not enough to cause the link

**Clark 6-22**

[Charles. Staffer for Government Executive. “Government Funds 47 Transportation Projects” 6/22/12 <http://www.govexec.com/management/2012/06/government-funds-47-transportation-projects/56422/?oref=dropdown> //Cal-JV]

Forty-seven local and regional infrastructure projects have won funding through the Transportation Investment Generating Economic Recovery [TIGER] program, Transportation Secretary Ray LaHood announced Friday, when he also called on Congress to break its impasse on the stalled surface transportation bill. Following a nationwide TIGER competition for shares of a $500 million pot for capital investments in surface transportation infrastructure, LaHood announced the winners from 34 states. They include a streetcar project in Fort Lauderdale, Fla.; high-speed and intercity passenger rail projects such as one at Raleigh Union Station in North Carolina; a freight rail congestion-easing project in Chicago; and various multimodal, bicycle and pedestrian projects such as a corridor connecting Memphis and West Memphis in Tennessee. More than $120 million will go to projects in rural areas, particularly to repair decaying roads and bridges.

#### ( ) This spending is nowhere close to meeting demand – proves that there’s still a overarching trend of reluctance

**Clark 6-22**

[Charles. Staffer for Government Executive. “Government Funds 47 Transportation Projects” 6/22/12 <http://www.govexec.com/management/2012/06/government-funds-47-transportation-projects/56422/?oref=dropdown> //Cal-JV]

LaHood noted applications for this year’s round of TIGER totaled 703 projects, which would cost $10.2 billion if all were funded, an indication of pent-up local and regional demand. The program in the past three years has spent $3.1 billion for 218 projects in 50 states, territories and the District of Columbia -- money that is expanded by contributions from private sector partners, states, local governments, metropolitan planning organizations and transit agencies.

## \*\*Link Debate

#### \*\*This section of the file applies to any variant of the DA you decide to read.

### 1NC Link

#### ( ) Transportation infrastructure investment occurs through zero-sum budget redistribution

GAO ‘5

(Government Accountability Office “The Benefits and Costs of Highway and Transit Investments,” May 6 2005, Highlights of an Expert Panel, <http://www.gao.gov/new.items/d05423sp.pdf>, AMukund)

For transportation analysts, the redistributive effects of expenditures are largely a zero sum game. Although transportation expenditures can generate significant local economic activity, much of it is simply redistributed from other taxpayers and places that lost out in the geographic competition for subsidy dollars. From this point of view, policy makers are simply missing the point when they focus almost exclusively on the local expenditure effects of transportation investment decisions. Despite such admonitions from analysts, however, many elected officials and other policy makers view the transportation effects of public investments as abstract, arcane, and arbitrary. While a new freeway ramp metering project might smooth traffic flows, which in turn lower production costs for a particular set of firms, which in turn increase sales, which in turn add to total employment, such effects are difficult to unambiguously link to the highway investment. In contrast, the consequences of the public expenditures on transportation projects in a given congressional district are clear and unambiguous—dollars get spent, projects get built, people get hired. New highways and transit investments are dramatic and highly visible and generate economic activity, especially during construction. That much of this activity is simply shifted from taxpayers in other jurisdictions is almost beside the point to most elected officials. For most elected officials responsible for transportation taxation and spending, the overriding concern is with the equity of transportation funding among states, districts, and jurisdictions. Concerns over who pays and who receives are paramount This concern ensures a political focus on the expenditure effects of transportation investments and makes it all but impossible for elected officials to consider the transportation effects of investments. From the perspective of most public officials, it’s the transportation analysts and economists who miss the point by focusing on transportation effects and tools like benefit-cost analysis in making investment decisions. A Member of Congress from a western state, for example, may find a study showing that rail transit investments in a densely developed, older east coast city are likely to yield far greater transportation benefits than those in his/her city all but irrelevant to debates over the equitable geographic distribution of federal transportation funds.

###  2NC Link Wall

#### ( ) The size of the link is large – bureaucracy, funding demands, and capacity shortages all ensure a tradeoff

**Canby ‘9**

[President, Surface Transportation Policy Partnership (Anne P., 3/6/2009, “Surface Transportation ‘Authorization’”, *Transportation and Infrastructure Questions for the Next Decade*, Policy Research Institute, Princeton University, <http://wws.princeton.edu/research/prior-publications/conference-books/PRIOR-TandI.pdf>, AMukund)

Ms. Canby stressed that the new authorization provides an opportunity to reexamine transportation and infrastructure programs in light of changes that the Obama Administration brings—namely a focus on climate and energy issues. Today transportation has a silo approach where each mode of transport has separate funding sources that are typically hoarded rather than shared. Ms. Canby urged transportation professionals to escape that model and pursue more cross-modal opportunities. There are institutional, programmatic, and procedural barriers that we must address as we move forward with the new legislation. It is important to bring all the players to the table, including local and regional representatives, rather than focusing on a few states, highway corridors, or rail lines. The Economic Recovery Act is a step to put more funds on the table, and although never enough, $50 billion is not paltry. Ms. Canby addressed four broad topics in her presentation: national interest, decisionmaking, planning, and funding. To address national interest, transportation officials must think broadly about a transportation system that embraces climate issues, connects the national economy to the world, and provides a more effective set of travel options that facilitate job creation. We need a national program with national goals and accountability. The current system established in Title 23, “provide[s] for a federally assisted state program” that undermines the Department of Transportation’s (DOT) accountability because they simply funnel money to grant recipients. She argued for restructuring the federal-state relationship to require states to meet national goals. We must move away from the donor-donee mentality and focus on objectives and outcomes. In the decision-making arena, Ms. Canby questioned whether the institutional construct we have today will work for the challenges we need to address. In major metropolitan areas we must have more integrated decisionmaking authorities and include the private sector. We lack institutional models in this regard. Local governments and transportation agencies are not currently accountable to each other for the transportation and landuse problems they create. We should work to build credibility for Metropolitan Planning Organizations (MPOs) at the regional and national level. Ms. Canby argued for a much stronger planning process. Rather than focusing on specific projects, investment decisions should be based on a plan that includes a vision, baselines, established goals, and measurement mechanisms. There is existing planning language that can be used to strengthen current law. For example, Ms. Canby argued that long-range transportations plans should no longer be exempt from the National Environmental Policy Act (NEPA). Additionally, we should create a single analytical process that examines the tradeoffs for any type of additional capacity, whether it is highway, transit, rail or another type of capacity. Finally, Ms. Canby addressed funding, which she deemed the biggest challenge. As of yet, there has been no action by the Obama Administration to raise revenue through a gas tax or VMT tax, and it is not clear what will come out of the White House in the future. In Ms. Canby’s view, for real change to happen, new revenues must come with changes to program structure such as creating national objectives and accountability. Ms. Canby offered an essential question we should ask about funding: What are the problems we need to solve, and how do we portray them so the public can understand the connection between the cost of transportation and the price people pay? Driving is largely unconstrained and user fees are almost nonexistent. Ms. Canby argued that rail needs to be included in systems-wide funding discussions, as using more rail will save wear and tear on the roadway. Finally, public-private partnership must be further explored. Ms. Canby closed by asking whether we are ready to rethink the basic transportation mission, lay out federal goals, and hold ourselves accountable, and whether we are prepared to broaden decision-making and strengthen the planning process.

#### ( ) Budgetary constraints force zero-sum tradeoffs – the downfall of commercial aviation *proves*

**Shorris ‘8**

(Anthony E., The Century Foundation “Breaking Down Walls: Institutional Barriers to Infrastructure Investment,” Building a Stronger America, <http://tcf.org/media-center/pdfs/pr155/shorris.pdf>, AMukund)

Given this alignment of interest groups competing against one another for scarce dollars at the federal level, it is not surprising that a parallel pattern develops down the line at other levels of government. Governors and state legislators face active lobbying from the construction industry and related labor unions for one form of infrastructure investment or another—and their responsiveness is ensured by the financial support for their campaigns that these same groups may provide. Research centers funded by the same pools of dollars and well-intentioned policy advocates make their voice heard, as does the media that reports on these issues. In such a balkanized world, inter-relationships among the various infrastructure investments are hard to see and even harder to organize. While everyone can understand the zero-sum game budget-making can create, especially under firm caps or in tax-constrained environments, seeing through the smoke to create sound policy that integrates various forms of investment is extraordinarily difficult. One example illustrates the point. Given the poor state of the nation’s air traffic system, flying in the United States has become a depressing experience, filled with near misses, delayed arrivals, and canceled takeoffs. The federal response, unsurprising given the challenges cited above, has been simply to cap the number of flights allowed at the most egregiously crowded airports. Yet at the same time that capacity has been capped, airlines have been seeking to add large numbers of flights from small communities to so-called hub airports, where passengers are expected to transfer to larger planes for longer-distance flights. The resulting chaos has been entirely predictable, yet one of the most obvious answers is hard to put on the policy table.

#### ( ) Congressional battles over the plan *force* the link

**Laing 6-20**

(Keith, Staffer for the Hill “GOP unveils $51.6B DOT, HUD budget,” <http://thehill.com/blogs/transportation-report/infrastructure/231197-gop-unveils-516b-dot-hud-budget>, AMukund)

As lawmakers debate a new road and public transit spending bill, Republican leaders in the House unveiled on Wednesday a $51.6 billion budget for the departments of Transportation and Housing and Urban Development. The House Appropriations Committee said Wednesday that it will consider its Transportation, Housing and Urban Development budget for fiscal year 2013 in a subcommittee hearing Thursday. The draft of the proposal released Wednesday contains a $3.9 billion reduction for the agencies from 2012 spending and it is $1.9 billion less than President Obama requested for the departments earlier this year. Appropriations Committee Chairman Hal Rogers (R-Ala.) said his committee had to make "smart investments" in transportation and housing development. "This bill targets taxpayer dollars where they can be best used to improve the reliability, safety, and efficiency of our transportation systems, while also holding the line on spending to help reduce the nation’s growing deficits,” Rogers said. Rodgers also said the 2013 transportation and HUD appropriations bill "funds important housing programs at responsible levels for Americans that need them, while scrubbing the HUD budget to find and eliminate excess, wasteful, or unnecessary spending.” Appropriations subcommittee on Transportation, Housing and Urban Development Chairman Tom Latham (R-Iowa) added that the legislation will “meet our nation’s transportation and housing needs while remaining fiscally responsible and accountable to hardworking American taxpayers. "This legislation continues my goal and dedicated work of ending the budgeting gimmicks and accounting tricks that have plagued Washington in recent years," he said. However, Democrats on the appropriations committee assailed the measure for cutting the Transportation, Housing and Urban Development departments' budgets. “As we are witnessing in Europe, austerity is not working and shouldn't be replicated here," the ranking Democrat on the panel, Rep. Norm Dicks (D-Wash.), said in a statement released by his office. “Due to House Republican infighting over the surface transportation bill and their unwillingness to compromise in conference negotiations, our Republican majority has had to resort to place-holder language in this bill for several important transportation provisions, not least of which, the funding level for the federal highway program," Dicks continued. "The reckless partisan brinkmanship of House Republicans on this traditionally bipartisan infrastructure bill is appalling." The transportation and HUD bill does not have a "sufficient allocation," Dicks added, but he allowed that he appreciated "that our majority has made an effort to protect several important transportation and low-income housing programs."

###  Ext. Yes Tradeoffs

#### ( ) Budget shortfalls will force tradeoffs

**PWC ‘12**

Pricewater Coopers, LLP (“Investing in transportation: Doing more with less,” Jan 2012, <http://www.pwc.com/en_US/us/capital-projects-infrastructure/publications/assets/infrastructure-investing-dot.pdf>, pg 2, AMukund)

Shrinking public resources Historically endowed with the resources necessary to create and maintain world-class transportation infrastructure, the US in recent years has experienced a decline in transportation infrastructure spending. State and federal budgets are squeezed tighter than ever before as various constituencies compete for a limited— often shrinking—pool of funding. As a result, the US has become less and less able to do either: create new infrastructure or maintain what already exists. Today, the US ranks 24 th in the world for the quality of its overall infrastructure—between Malaysia in 23 rd place and Taiwan in 25 th —according to the World Economic Forum’s Global Competitiveness Report evaluating 142 countries. 1 The need for more efficient infrastructure investment On the one hand, government budgets are tighter than they’ve ever been: Infrastructure maintenance and improvement funding gaps as high as 70 percent are not uncommon, according to the American Association of State Highway and Transportation Officials. As Figure 1 illustrates, estimates from the US Department of Transportation, the National Surface Transportation Infrastructure Financing Commission, and the National Surface Transportation Policy and Revenue Study Commission all concur that significant gaps in funding exist. 2 And 29 states have projected budget shortfalls totaling $44 billion for FY 2013, which begins July 1, 2012. 3

#### ( ) Here’s empirical support for the link – the plan to remove the Bronx Expressway proves that tradeoffs are inevitable

**Dolnick ‘10**

[New York Times (Sam, 7/12/10, “Plan to Remove Bronx Expressway Gains Traction,” <http://www.nytimes.com/2010/07/13/nyregion/13sheridan.html>, AMukund)

For more than a decade, a plan pushed by some South Bronx residents and transportation advocates has sat on the fringes of the State Transportation Department’s to-do list, in part because it would be a radical undoing: tearing down the Sheridan Expressway. Although the plan has no real precedent in New York, advocates recite the benefits. They say it would ease traffic, improve neighborhood life and right a decades-old wrong committed by the master planner Robert Moses of building an unnecessary highway. As other proposals for the Sheridan have been tossed aside, the idea to tear it down has improbably progressed to the center of the state’s rethinking of the highway, which runs only a mile and a quarter long between the Cross Bronx and Bruckner Expressways. In the process, the Sheridan, a reliable thoroughfare for truckers and an eyesore for Hunts Point residents, has become something else: a battleground in a national fight to take urban spaces back from the automobile. “We’re rolling back the freeway system,” said John Norquist, president and chief executive of the Congress for a New Urbanism, a group based in Chicago that promotes walkable cities. He pointed to Portland, Ore.; San Francisco; and Milwaukee, where he was mayor, as cities that have removed highways running through urban areas. Mr. Norquist said the Sheridan was “a big important example because it’s in New York and it’s very visible; it would inspire other people that are trying to do the same thing.” State transportation officials have been studying the Sheridan for years. They have narrowed the field of proposals to three, including a plan to “demap” the roadway, which would probably lead to its removal. On Tuesday, officials will release long-awaited results of a study of the traffic implications for keeping and removing the Sheridan. While no final decision is expected, the report could presage the road’s fate. “We realize that we can’t just look at the highway facility itself; we need to look at the impact of a highway through the community it runs through,” said Phillip Eng, the city’s regional director of the State Transportation Department. “It needs to focus on not just moving traffic.” The Sheridan carries roughly 50,000 vehicles a day, according to state officials. It provides a route for truckers to reach the major food distribution center in Hunts Point but also acts as a physical barrier between local residents and the Bronx River. Removing the Sheridan would open up 13 acres of open space along the river, land that advocates want to connect with some 15 other acres of service roads and riverfront property to create 1,200 affordable housing units, commercial and industrial space, and amenities like playgrounds, swimming pools and soccer fields. “This proposal is really rooted in the environmental justice battles that low-income communities have been fighting for decades,” said Joan Byron of the Pratt Center for Community Development, a member of the campaign to remove the Sheridan. “If you look at globally competitive cities, they’re all looking at the spaces they gave over to highways decades ago, and they’re rethinking those decisions.” In contemplating Mr. Moses’ legacy, the Sheridan stands as more an asterisk than a triumph. It was conceived as cutting across the northeastern Bronx, but local opposition foiled the plan because the road would have gone through part of the Bronx Zoo. Still, removing the Sheridan would be a bold decision; after all, it received a $27 million upgrade in 2004. “The Sheridan, physically, is really a new highway,” said Sonia Pichardo, a State Transportation Department official. The last major removal of a New York City highway was of elevated portions of the West Side Highway, most of which were removed in stages from 1976 to 1989. (In 1973, a truck fell through the highway at Gansevoort Street.) The Southern Bronx River Watershed Alliance, a coalition of Bronx and citywide environmental, housing and transportation groups, say the Sheridan, no matter its condition, is unnecessary. It links two highways, the group points out, that already intersect to the east. The plan to remove the highway proposes new ramps from the Bruckner that would improve access to the Hunts Point market. A plan to keep the Sheridan also calls for new ramps from the Bruckner to the market but seeks to preserve the Sheridan as an alternative to other traffic-clogged highways. A third plan essentially keeps the highway as it now stands. The state has been evaluating the traffic implications of all three plans since 2008. For the thousands of truckers who pass through Hunts Point every night, improving the highway is seen as far more essential than a desire for open space. “Eliminating the Sheridan would bring things backwards a bit and make it worse,” said Matthew D’Arrigo, a third-generation produce distributor and co-president of the Hunts Point Terminal Produce Cooperative Association. “The job is to try and fix the situation, not to make a park. This is about highway stuff and traffic.” Mr. D’Arrigo said that even if the new route added just a few minutes of time to truckers’ trips to and from the market, “a few minutes of truckers’ time on a bad day will stifle the entire community.”

## \*\*\*NextGen DA

### N/G 1NC

#### ( ) NextGen’s on the chopping block – key to innovative, efficient commercial aerospace

Holleywell and Lipman 4-12

(Ryan and Daniel“The 5 Biggest U.S. Infrastructure Projects, Plus 5 at Risk,” April 2012, GOVERNING is the nation's leading media platform covering politics, policy and management for state and local government leaders. Recognized as the most credible and authoritative voice in its field, GOVERNING provides nonpartisan news, insight and analysis on such issues as public finance, transportation, economic development, health, energy, the environment and technology, <http://www.governing.com/topics/transportation-infrastructure/gov-5-biggest-us-infrastructure-projects-plus-5-at-risk.html>, AMukund)

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.”

#### ( ) Transportation infrastructure investment occurs through zero-sum budget redistribution

GAO ‘5

(Government Accountability Office “The Benefits and Costs of Highway and Transit Investments,” May 6 2005, Highlights of an Expert Panel, <http://www.gao.gov/new.items/d05423sp.pdf>, AMukund)

For transportation analysts, the redistributive effects of expenditures are largely a zero sum game. Although transportation expenditures can generate significant local economic activity, much of it is simply redistributed from other taxpayers and places that lost out in the geographic competition for subsidy dollars. From this point of view, policy makers are simply missing the point when they focus almost exclusively on the local expenditure effects of transportation investment decisions. Despite such admonitions from analysts, however, many elected officials and other policy makers view the transportation effects of public investments as abstract, arcane, and arbitrary. While a new freeway ramp metering project might smooth traffic flows, which in turn lower production costs for a particular set of firms, which in turn increase sales, which in turn add to total employment, such effects are difficult to unambiguously link to the highway investment. In contrast, the consequences of the public expenditures on transportation projects in a given congressional district are clear and unambiguous—dollars get spent, projects get built, people get hired. New highways and transit investments are dramatic and highly visible and generate economic activity, especially during construction. That much of this activity is simply shifted from taxpayers in other jurisdictions is almost beside the point to most elected officials. For most elected officials responsible for transportation taxation and spending, the overriding concern is with the equity of transportation funding among states, districts, and jurisdictions. Concerns over who pays and who receives are paramount This concern ensures a political focus on the expenditure effects of transportation investments and makes it all but impossible for elected officials to consider the transportation effects of investments. From the perspective of most public officials, it’s the transportation analysts and economists who miss the point by focusing on transportation effects and tools like benefit-cost analysis in making investment decisions. A Member of Congress from a western state, for example, may find a study showing that rail transit investments in a densely developed, older east coast city are likely to yield far greater transportation benefits than those in his/her city all but irrelevant to debates over the equitable geographic distribution of federal transportation funds.

#### **( ) NextGen failure collapses the economy**

AIA 11

(Aerospace Industries Association, “Civil Aviation – Second to None”, http://www.aia-aerospace.org/assets/ip\_civil\_2011.pdf)

The U.S. civil aviation industry plays a vital role in the health of the world’s economy. BACKGROUND The most recent data show that the sale of goods and services tied directly or indirectly to civil aviation constituted $1.3 trillion, or about 5.6 percent of the nation’s total gross domestic product in 2009. Our industry directly and indirectly sustains nearly 12 million jobs. The U.S. aerospace industry remains the single largest contributor to the nation’s balance of trade, with $87 billion in exports and a $57.4 billion trade surplus in 2011. The global recession of the past few years has reduced demand for leisure and business travel and the shipment of just-in-time goods. Many of our nation’s aging aviation infrastructure limitations have been masked by the economic slowdown. Delays are down; aircraft CO2 emissions are 10 percent below 2005 levels. Yet, our 1960s-era air traffic control system will not be able to handle demand when it returns. Unless we invest in sorely needed transformational aviation infrastructure now, civil aviation generated economic growth will be stunted and the economic cost of system delay will likely eclipse $40 billion annually by 2012. FAA has already invested more than$3 billion in the Next Generation Air Transportation System and plans to spend up to $20 billion more. The contract to install ADS-B ground stations throughout the country is on time and on budget and should be completed by 2013. The economic and environmental benefits of NextGen, when fully implemented, are impressive. Routing and delay-reducing efficiencies will save billions of dollars annually and save more than a billion gallons of fuel. Those are conservative estimates which will provide an economic return on government investment in less than three years and will be the environmental equivalent of removing 2.2 million cars off the road. The global aviation industry has committed to improve overall fuel efficiency by 1.5 percent per year through 2020; achieve carbon neutral growth from 2020; and cut aviation’s net CO2 emissions in half by 2050 compared to 2005 levels. One of the biggest impediments to confidence in the country’s commitment to implement NextGen expeditiously is that our National Airspace System has been operating without an updated program and funding authority (a FAA Reauthorization Bill) for nearly four years. This unprecedented delay in modernizing the statutes that govern the oversight and operation of the most complex aviation authority in the world has had numerous deleterious effects. New starts are prohibited. Programs are not anchored to long-term financial authority. And new concepts and technologies such as unmanned aircraft systems are held back while other nations march forward. AIA RECOMMENDATIONS Like our national defense, funding for the safety and efficiency of our nation’s aviation infrastructure should never be shortchanged. The safe and fiscally sensible course of action is to accelerate, not delay, the implementation of NextGen. By doing so, we invigorate the economy, generate jobs, save fuel, reduce CO2 emissions and, most importantly, improve system safety. To do this most effectively, AIA recommends that:  The Transportation Department swiftly review and implement the 23 recommendations of the Future of Aviation Advisory Committee;  Congress pass a multi-year FAA Reauthorization Bill as soon as possible; and  Congress ensure NextGen implementation stays on schedule by fully funding FAA’s capital and RE&D accounts.

#### ( ) That ruins interdependence and risks nuclear war

**Kemp ‘10**

[Geoffrey Kemp, Director of Regional Strategic Programs at The Nixon Center, served in the White House under Ronald Reagan, special assistant to the president for national security affairs and senior director for Near East and South Asian affairs on the National Security Council Staff, Former Director, Middle East Arms Control Project at the Carnegie Endowment for International Peace, 2010, The East Moves West: India, China, and Asia’s Growing Presence in the Middle East, p. 233-4]

The second scenario, called Mayhem and Chaos, is the opposite of the first scenario; everything that can go wrong does go wrong. The world economic situation weakens rather than strengthens, and India, China, and Japan suffer a major reduction in their growth rates, further weakening the global economy. As a result, energy demand falls and the price of fossil fuels plummets, leading to a financial crisis for the energy-producing states, which are forced to cut back dramatically on expansion programs and social welfare. That in turn leads to political unrest: and nurtures different radical groups, including, but not limited to, Islamic extremists. The internal stability of some countries is challenged, and there are more “failed states.” Most serious is the collapse of the democratic government in Pakistan and its takeover by Muslim extremists, who then take possession of a large number of nuclear weapons. The danger of war between India and Pakistan increases significantly. Iran, always worried about an extremist Pakistan, expands and weaponizes its nuclear program. That further enhances nuclear proliferation in the Middle East, with Saudi Arabia, Turkey, and Egypt joining Israel and Iran as nuclear states. Under these circumstances, the potential for nuclear terrorism increases, and the possibility of a nuclear terrorist attack in either the Western world or in the oil-producing states may lead to a further devastating collapse of the world economic market, with a tsunami-like impact on stability. In this scenario, major disruptions can be expected, with dire consequences for two-thirds of the planet’s population.

## \*\*NextGen Uniqueness

#### ( ) The FAA’s expanding incentives for NextGen

**Lynch 5-30**

[Kerry. Staffer for Aviation Daily. “FAA to Explore Incentives for NextGen Aircraft Equipment” [http://www.aviationweek.com/Article.aspx?id=/article-xml/avd\_05\_30\_2012\_p04-01-463055.xml 5/30/12](http://www.aviationweek.com/Article.aspx?id=/article-xml/avd_05_30_2012_p04-01-463055.xml%205/30/12) //Cal-JV]

The FAA today will hold a public meeting to solicit input on incentives for commercial and general aviation operators to equip their aircraft with NextGen capabilities. In the most recent FAA reauthorization bill, Congress gave the U.S. Transportation Secretary authority to establish an equipage incentive program for U.S.-registered aircraft. Under the measure, a loan guarantee program could be established with appropriated funds or with fees and premiums. “The FAA is working to understand what options exist for establishing the most effective program even if it receives no additional appropriations to fund the incentive,” the agency says. This program would be designed to encourage the introduction of NextGen-capable aircraft, with the FAA targeting base levels of equipment bundles that would accelerate NextGen benefits. “The FAA is examining various methods of reducing the government’s risk and determining the extent of industry interest in the program,” the agency notes.

#### ( ) It’s on the brink

**Tate 5-31**

[Chris. Staffer for the McClatchy Newspapers. “Plan to Update Air Traffic Control System Faces Delay” The Miami Herald, 5/31/12 ln//Cal-JV]

NextGen, a satellite-based air-traffic control system that’s to replace the current radar-based one, is intended to make the skies safer and more efficient. It’s supposed to be complete by 2025, but its implementation depends on the consolidation of air traffic control buildings and facilities, a process that could take two decades. As part of a multiyear reauthorization of the FAA that was signed into law in February, Congress gave the agency 120 days to submit its plan. Officials from the FAA and the union that represents air traffic controllers will meet Tuesday to discuss the plan, said Paul Rinaldi, the president of the National Air Traffic Controllers Association. That’s nine days before it’s due. “Nine days is clearly not enough,” Rinaldi said. “But it’s certainly a start.” David Grizzle, the FAA’s operating chief for air traffic organization, said the plans were complex because they involved changing flight patterns, and the agency wanted to make accurate decisions even if it took more time. “We can’t make light decisions,” Grizzle said. “If we merely consolidate facilities without restructuring airspace, we may very well set ourselves back.”

#### ( ) Loan guarantees have been authorized, but they must remain a priority to succeed

Poole ‘12

(Robert, Director of Transportation Policy and Searle Freedom Trust Transportation Fellow – Reason Foundation, “FAA Reauthorization, Aviation Emissions Trading War, ATC User Fees, Europe's Next-Generation Milestones, ERAM Woes and FAA Shortcomings”, Air Traffic Control Reform Newsletter #90 – Reason Foundation, 2-24, http://reason.org/news/printer/air-traffic-control-reform-news-90)

After 23 extensions since the nominal expiration of the last FAA authorization (Sept. 30, 2007), Congress finally enacted and the President signed the bill. Despite some blather by politicians about how the bill opens the door to ATC modernization by fully funding NextGen, the bill does nothing of the kind. In fact, it freezes for four years the FAA budget account (Facilities & Equipment) from which NextGen projects (and a lot of other capital expenditures) are paid for. All the other main accounts are also frozen for four years—airport grants (AIP), operations (mostly payroll), and research (tiny), making this the first FAA reauthorization ever that does not increase spending. Actually, however, the impact is worse than flat. That’s because the largest budget category, the $9.6 billion per year Operations account, almost certainly will not remain at that level during the four-year period. Doing so would mean violating the terms of the FAA’s union contracts, which provide for annual increases in compensation. Hence, when Congress each year gets around to appropriating the money for FAA, if it sticks with the overall $15.9 billion per year FAA budget total, something else will have to be cut if Operations goes up each year. It won’t be AIP, because that is the one category that is on the “mandatory” side of the budget. The Research account is too small to matter. So the account that takes the hit will be—you guessed it-- Facilities & Equipment (a.k.a. NextGen). Just to illustrate the magnitudes, assume the Operations budget increases by 5% in each of FY2013, 2014, and 2015. By FY2015, it would have increased from $9.653 billion to $11.174 billion, and the four-year difference would be $3.024 billion. Subtracting that from the budget’s four-year total for F&E ($10.906 billion) would reduce F&E to $7.872 billion over four years. So FAA would have to defer some $3 billion of F&E projects into future years, further stretching out the transition to NextGen. (And this example ignores the possibility of across-the-board cuts in all federal discretionary spending as a future deficit-reduction measure.) Given this dismal outlook, one of the few good elements of the bill is its approval of provisions aimed at facilitating equipage of aircraft to operate in a NextGen environment. For example, last year Nexa Capital Partners proposed an innovative NextGen Equipage Fund. This is a creative effort to resolve the conundrum faced by airlines when deciding when to make the capital expenditures to equip their planes with systems to interface with NextGen systems such as ADS-B, DataComm, etc. Airlines (and business jet operators) rightly fear that if they act too soon, FAA will fail to deliver operational programs that interface with their new onboard gear. So the Equipage Fund would buy the hardware from suppliers and get it installed on aircraft fleets, but the aircraft operators would not start making lease payments until the FAA capability was operational (i.e., they would start paying only when they started to get benefits from the new systems). That model would leave the Equipage Fund holding the bag in the event of FAA delays. Fortunately, the bill provides for equipage loan guarantees from the government. That should enable the Equipage Fund (and others) to get moving on NextGen equipage—assuming DOT and FAA make it a priority to get the loan guarantee provision up and running.

## \*\*NextGen Internal Links

#### ( ) Stable commitments through funding are key to successful NextGen upgrades

**Dymet ‘11**

(Michael J., General Partner – NextGen Equipage Fund, “Transitioning to Satellite-Based Air Traffic Control”, Geospatial Today, 9-15, Lexis)

The US airline position on NextGen Airline scepticism of the FAA's ability to deploy, as well as implement, NextGen infrastructure remains high. Al-though FAA procurement reforms have produced significant improvements by using more solid contracting practices that better balance risks, airlines remain concerned about the long lead times between required capital investment, and net benefit realisation. While US airlines seek ATC modernisation and are generally supportive of the NextGen program, vexing challenges remain: \* NextGen architecture requires an extensive investment in aircraft equipage, from antennas to black box avionics, displays, and ongoing software upgrades. It is widely accepted, for example, that the cost savings afforded by ADS-B "Out" reside primarily with the FAA and its ability to phase out expensive secondary radar systems, while airlines bear most of the cost. This comes when US airlines can little afford to make such nonproductive investments. \* Major NextGen benefits can be delivered only when more than half of the air transport fleets are equipped and running the new systems. For example, enroute airspace congestion today causes delays from ATC workload saturation and radar-based separation standards. Capacity is limited by controllers' ability to handle multiple aircraft in a given congested enroute sector with delays from excessive miles-in- trail spacing, inefficient vectoring, and airborne holding. A substantial benefit of DataComm for airlines is the reduction in operating costs associated with reducing these delays. Regression analysis shows a 90 per cent correlation between capacity expansion and equipage level. \* Aircraft equipage issues aside, FAA controllers will need ATC display changes, new procedures, and training in order to cut over to NextGen operations, to realise the benefits. But details remain in the cut-over to NextGen, and will require close cooperation between FAA and airlines. \* Global interoperability with these new systems and architectures will be essential, and while many working groups are seeking solutions to harmonisation challenges, questions remain about the end-state architectures, requirements and investment costs for both airlines and ATC service providers. NextGen equipage costs While FAA infrastructure cost estimates have produced stable figures, not much is agreed upon with respect to exact aircraft equipage costs. Consequently, NextGen Equipage Fund conducted a detailed domestic turbine fleet forecast from 2009 through 2020 to provide estimated aircraft population and demographics as the foundation for the Fund's performance and capacity. Accurate depiction of the equipage environment requires categorisation of the existing domestic fleet since there are various configurations of avionics within the aircraft fleet currently in service. The NextGen Fund developed a list of categories with the assistance of industry experts. These categories ("Families") are based on aircraft production year and the ARINC engineering standards in operation. Target equipage segments in the turbine aircraft category and associated unit costs range in estimated cost from about $100,000 to as much as $1 million per aircraft. These estimates are subject to continued equipage cost updates from the analysts at NEXA in surveys of the supply chain vendors hoping to sell into the market in coming years. Assuming that fully NextGen-equipped aircraft from OEMs are not expected to be available until about 2017, it is expected that nearly all deliveries over the next few years will still require some form of retrofit, update, or up-grade. The forecast used these Families to construct an equipage cost outlook with each existing avionics configuration and the new equipment required to achieve NextGen DataComm, ADS-B, and Air-SWIM capability, including varying com-binations of required equipment. The NextGen Fund prepared this information to project the cost of equipage for eligible retrofit aircraft within the domestic US fleet. The results from this fleet and cost forecasting process show that the NextGen Fund is expected to equip up to 75 per cent of the commercial air transport retrofit fleet. To address this total cost, the Fund antic-ipates a mix of investment proceeds from the debt and equity raise and future cash flows generated from NextGen Fund operations. Equipage risk sharing partnership A plan to share the capital investment risks among key stakeholders is the best way to ensure NextGen equipage targets are met. Figure 5 summarises costs and benefits of participation and risk-sharing by the major stakeholder groups. Discussions with airlines and FAA have pointed to the need for the parties to enter into agreements to memorialise these shared risks. It is anticipated that a Memorandum of Agreement ("MOA") would commit the three parties to certain obligations and to incur costs as certain capabilities come online, and by extension can begin to produce benefits such as reduced delays, lower fuel costs, greater aircraft utilization, and related incremental new revenues. Conclusion Without a large and well-funded equipage financing solution capable of addressing key stakeholder risks, there will be no NextGen system for the United States. The NextGen Fund intends to remove barriers to equipage that could impede or threaten the long-term success of NextGen program, and to otherwise accelerate airline equipage through a carefully designed financial incentive pack-age , and a business infrastructure to administer equipment purchases and inventories. With the ground-based NextGen infrastructure build-out proceeding, stakeholders now recognise that properly equipping the nation's aircraft fleet stands on the critical path to realising the benefits of a fully functioning NextGen system.

#### ( ) Hearings mean WAAS is on the chopping block – partisanship guarantees Congress is looking for cuts

Turner 5/30

(Aimee, “FAA to be grilled on NextGen consolidation planFAA to be grilled on NextGen consolidation plan,” 5/30/2012, AirTrafficManagement Magazine, <http://www.airtrafficmanagement.net/2012/05/faa-to-be-grilled-on-nextgen-consolidation-plan/>, AMukund)

A Congressional hearing tomorrow will examine the Federal Aviation Administration’s (FAA) need and efforts to consolidate air traffic control facilities to provide long-term cost savings and help US aviation transition to the NextGen air traffic control system. The Aviation Subcommittee will hear testimony from the FAA, the Department of Transportation Office of Inspector General (OIG), and the National Air Traffic Controllers Association regarding the need for action given the age and deteriorating condition of FAA facilities, the state of the federal budget, the need for cost savings, expected facility and infrastructure needs with the implementation of NextGen, and consolidation and realignment planning requirements included in the recently enacted FAA Modernization and Reform Act of 2012 (Reform Act). The FAA is responsible for maintaining or replacing 402 air traffic control facilities in the United States. According to the OIG, the average facility has an expected useful life of approximately 25 to 30 years. As of 2012, the average age of an en-route centre, which generally handles high altitude en route air traffic moving across the United States, is 49 years. The average age of a TRACON, which typically handles traffic within 40 miles of an airport, is 28 years. According to the FAA, the estimated cost to replace 402 terminal facilities is $10.6 billion, while the estimated annual cost to sustain 402 terminal facilities is $99.3 million. “Despite its understanding of the need to make decisions on facility requirements and to move ahead with realignments and consolidations, the FAA has previously met parochial political resistance from Congress, and at times, its own workforce,” states the sub committee. “If the FAA is to successfully implement NextGen and achieve the expected cost savings, cost avoidances, and safety improvements, it must work with Congress, labour, industry and other stakeholders to develop clear facility requirements and sound business cases; comply with the mandates of the recently enacted Reform Act; and move ahead with needed realignments, consolidations, and/or maintenance plans in an expedited fashion.”

#### ( ) Sustained funding is key

FAA 11

[Federal Aviation Administration (US Department of Transportation, FAA budget request submitted for use of the committees on appropriations, “Budget Estimates Fiscal Year 2012,” <http://www.dot.gov/budget/2012/budgetestimates/faa.pdf>, AMukund)

The WAAS Program has various program goals. The loss of the Galaxy XV GEO; its WAAS payload, and the sunset of the L2P GPS signal has accelerated/modified WAAS goals The program requirement is the proliferation of WAAS LPV approach procedures to enable the WAAS benefit of improved access to airports. The WAAS program office was notified by Intelsat on April 12, 2010 that the telemetry, tracking, and control system on the Galaxy XV satellite had failed. Service disruptions will occur in NW Alaska as well as intermittently across the entire system. A failure to fully fund the GEO satellite acquisition would delay the implementation of the replacement (stopgap) GEO as well as the development of the 5 th GEO payload. A slip to the stopgap GEO implementation will result in a commiserate delay in restoring WAAS coverage to northwest Alaska. Any failure to pay for the existing GEO leases will result in termination liability costs for the FAA. The Department of Defense has notified users that the L2P signal will no longer be available to users beyond 2020. The L2P signal is essential to the operation of WAAS, and an operational replacement capability must be in-place by 2018. FY 2012 is a pivotal year for this effort in terms of long-lead items such as development, test, and prototype delivery of the next generation G-III receiver, the development of a Safety Computer essential to handle the expanded data requirements for the transition from L2P, the new GEO and GIII receiver. FY 2012 will also be critical year in the recomplete for the WAAS prime contract, which must be in-place to support GEO replacement and L2P transition. The GEO and L2P transition activities are essential to ensuring the existing WAAS capability is provided to users and therefore takes precedence over the development of new procedures. Any reduction in funding to WAAS will jeopardize the program’s ability to achieve the FAA Flight Plan goal of publishing 500 procedures per year.

#### ( ) Long-term funding is key

Halsey 11

(Ashley, Staff Writer, Washington Post “ Lawmaker predicts Congress will reach accord on aviation funding” <http://www.washingtonpost.com/local/commuting/lawmaker-predicts-congress-will-reach-accord-on-aviation-funding/2011/11/17/gIQAZWCgUN_story.html>, 11-17-11 AMukund)

The meeting came Tuesday, a day after Rockefeller told an aviation industry gathering that prospects for agreement on a long-term funding bill seemed grim. “I’m optimistic,” Mica said Wednesday. “We directed staff to try to resolve any of the pending issues and what can’t be decided [by them], we’ll meet and try to come to agreement.” Long-term funding for the Federal Aviation Administration has proved to be as problematic and contentious as any issue on Capitol Hill in recent years, though it has played largely in the background to other high-profile partisan battles. A long-term aviation spending plan is considered crucial to advancing a $42 billion program that will revolutionize the nation’s air traffic management system, keeping the U.S. industry competitive with its foreign counterparts and preparing for a projected huge increase in air travel in the next four decades. Without confidence that Congress has committed to pay for the program, which has a long-term rollout, airlines have been reluctant to install equipment that will cost them up to $10 billion.

## \*\*NextGen Impacts

### Impact 2NC

#### Economic collapse outweighs and turns the case:

#### ( ) Magnitude – economic interdependence is a controlling impact – it should be a filter because conflict can only occur if trade relationships collapse. Kemp says economic collapse results nations turning inward, which spurs conflict in every corner of the globe.

#### **( ) Risk – a wealth of qualified experts prove economic collapse is the most likely scenario for conflict**

Royal ‘10

[Director of CTR Jedediah, Director of Cooperative Threat Reduction – U.S. Department of Defense, “Economic Integration, Economic Signaling and the Problem of Economic Crises”, Economics of War and Peace: Economic, Legal and Political Perspectives, Ed. Goldsmith and Brauer, 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 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.

#### ( ) Timeframe – economics are perception-based – the plan would result in immediate cuts toward NextGen technology, which is the death knell for commercial aviation.

#### ( ) NextGen development should also be an impact filter – it’s development makes all conflict escalation *impossible*

**Bolkcom ‘6**

[Chris. PhD in Military Aviation. MA in Intl Relations. “CRS Report for Congress: Homeland Security – Defending US Airspace.” 2006, <http://www.fas.org/sgp/crs/homesec/RS21394.pdf> //Cal-JV]

Similar to the options for air defense surveillance, options to intercept aircraft and cruise missiles can be divided into surface- and air-based, each offering strengths and weaknesses. Fighter aircraft are well suited to shoot down other aircraft and cruise missiles. They are inherently deployable and flexible. They also tend to cost more to procure and operate than other intercept options. Immediately following September 11th, the Air Force began 24 hour combat air patrols over New York and Washington, and intermittent patrols over other major cities. Cost estimates of these patrols vary between $100 million to $200 million per month.14 These costs, the strains they put on pilots and personnel, and the unanticipated wear and tear they put on fighter aircraft have led some to recommend reducing these patrols and search for other intercept solutions.15 The costs of using combat aircraft for air defense might be reduced in three ways. First, combat aircraft could be kept on 15 minute strip alert, rather than having them fly patrols. During the Cold War, NORAD kept aircraft on strip alert at over 100 sites.16 Some loss of responsiveness would be expected. On January 6, 2002 a private aircraft flew into an office building in Tampa, FL, passing over MacDill AFB in the process. The Air Force’s inability to intercept the aircraft before it crashed suggests how strip alert may be less responsive to intercept needs than fighter CAP. Another way to reduce the cost of using combat aircraft for air defense would be to design aircraft specifically for this mission. One company claims it can build an interceptor for $4 million, a fraction of the cost of modern fighters.17 The feasibility of building such a low cost combat aircraft is still unproven. A third potential way of reducing aircraft costs would be to field air-to-air missiles on UAVs. The Air Force is currently experimenting with the Stinger on its Predator UAV, which reportedly engaged in a dogfight with an Iraqi fighter aircraft.18 DOD operates many SAM systems. The Army’s Patriot, the Marine Corps’ Hawk, and the Navy’s ship-based Standard Missile, are examples of SAMs that could be part of a CONUS air defense. SAMs tend to be less expensive than combat aircraft, and carry more missiles. The Hawk, for instance, costs approximately $25 million, and a battery can fire 48 missiles.19 SAM warheads are generally larger than air-to-air missile warheads, which provides more destructive power. Unlike aircraft, SAMs cannot chase enemy aircraft and cruise missiles, and their deployment must be carefully planned. Unlike combat aircraft, SAMs cannot visually identify a target and determine if it is hostile. Regardless of which systems are deployed, a CONUS air and cruise missile defense system will likely be made up of layered elements. A mix of fighter aircraft and SAMs (or other options) is typically more attractive than deploying only fighters or only SAMs. Similarly, defense planners will likely lean toward a mix of surveillance platforms and sensors rather than just one type. A mix of systems reduces the chance of “single point failure,” complicates an adversary’s attack planning, and can make a more effective system. Determining the best mix, however, may be critical.

#### < Turns the Case >

###  Turns Case: Climate Change

#### ( ) NextGen cuts airline emission by boosting efficiency

Johnson 9

(Keith, Reporter – WSJ, “Cleared for Takeoff: Obama Budget’s Green Take on Air Travel”, Wall Street Journal, 5-8, http://blogs.wsj.com/environmentalcapital/2009/05/08/cleared-for-takeoff-obama-budgets-green-take-on-air-travel/)

The $865 million allocated to the next-generation of air navigation systems—creatively called NextGen—is a way to modernize the way commercial airliners take off, fly, and land at the nation’s increasingly crowded airports. Designed to improve safety and efficiency of the antiquated air-traffic control system through 2025, NextGen has some surprising environmental benefits: It promises to cuts fuel consumption, and emissions, from airliners. The idea is basically to do for air travel what dashboard GPS devices have done for cars: Put high-tech satellite navigation to work in the cockpit. Some of the new technology, developed by companies like ITT Corporation, is slowly being rolled out. Last month, Miami joined airports Atlanta and Dallas-Fort Worth that have started using a new way to keep airliners in communication with the ground and with each other. All of that helps safety, of course. And makes it easier for busy airports to safely juggle lots of airliners, improving efficiency and cutting down on delays. That was the main reason freight carriers such as UPS have been experimenting with new navigation technology—it helps the bottom line in a time-sensitive business. But when it comes to the environment, little things add up. The new system lets aircraft fly straighter routes, for starters. And by allowing aircraft to glide in for landing in a gentle path, using practically no throttle, the new systems can cut fuel consumption around airports, traditionally one of the areas where fuel burn is heaviest. Other airlines like Southwest have already been experimenting with juiced-up navigation systems to boost efficiency. Since early 2008, UPS has been using one of the new technologies developed by ITT, called automatic dependent broadcast surveillance, on flights into its Louisville hub. The new technology cuts emissions of its big Boeing 757 aircraft by 38%, UPS says. “It improves safety, reduces delays, reduces fuel burn, and the attendant environmental impacts,” says John Kefaliotis, ITT’s vice-president for NextGen. Overhauling the air traffic control system may not be the high-profile stuff President Obama’s green revolution is made of. But it does show, once again, that making things more efficient makes things work better, saves money—and can help the environment.

#### ( ) Those are key

Hodgkinson 7

[David Hodgkinson et al, June 2007, Associate Professor in the Law School at UWA; Special Counsel with Clayton Utz, a national Australian law firm; and a principal of The Hodgkinson Group, a consulting firm with advisors located around the world. David is the co-author of the book Global Climate Change: Australian Law and Policy (2008) and the general editor of Australian Climate Change Law and Policy (2009). As executive director of EcoCarbon, a non-profit organisation, he manages an industry partnership which is building capacity in mechanisms designed to reduce greenhouse gas emissions. He also leads an international project team working on a draft convention for persons displaced by climate change, “STRATEGIES FOR AIRLINES ON AIRCRAFT EMISSIONS AND CLIMATE CHANGE: SUSTAINABLE, LONG - TERM SOLUTIONS”, <http://www.hodgkinsongroup.com/documents/Hodgkinson_airline_emissions.bak.pdf>]

A number of organisations such as the Intergovernmental Panel on Climate Change (IPCC), Oxford University, the Massachusetts Institute of Technology (MIT) and the Tyndall Centre, for example, have studied the impacts of aviation on the global atmosphere. These studies, together with reports from Royal Commissions and other inquiries, make the following points clear: the climate change impacts of aviation are significantly worse than those of its carbon dioxide emissions alone. Further, reference to aviation being responsible for 2% of global carbon dioxide emissions is misleading as the figure (a) is based on total anthropogenic carbon dioxide emissions in 1992 (as determined by the IPCC), not 2007; (b) does not take into account aviation’s non-CO2 greenhouse gas (GHG) emissions which significantly contribute to the climate change impacts of aviation; and (c) ignores growth in air travel; air travel demand is growing at unprecedented rates, yet substantial reductions of aviation GHG emissions are not possible in the short to medium term; not only are emissions from air travel increasing significantly in absolute terms but, against a background of emissions reductions from many other sources, their relative rate of increase is even greater. Put another way, “if the [recommended] reductions in carbon dioxide emissions from groundlevel activities … are achieved, and the growth in air transport projected by the IPCC materialises, then air travel will become one of the major sources of anthropogenic climate change by 2050;”development of alternative jet fuels and aircraft technological developments, together with the development of more efficient operational practices and more efficient air traffic management systems and processes, will only partially offset the growth in aviation emissions; there is presently no systematic or compulsory incentive to reduce international aviation emissions; 􀁸 without government action to significantly reduce aviation growth within the UK, for example, aviation emissions may be greater than those forecast for all other sectors of the economy. As a result, aviation may exceed the carbon target for all sectors by 2050.

#### ( ) Flight efficiency is critical to slow the rate of warming – overcomes any “try or die” argument

Capoccitti ‘10

(Sam, Aviation Consultant, et al., “Aviation Industry - Mitigating Climate Change Impacts through Technology and Policy”, Journal of Technology Management & Innovation, 5(2), http://www.scielo.cl/scielo.php?pid=S0718-27242010000200006&script=sci\_arttext)

Environmental impact of Flight The main environmental concerns associated with aircraft are climate change, stratospheric ozone reduction (leading to increased surface UV radiation, regional pollution, and local pollution. During flight, aircraft engines emit carbon dioxide, oxides of nitrogen oxides of sulphur, water vapour, hydrocarbons and particles - the particles consist mainly of sulphate from sulphur oxides, and soot. These emissions alter the chemical composition of the atmosphere in a variety of ways, both directly and indirectly (RCEP, 2002). While much of the CO2 is absorbed on Earth in plants and the ocean surface, a huge amount goes into the atmosphere, where it and other gases create a kind of lid around the globe --the so-called greenhouse effect. Heat that would normally escape into space is thus reflected back to Earth, raising global temperatures (Lehrer, 2001). Nitrogen oxides (NOx) and H2O vapor from aircraft increase the formation of cirrus clouds and create contrails, which are visible from the ground. The combination of " contrails and cirrus clouds warm the Earth's surface magnifying the global warming effect of aviation. Together, NOx and water vapour account for nearly two-thirds of aviation's impact on the atmosphere (IPCC estimated that radiative forcing from all aircraft greenhouse gas emissions is a factor of 2 to 4 times higher than that from its CO2 emissions alone). Hence any strategy to reduce aircraft emissions will need to consider other gases and not just CO2" (GreenSkies, n.d.; pg.1). The environmental issues associated with flight are also correlated with the altitude at which the carbon dioxide is emitted, the higher the attitude the greater damage to the ozone layer. Research has shown that the majority of flights fly at an altitude between 29,500 ft and 39,400 ft (9-12 km). Figure 1 (Federal Aviation Administration, 2005; pg. 32 ) highlights the distribution to total fuel burn and emissions by 1 km altitudes for the year 2000. The lower spike in fuel burn and emissions in the 0-1 km range is attributed to aircraft emissions from the ground when aircraft are idling or taxiing. It was noticed after the events of 9/11 (when there was a temporary halt to all commercial flights) that the Earth's temperature was 1 to 2 degrees Celsius colder, which coincides with the theory that aircraft emissions do impact the environment. Figure 1. Altitude distribution of fuel burn and emissions Approaches to Mitigating Environmental Impacts The aviation sector these days is buzzing with talks about aviation emissions. There is a call for aviation emissions by the airlines to be included in climate change pacts (Fogarty, 2009). Talk is now turning to ways of mitigating air travel's future impact on climate change, and these "generally fall within two spheres: technology development, and policy mechanisms" (GLOBE-Net, 2007). Engine Technology, Aerodynamic Body and Weight It is estimated that the aircraft we fly today are 70% more efficient than those 10 years ago. IATA predicts that by 2020, another 25% efficiency will be added to the present day fleet (GLOBE-Net, 2007). Improvements in aerodynamics, engine design and weight reduction are the main areas of improvement to counter the dependence on fossil fuel. Though the replacement of fossil fuel is being vigorously pursued with some limited success, fossil fuels will not expect to be replaced in the near future. Apart from engine efficiency, finding an alternative fuel is part of the challenge for the aviation industry. GLOBE-Net (2007) reports that the majority of efficiency improvements over past aircraft have been achieved through the development and improvements in engine technology. Engine improvements, as in the case of automobiles, must increase fuel efficiency (and therefore, decrease CO2 emissions) with reductions in NOx, water vapour, and other air pollutants. Some technological advancement in engine technology uses high pressure ratios to improve efficiency but this worsens the problem with NOx. If new control techniques for NOx are developed to keep within regulatory compliance limits, high pressure ratios will likely be the path pursued by aircraft manufacturers. Further reduction in emissions can be achieved by matching the advancements in engine technology with better aerodynamic shape and use of light weight material to reduce drag. This certainly contributes to reducing the impact on environment and also can be promoted as a cost-saving measure (e.g., savings in fuel costs). Boeing (2007; pg. 1) indicated that "four key technologies contribute to an impressive 20% improvement in fuel use for the 787 Dreamliner as compared to today's similarly sized airplane. New engines, increased use of light weight composite materials, more-efficient systems applications and modern aerodynamics each contribute to the 787's overall performance." Aircraft manufacturers are also exploring the benefits of other technologies such as the use of winglets, fuselage airflow control devices and weight reductions. These could "reduce fuel consumption by a further 7% says the IPCC, although some have limited practicability" (GLOBE-Net, 2007). In the long term, new aircraft configurations (such as a blended wing body) may achieve major improvements in efficiency. Alternate Energy Solutions The time for zero emission aircraft is still far away. The technologies that may make that possible are still in early stages of development and evaluation. Second-generation biofuels, solar power and fuel cells are all being investigated by the aviation industry as well as the automobile industry. The more fuel aircraft burns, the more emissions emitted into the atmosphere thereby increasing its environmental footprint. The aviation industry has come a long way with fuel technology and with the help of Boeing and Airbus (the world's largest aircraft manufacturers). Today aircraft are lighter, quicker and more fuel efficient. Boeing has an ongoing legacy of integrating environmental performance improvements through technology advancements. Over the last 40 years, airplane CO 2 emissions have been reduced by around 70% and the noise levels have been reduced by approximately 90 percent. The noise footprint of the new 787 Dreamliner is 60% lower than any similar aircraft (Boeing 1998-2007; pg. 14). That legacy continues today with every airplane they design and build (Boeing, 1998-2008; pg. 16). One of the many initiatives supported by Boeing is its search for alternative energy solutions. This initiative will lead to reducing greenhouse gas emissions and at the same time Boeing is pioneering three key environmental advancements: • Advanced-Generation Biofuels - Boeing, Virgin Atlantic and GE Aviation conducted the first commercial flight using a biofuel mix with traditional kerosene-based fuel in February 2008. • Solar Cells - Converting sunlight into electricity • Fuel Cells - Convert hydrogen into heat & electricity without combustion, reducing the need for conventional fuels and eliminating emissions. Like Boeing, Airbus has partnered with Honeywell Aerospace, International Aero Engines and Jet Blue Airways in pursuit of developing a sustainable second-generation bio-fuel for commercial jet use, with the hope of reducing the aviation industry's environmental footprint. Alternative fuel research is a core tenet of Airbus' eco-efficiency initiatives (Airbus, 2008). Airbus research has also lead to test flights using gas to liquid kerosene, which is similar to jet fuel but results in lower emissions and is a much cleaner fuel source. Airbus has also researched other types of alternative fuels; for example, bio-mass to liquid and coal to liquid. On February 1, 2008 an Airbus 380 (in collaboration with Shell International and Rolls Royce) conducted a test flight using gas to liquid kerosene in one of the A380 engines. Over the last year, four airlines have flight tested on biofuel: Virgin Atlantic (in February 2008), Air New Zealand (in December 2008), Continental Airlines and Japan Airlines (in January 2009). They have "already flown on routes with one engine part-powered by a range of biofuels including algae and jatropha. Jatropha, a poisonous plant that produces seeds that can be refined into biofuels, is being touted as a good alternative fuel and a potentially powerful weapon against climate change. Experts say the perennial plant can grow on marginal land with limited rainfall, and does not compete with other food crops or encourage deforestation. Following its flight using jatropha in late December, Air New Zealand has set a goal to have 10 percent of fuel coming from biofuel sources by 2013, while Virgin is aiming for 5 percent by 2015" (Szabo et al., 2009). Pew (2009) reports that "the push in development of biofuels continues with a recent $25 million contract awarded by the Defense Advanced Research Projects Agency to SAIC. The company is being tasked to lead a team in development of an integrated process for producing JP-8 from algae at a cost target of $3/gal." The two-phase program aims to conclude with the design and operation of a pre-pilot scale production facility. But another project that involves Boeing, Honeywell, and CFM hopes to see biofuel production levels in the hundreds of millions of gallons per year by 2012 (Pew, 2009). The International Air Transportation Association (IATA) feels that any alternative fuel should be tested for performance and environmental impact before introducing into the marketplace. IATA researched has shown that the conservative nature of the industry will foster alternative fuels that originally are combined with conventional jet fuel. According to IATA (2008a), alternative fuel systems derived from biomass sources have the potential to lower the carbon footprint and lower other emissions as well. New technologies and more economic integration of alternative fuels along with government subsidies will accelerate the acceptance of these fuels in the market place (IATA, 2008a). In "Are bio-fuels really an alternative?" Jeff Gazzard (2009), a board member of the Aviation Environment Federation contends that the biofuel issue may not be as clear as it seems. The jury is still out as to whether either synthetic or biofuels are yet capable of being either entirely fail-safe for aviation use or environmentally sustainable in the longer term. According to Gazzard (2009) alternate fuels looked attractive when oil was marching towards $147 a barrel, but now that oil has fallen back to below $50 a barrel, $75-$85 a barrel for biofuel is not as attractive. He points out that another issue is that aviation consumes approximately 240 million tones of kerosene a year. Replacing the current aviation fuel with bio-fuel from productive arable land that does not compete with food production would take almost 1.4 million square kilometers, which is greater than twice the area of France. Gazzard (2009) is not convinced that aviation would be the best end-user even if biofuels could be produced sustainably. The industry has also followed with increasing interest in algae as a potential source of aviation fuel but is unconvinced that any cost-effective algae-derived aviation fuel could be produced within a practical timeframe that would allow such fuels to make any substantial contribution to climate change policies of today. Regardless of the skepticism, more and more airlines are testing alternative fuel sources and as global warming continues to escalate in the minds of the consumers. The assessment of GLOBE-Net (2007) is similar - "biofuels could mitigate some aircraft emissions, but the production of biofuels to meet the aviation industry's specifications and quantity demands is currently untested. Ethanol and biodiesel both have properties that make them currently unsuitable for jet fuel, but companies such as Virgin are pursuing biofuels research, investigating possibilities including the use of microorganisms." Further, the option of solar power is still in its infancy and largely unexplored. Boeing (1998-2008; pg. 16) is working with their wholly-owned subsidiary Spectrolab in this area. Spectrolab is one of the world's leading manufacturers of solar cells, powering everything from satellites and interplanetary missions. However, without the commercialization of these and other novel new technologies, annual air traffic growth is expected to outstrip efficiency improvements, resulting in a net rise in CO2 emissions of around 3-4% per year, along with increases in NOx and water vapour emissions. Better Traffic Management One possible contributor to greater aircraft efficiency is improved air traffic management. According to the IATA (2007), there is a 12% inefficiency in global air traffic management which could largely be addressed by three 'mega-projects': a Single Sky for Europe, an efficient air traffic system for the Pearl River Delta in China and a next generation air traffic system in the United States. However, there has not been much progress on these initiatives much to the disappointment of IATA and its leadership. Scientists and aviation experts worldwide are investigating improved air traffic management, lower flight speeds, reducing idling and other efficiencies, searching for areas of potential emissions reductions. Policy Mechanisms In February 2009, four leading airlines and an airport authority - Air France/KLM, British Airways, Cathay Pacific, Virgin Atlantic and airport operator BAA - called for aviation emissions to be included in a broader climate pact. This can be seen as a move to ward off criticism from environmental groups and to probably have a negotiated deal instead of a one that is imposed upon them. Even with only 2% of global pollution coming from airlines, the pressure of the aviation industry has been mounting to participate in emission reduction initiatives (Fogarty, 2009). This call was a prelude to the 2009 Copenhagen Summit on Climate Change where nations are expected to find an agreement around a climate pact that replaces the Kyoto Protocol whose first phase ends in 2012. To date "international air travel is exempt from carbon caps under the Kyoto Protocol. Neither do airlines pay tax on fuel. Understandably, lawmakers are wary of disrupting aviation since air travel represents a cash cow for governments. In the US, for example, the average tax on a $200 ticket is 26%, amounting to about $15bn a year. And the air travel industry picks up the tab for its own infrastructure, an annual bill of about $42bn, according to IATA" (Balch, 2009). In recent years, governments and international organizations have looked at policy options that could create incentives or impose requirements on aircraft operators and manufacturers to reduce emissions. At the forefront of this push is the European Union, which has proposed that aircraft be covered under the region's Emissions Trading Scheme (ETS). Under the proposal, emissions from all flights within the EU will be covered in 2011, with international flights to be included in 2012. The EU hopes to serve as a model for other countries (GLOBE-Net, 2007). An Ernst & Young (2007) study commissioned by the airline industry projects the system would cost airlines more than 40 billion Euros from 2011 to 2022. The IATA states in its climate change strategy that it prefers emissions trading to a carbon tax or other charges, but would rather participate in a worldwide voluntary scheme instead. "The challenge is for the International Civil Aviation Organization (ICAO) and its 190 member States to deliver a global emissions trading scheme that is fair, effective and available for all governments to use on a voluntary basis" (IATA, 2007). Short-term Measures In recent times some airlines have started offering passengers a chance to purchase carbon offsets to neutralize/minimize their carbon emission footprint. Air Canada partners with ZeroFootprint while Westjet has partnered with Offsetters.ca. In 2009, Japan airlines joined hands with Recycle One to help its passengers offset the carbon caused by their flight. "The total emissions figure is based on factors such as distance of travel, aircraft type, baggage and passenger to cargo ratios" (Balch, 2009). Continental, SAS, Qantas, British Airways, JetStar, Virgin Atlantic and Virgin America and some other airlines offer similar programs. Such programs are leading the way now but stronger action may be required to bring a significant reduction in GHG emissions. Long-term Thinking To address the problem of Climate Change, like all other industries, airlines will also have to re-think their business model. They will have to probably agree to be part of a network that moves people and goods from one place to another in an efficient and timely manner. To achieve this goal, they will have to collaborate and network with other transport operators like the railways. "In the Netherlands, airlines and rail companies have a history of cooperation. Long before its merger, KLM had already cancelled several short-haul flights on routes where fast train links existed. Many of KLM's international flights to Dutch cities also finish with a final leg by train" (Balch, 2009). The "Flight" Ahead As demonstrated, the aviation industry plays a vital role in the global economy and provides economic and social benefits. It is also apparent that global temperatures continue to rise while the aviation industry continues to grow. The combination of aviation growth and climate change leads us to believe that CO2 emissions from the aviation industry is one of the many other factors impacting global warming. It has to be addressed even though its impact today is limited to a very low percentage. But with a potential to grow, it cannot go unattended. With this in mind, the following main areas have been identified in order to help reduce aviation emissions. • Strengthen the global leadership strategy (for example, add aviation emissions to Kyoto protocol; revisit fuel surcharge (taxation) issue; create an emissions charge; implement an emissions cap on aviation emissions; enforce Carbon offset programs for all airlines; etc.) • Increase Alternative Fuel technology/implementation (for example, increase biomass fuel technology; etc.) • improvements in Aircraft Technology Efficiency (for example, reduce aircraft fuel consumption and CO2 emissions by replacing older, less fuel efficient aircraft with aircraft using latest fuel efficiency technology and navigation equipment; reduce aircraft noise - mitigate inefficient noise procedures; reduce oxides of nitrogen - try to go beyond compliance limits; etc.) • Improvements in Air Traffic Management (for example, cut inefficiency in current flight patterns - more fuel efficient approaches and overall routing; encourage flight patterns that minimize the impact of non CO2 emissions; optimize aircraft speed; etc.) • Improvements in Operational Efficiencies (for example, increase load factors; eliminate non-essential weight - reassess the value of onboard materials; limit auxiliary power (APU) use by reducing engine idle times and by shutting down engines when taxiing to reduce APU use and fuel burn; reduce taxiing time of aircraft; etc.) All these suggestions require stimulating technology advancements and innovation. Holliday et al. (2002) state that innovation is critical for any organization and industry if it wants to operate in a new global business environment which puts emphasis on environmental alignment of business goals. The aviation industry (airlines, governments, non government organizations, suppliers, manufactures) must work together and create technology advancements that catapult the industry into the future. The innovation created must not only look at how the aviation industry can improve on their CO2 emissions but also how it can change the CO2 emissions landscape. Improving current practices is not good enough. The aviation industry must change the way they operate in order to reduce CO2 emissions. Governments must get involved and work with airlines to spur innovation and remove obstacles for airlines leading the environmental movement.

###  Turns Case: Competitiveness

#### ( ) NextGen’s key to competitiveness

NEXA Capital 11

(NEXA Advisors, A NEXA Capital Company, April 2011, NEXA Capital Partners provides corporate and strategic financial advisory services, and capital investment, to the aerospace, transportation, logistics and homeland security sectors (Venture Capitalist). “NextGen Equipage Fund Job Creation, Economic Benefits, and Contribution to Federal Revenues” p. 13 <http://www.nextgenfund.com/files/downloads/NEF_Economic_Study.pdf>)

Improved air transportation results in more efficient business operations, reduced costs, and increased U.S. international competitiveness. xviii NextGen will improve U.S. competitiveness by lowering the travel time and therefore the costs for both passengers and cargo. Just‐in‐time inventory management facilitated by efficient air cargo operations plays an important role in the U.S. maintaining global competitiveness. The aerospace industry provides a significant positive contribution to the U.S. balance of trade. xix The U.S. competitive position can be reinforced by taking leadership in aircraft equipage for NextGen technologies. This leadership applies to both the U.S. air transport sector, and the aerospace manufacturing sector, OEM and component alike.

###  Ext. NextGen K2 Growth

#### ( ) NextGen maximizes efficiency, solves congestion, and boosts airport capacity --- investment’s key

ACI 11

(Airports Council International – Global Association of Airports, “Air Traffic Modernization”, 11-12, http://aci-na.org/static/entransit/Air%20Traffic%20Modernization%20Fact%20Sheet.pdf)

Maximizing the safe and efficient use of the airspace and airports is critical to accommodating future aviation demand. If the aviation industry is to meet the challenge of Federal Aviation Administration (FAA) forecasts that predict one billion passengers by 2015 and a doubling of today’s passenger levels by 2025, it will require substantial improvements and investments in the air traffic control system, just as it will require federal and local capital investments in airport infrastructure. Airports believe that these investments require that the FAA have a stable and predictable funding system to ensure sufficient capital resources are available. WHAT IS NEXTGEN? The Next Generation Air Transportation System (NextGen) includes a set of FAA initiatives that will apply new technologies, set standards and develop new procedures that together will transform today’s ground-based air traffic control system to a system based on a combination of ground and satellite navigational capabilities having far greater precision and capability. Once the core elements of NextGen are in place, air carriers, general aviation and the military will be able to use the airspace and airport operating environments in a safer, more sustainable and efficient manner, helping to enable the FAA and aviation industry to continuously improve performance and meet the challenges of the future. HOW DOES NEXTGEN ADDRESS AIRPORT NEEDS? NextGen would increase capacity in the enroute and terminal environments, particularly in weather conditions that today cause en route and terminal airspace capacity to drop, resulting in delays and cancellations and less than desirable passenger experiences. If investments are not made, and the full benefits of NextGen are not realized, airspace capacity will be insufficient to meet forecasts and system disruptions will become routine. Following are three areas where air traffic modernization and NextGen can play important roles: • Airport Safety: As aircraft traffic increases, surface movements of aircraft and other vehicles on the airfield grows significantly. This raises the potential for accidents and equipment damage on runways and taxiways as well as for traffic gridlock on the airfield. It is vital that both air traffic controllers and air crews have updated information available to them that accurately determines the position and identification of aircraft and surface vehicles so that safety and airfield throughput can be maintained. • Airspace: Today, much of the airspace surrounding our nation’s most intensively used airports is congested, limiting system capacity. Without modernization, this challenge will only increase as the projected numbers of commercial and general aviation aircraft accessing congested airspace is forecast to grow significantly. By reducing aircraft spacing and separation requirements and better managing traffic in, out and within busy terminal airspace, NextGen will safely permit more aircraft to operate in these areas and be routed to the appropriate airports in the region. • Airport Capacity: Many of busiest airports today have runway configurations that do not permit independent arrival and departure streams when aircraft are operating under Instrument Meteorological Conditions (IMC) and flight minimums must be raised. As a result under IMC conditions aircraft spacing and separation must be increased, airport arrival and departure rates drop, and the system is forced to queue, divert, delay or cancel flights. By enabling pilots and controllers to more accurately identify the exact position of aircraft, more precise routes in and out of airports can be flown, increasing throughput during almost all weather conditions.

#### ( ) It’s key to the overall health of commercial aviation

Toner 12

(Dr. Karlin, Director and Senior Staff Advisor to the Secretary of Transportation for NextGen, Joint Planning and Development Office, “NextGen Topics”, http://www.jpdo.gov/Nextgen\_Topics.asp)

The Next Generation Air Transportation System (NextGen) will benefit the General Aviation (GA) community in the following ways: Preservation of Small Airports The JPDO recognizes the importance of the 5,000-plus airfields that support the GA community and the valuable capacity that they add to the National Airspace System (NAS). Better Weather Information Better weather information will help disseminate weather situational awareness and create a common weather picture for all pilots. Equivalent Visual Operations in Marginal IMC With NextGen, bad weather will have less of an adverse impact on flight. In most situations, pilots and controllers will collaborate in real-time to adjust routes and maneuver around storms. Greater Access to Terminal Airspace Flexible management of the airspace, coupled with improved weather forecast accuracy, new communications, and surveillance and navigational capabilities, allows access to more airspace, more of the time, with reduced impact on traffic flows. This will maximize access for all traffic, while rewarding those aircraft with advanced capabilities that support the air traffic management system. In addition, because of the reduced "footprint" required for these operations, classic Visual Flight Rules (VFR) operations will have more access around major airports. Security Targeted to Risk The assessment of risks under NextGen provides a prioritized list of vulnerabilities and potential mitigation. For example, external attacks on aircraft may be an issue at some airports, requiring mitigation. Fortunately, this means that most GA airports will not be as vulnerable to these risks.

###  AT//Alternative Causalities

#### ( ) Commercial aviation drives every other sector of the economy

Blakey 11

(Marion C., President and CEO – Aerospace Industries Association, “The Future of NextGen”, Congress Blog – The Hill, 2-15, http://thehill.com/blogs/congress-blog/economy-a-budget/144119-the-future-of-nextgen)

The House and Senate have each declared passage of a new FAA Authorization bill a top legislative priority, very welcome news after more than three years of short-term extensions. Air transportation is a proven economic engine; passage of this bill is an investment in our nation’s economic recovery. The U.S. air transportation system has been the world’s gold standard for more than half a century. But to remain so, we need to bring our system into the 21st Century. Air service demand will return to pre-recession levels, but along with the return of that demand will come the return of gridlock—you can count on it. The best means of addressing the gridlock to come is acceleration of the full deployment and implementation the Next Generation Air Transportation System. That makes funding NextGen a government investment, not government spending. Even in these tough economic times, it makes more sense to accelerate NextGen than slow it down. Cutting NextGen will ultimately cost the government and our economy much more than it will save. One of the larger challenges facing our ability to realize NextGen’s enormous benefits is the issue of establishing a sound business case for equipping civil aircraft with upgraded avionics systems. Quite frankly, without equipage there is no NextGen. Innovative and careful structuring of government support for equipage can help resolve the obstacles to full implementation of NextGen. However, with the nation’s need to address the growing federal deficit, it is important also to look at ways to leverage the available private-sector capital markets. To this end, AIA recommends language in the FAA Reauthorization bill that encourages funding equipage with the participation of private-sector investment capital. FAA should have the authority to enter into government-guaranteed loan arrangements that can be used in innovative ways to incentivize the retrofitting of commercial and general aviation aircraft with NextGen avionics equipment. Critical to leveraging available private-sector capital markets is reducing risk to stimulate investment. A key message from industry throughout the FAA Reauthorization deliberations is the need for government accountability for achieving progress. FAA must establish a set of progress metrics so that the administration, the Congress, industry stakeholders and the public can measure and track the operational improvement that is actually being achieved by the program. These metrics need to track performance outcomes, not just activity. Both industry and the regulators must be capable of determining whether efforts are actually improving safety, capacity and efficiency. A big part of NextGen are the thousands of new satellite-based procedures that allow more efficient takeoffs and landings. All these airspace procedures must be designed and implemented, and most will require an environmental assessment. The National Environmental Policy Act process can be extremely protracted and time-consuming. Given the volume of expected airspace redesigns and the immediate economic and environmental benefits their implementation will provide, AIA recommends including NextGen-related airspace redesigns in the Airport Streamlining Approval Process as defined in Section304 of Vision 100 and an FAA-EPA interagency review to produce a more streamlined process. With a streamlined NEPA process, new flight tracks and procedures will be implemented expeditiously. FAA estimates these satellite-guided procedures will be quieter, reduce delays and save fuel. By 2018, these procedures will save aircraft 1.4 billion gallons of fuel, which means they will emit 14 million fewer tons of CO2. To implement these procedures even quicker, AIA recommends the FAA certify third- party procedure development. Far more procedures could be put in place in less time and each would be checked and approved by FAA inspectors. The civil aviation industry is an economic engine that contributes positively to the U.S. trade balance, creates high paying jobs, keeps just-in-time business models viable and connects all Americans to friends, family and business opportunities. All of that economic activity is funneled through the nation’s air traffic system. Full NextGen deployment requires the production and installation of hundreds of thousands of high-tech avionics products assembled by skilled workers in U.S. factories and maintenance stations in every state. Lack of an authorization bill has kept NextGen and other critical programs on life support. It’s time to give FAA the tools to keep our nation the leader in civil aviation.

#### ( ) Aviation’s the vital internal link to economic growth

**NBAA ‘9**

(National Business Aviation Association, “General Aviation Industry Hurting During Economic Downturn”, 3-30, http://www.nbaa.org/advocacy/issues/economic-downturn/recession.php)

General aviation is an essential economic generator directly or indirectly employing over 1.26 million people nationwide according a 2006 economic study by Merge Global. These jobs generate $150 billion in economic activity across the United States, including states like California ($18B), Texas ($11B), Georgia ($9B), and Kansas ($7B). Our industry is continuing to build a strong American manufacturing and employment base that contributes positively to our national balance of trade. Congress recognized just how fundamental general aviation is to our nation's transportation system, rural economies, manufacturing capability, and balance of trade when it passed the General Aviation Revitalization Act a little more than a decade ago. There's no question that in communities across the country, general aviation means millions of jobs: jobs in aircraft manufacture (the U.S. industry leads the world), jobs for people in small towns (where companies use airplanes to reach new markets), and jobs in flight support (including schedulers, dispatchers, maintenance technicians, pilots, training professionals, and airport employees to name just a few examples). Unfortunately, the people and businesses in general aviation are weathering one of the worst economic storms anyone has ever seen. The impact of the flagging economy on the companies and communities that rely on general aviation is visible in all parts of the country. Following are some examples: GA Manufacturing has been hit hard by the economy The general aviation industry supports highly skilled, well-paying jobs for engineers and manufacturing line workers who design and build aircraft in places like Savannah, Wichita, and Little Rock and for hundreds of component manufacturers such as GE, Honeywell, and Pratt and Whitney that supply them with parts including many small businesses. GA is an important national industry that contributes greatly to the economy and to local tax bases. These suppliers also contribute extensively to aircraft produced by foreign companies like Dassault, Embraer, and Bombardier. The collective direct earnings of general aviation exceed $53 billion. Layoffs The industry started feeling the effects of the downturn last fall and since then US members of the General Aviation Manufacturers Association (employing 144,000 people in the U.S.) have laid off over 12,155 people to adjust to the economy with thousands more among suppliers and additional layoffs pending. In addition, some general aviation manufacturers, including Adam Aircraft and Eclipse Aviation, have declared bankruptcy and ceased production. Backlog and Loss of Orders Our industry held a record backlog of $83 billion at the end of the third quarter 2008, but it is rapidly shrinking. Customers are not placing orders which results in the backlog shrinking by $6-7 billion each quarter. Customers are also cancelling or delaying orders as they manage their own finances and schedule for capital purchases. At the same time, the used aircraft market is saturated with inventory levels for business jets reaching over 17%. Criticism of business aviation risks further flooding the used aircraft market and depressing prices. Exports Our industry is a strong contributor to U.S. exports with a total of 1,161 airplanes exported in 2008. The export billings reached $5.86 billion. The aggregate aviation industry, including GA has a positive impact on the US trade balance. Our exports accounted for 43.9 percent of the total value of U.S. manufactured general aviation airplanes in 2008. GA Flight Activity is in Decline According to FAA data, overall general aviation traffic volumes in January 2009 are down 23% compared to January 2008. The same data reports the change in business jet operations is a decline of 28.3 percent for January 2009 compared to January 2008 year-over-year. Small airports are operating ‘in the red' There are more than 5,000 public use airports located in communities across the country. Approximately 470 of these airports have commercial airline service – making general aviation a critical lifeline for smaller communities. Many of these smaller airports are seeing their revenues plummet as general aviation flight hours decrease. For example, Aviation International News recently reported that: "A decline of nearly 20 percent in jet fuel sales has helped drag the Salina Airport Authority's 2008 budget into the red. The airport authority gets 6.6 cents from every gallon of jet fuel sold at the airport. That surcharge provides almost an eighth of the authority's operating revenue. ‘It confirms that business jet use and travel is down,' said Tim Rogers, executive director." The bottom line is that the people and businesses in general aviation are subject to the sluggish economy just like everyone else. And all the information available confirms that when a recession hits general aviation, the impact is felt all across America's economy.

### Miscalculation 2NC

#### ( ) NextGen’s key to interagency interoperability necessary to ensure airspace security

**Bolczak & Fong ‘8**

[Catherine and Vanessa. Program Managers of Air Traffic Management at MITRE. “Shared Situational Awareness to Meet Future Airspace Security Mission Needs” The Center for Advanced Aviation System Development, paper presented at the 2008 ICNS Conference. May 2008. I3E//Cal-JV]

Airspace security is a mission that is shared by the Federal Aviation Administration (FAA), Department of Defense (DoD), Department of Homeland Security (DHS), and National Airspace System (NAS) users among others including civil airspace users. Because events can unfold rapidly in the air domain, Shared Situational Awareness among the players is needed to facilitate rapid decision-making that can have life-or-death consequences. The current airspace security operation relies heavily on telephonic coordination with limited shared situational awareness, and treats potential threats in a “one-size-fits-all” manner, rather than focusing on highest risk. The future vision is the Next Generation Air Transportation system (NextGen) Secure Airspace concept, which is part of a multi-layered, adaptive security service that is risk-informed, is integrated into trajectorybased operations, and operates in a net-enabled environment. This paper describes the airspace security mission, the future concept, mission partner perspectives for information sharing, and challenges and opportunities in improving shared situational awareness. The current air transportation system is not scalable to meet the expected growth in air traffic demand and complexity. Increasing numbers and diversity of operations such as Unmanned Aircraft Systems, Very Light Jets and similar “unscheduled” operations inject more complexity into the system. This scalability challenge also applies to aviation security. Many people already recognize this issue when they experience long waits at security checkpoints at the airport. Airspace security also faces a scalability challenge. Currently, the airspace security function involves “eyes on the glass” identification of potential threats to a significant extent, while decision timeframes to respond to threats span only minutes. As traffic grows in volume and diversity, airspace security operations can no longer rely on manual coordination only and will require more automation support, to allow humans to focus on the greatest threats, as well as shared situational awareness to facilitate decisionmaking in a timely manner. In NextGen, we envision a net-enabled, information-rich environment in which information from numerous sources will be available to authorized users. Providing timely, relevant information in a manner that facilitates rather than hinders decision-making is a major challenge. NextGen is intended to meet the future air transportation challenges. This paper describes the current airspace security mission and how it is envisioned in the NextGen Concept of Operations (CONOPS) to operate in the future. Mission partners’ perspectives on information sharing are also presented. The paper also includes future operational scenarios to illustrate the role of information sharing and shared situational awareness among diverse stakeholders. Finally, some challenges and opportunities for improving shared situational awareness are presented. The airspace security mission has two primary objectives: first, to prevent and counter attacks on aircraft and other airborne vehicles; and second, to prevent and counter attempts to use an aircraft as a weapon. This mission is shared by both government and private sector entities. From the government side, three prominent players are the Federal Aviation Administration, the Department of Homeland Security (Transportation Security Administration, US Secret Service, Coast Guard, Customs and Border Protection), and the Department of Defense. In NextGen, these three organizational roles are referred to as the Air Navigation Services Provider (ANSP), the Security Services Provider (SSP), and the Defense Services Provider (DSP). Airspace users (flight operators and crew) are the primary partners from the private sector. The key elements of the airspace security mission are risk assessment, detection and communication of threats, identification and implementation of mitigation strategies, execution of joint response activities, and recovery from security incidents. Representatives of these elements are shown in Figure 1. These elements include prevention measures such as implementation of security restrictions and associated procedures for airspace users; security awareness training; and definition of on-board disturbance threat levels. Another key activity is response measures, which include actions taken in response to on-aircraft threats, as well as interception of non-compliant aircraft. Finally there a recovery process, including restoration of normal operations following a security incident. The primary mechanism for Shared Situational Awareness in the current environment is the Domestic Events Network (DEN) [1], a 24 hour-aday, 7 day-a-week FAA-sponsored telephonic conference call network that includes all major FAA facilities, defense service providers, security providers, and flight operators in the system. This network is used to communicate potential security threats in real time and to coordinate responses. The DEN is augmented by secure phone lines for classified discussion. Other shared situational awareness capabilities include automation systems, which provide flight information and situation displays, as well as limited risk identification capabilities. For the most part, these automation systems were designed to support each security partner’s mission area and not intended to support the cross-organizational, joint airspace security mission. However, the airspace security mission is maturing through individual agency’s efforts, as well as joint efforts such as those initiated by the National Strategy for Aviation Security (NSAS)2 and its supporting plans [2], which lay out a number of action items to be addressed by multi-agency teams. To further evolve airspace security, it is of high importance that the mission has an integrated and unified concept. The NextGen security concept [3 4] represents a future vision with automated risk assessment and threat identification, enabling channeling of scarce resources to areas that represent the most risk. It describes a seven-layered framework including Integrated Risk Management, Secure Airports, Secure People, Secure Checked Baggage, Secure Cargo/Mail, Secure Airspace, and Secure Aircraft. This layered framework, shown in Figure 2, builds upon foundational capabilities of net-enabled operations and shared situational awareness. These capabilities facilitate the dynamic updating and exchange of information required for continual security risk assessment in order to develop and implement adaptive security measures. The Net-Enabled Operations provide shared situational awareness to facilitate the rapid sharing and correlation of information needed to quickly determine if a single event or seemingly unrelated multiple events constitute a security threat or attack. If a security response is required, responders need to understand where and when to deploy their assets and resources, while civil operators also need to understand the safest and most efficient options for managing their operations.

#### ( ) The alternative’s miscalculation

**Bolkcom ‘6**

[Chris. PhD in Military Aviation. MA in Intl Relations. “CRS Report for Congress: Homeland Security – Defending US Airspace.” 2006, <http://www.fas.org/sgp/crs/homesec/RS21394.pdf> //Cal-JV]

Effectively protecting U.S. airspace requires detecting threatening aircraft and cruise missiles, making decisions on how to address these threats (called “command and control”, or C2), and negating these threats. On June 9, 2004, a small aircraft carrying the governor of Kentucky flew into restricted airspace around Washington, DC. The misidentified aircraft caused panic among Capitol Hill employees, and two F-15s were scrambled to intercept the aircraft.4 This event suggests that 2½ years after the September 11 attacks, effective defense of U.S. airspace is still in question. Surveillance. Detecting and tracking airborne threats to the United States are complicated by environment and enemy tactics. The large volume of airspace that must be surveyed presents one key environmental challenge. Airspace over the continental United States is estimated at approximately 3 million square miles.5 Enemy tactics could include flying low to the ground, which makes detection difficult, or applying stealth technology, which reduces an aircraft’s vulnerability to radar detection. As the September 11th hijackers demonstrated, turning commercial or civil aircraft into weapons is another tactic that would make threat detection difficult. Command & Control. Expediently identifying airborne threats, and accurately verifying that they are not civilian or friendly military aircraft is a key air defense challenge. The large amount of air traffic within CONUS will likely make separating “friend from foe” difficult. FAA data show that on a given day, over 80,000 distinct domestic commercial aircraft movements (e.g., departures, overflights) take place over CONUS.6 These 80,000 aircraft movements do not include international flights, or the approximately 200,000 civil aircraft in the United States that fly some 24 million flight hours annually. Nor does this number include military aircraft that fly within both civilian and military airspace. Air defense C2 over CONUS is further complicated by the fact that decision making will not be a solely military enterprise. Civil entities such as the FAA, and the U.S. Customs Service, and military authorities will require seamless communications and hardware interoperability to make effective decisions.

#### ( ) Miscalculation is the most likely scenario for conflict

**Phillips ‘3**

[Dr Alan – Retired PhD in Nuclear Physics who did Radar Research for US and Great Britain. “Interview Conducted by Robin Collins: An Introduction to No Launch on Warning” The American Prospect, Feb 2001 ln//Cal-JV]

At the present time, I think an accidental war is far more likely than an intentional one. An intentional one could happen I suppose if the Russian situation became desperate and the head of state really lost his wits as a result of the stresses there. It is conceivable that they might start one. It seems to me almost inconceivable that the Americans would start a war and obliterate Russia, because of world opinion. It might be that they might wish to, still; but at present they are trying to maintain friendly relations so I think an intentional start of a war is most unlikely. It's impossible to estimate how likely it is for an accidental war to occur but the mechanism for it happening is right there with the reliance on early warning by satellites and by radar, with the intention to launch retaliation even before the attack arrives. That's the big danger point. It could happen. It hasn't happened for 40 years while this system has been in operation. It seems rather a miracle that it hasn't happened already.

# \*\*\*Affirmative

### Non-Unique

#### ( ) NextGen is not “on the chopping block” – Congress hasn’t even allocated funding

**AD 6-4**

[Aviation Daily. “FAA Considers Loan-Guarantee Options for NextGen Equipage” Aviation Daily, 6/4/12 ln]

FAA must expedite the incentives and provide flexible loan-guarantee programs to persuade the aviation industry to make the large investments in aircraft equipment needed for NextGen, industry leaders told FAA officials last week. The agency held the first of a series of meetings on possible incentives for commercial and general aviation operators. Congress recently gave FAA the authority to establish an equipage incentive program for U.S.-registered aircraft, and FAA says it must examine «various methods of reducing the government’s risk» while determining industry interest. The agency plans to weigh public input on such a program throughout the summer and expects to host future meetings before setting up a public-private program. Agency officials also caution that Congress must still provide funding for the program through the appropriations process before FAA can move ahead with it.

#### ( ) Congress hasn’t committed to NextGen

**Schoefield 5-14**

[Adam. Staffer for Aviation Week. “NextGen Emerges” Aviation Week, 5/14/12 lexis]

On a broader scale, the equipage funding solution with the most potential is public-private partnerships, where government loan guarantees would help unlock private equity at reasonable rates. One such initiative, called the NextGen Fund, has been proposed by Nexa Capital Partners, with the backing of ITT Exelis. The plan is for participating airlines to pay back equipage costs as the financial benefits of NextGen emerge. While the outline of this plan was unveiled more than a year ago, there has been little movement since then. The NextGen Fund's managers have been waiting for the government to provide the commitments required for the program to work.

### Link Answers

#### **( ) The loan guarantees for NextGen aren’t controversial enough to be cut**

Pasztor 11

(Andy, Reporter – WSJ, “New Way to Upgrade Air Control”, Wall Street Journal, 4-4, http://online.wsj.com/article/SB10001424052748704587004576240992301960976.html)

On Monday, ITT and Nexa Capital Partners LLC are expected to announce proposals to use about $150 million in federal loan guarantees as seed money to establish a larger, self-sustaining fund to pay for installing upgraded equipment on potentially thousands of U.S. airliners. Controllers at work in LaGuardia Airport's new traffic-control tower, which will replace one that dates to 1964. The goal is to help carriers fund their piece of a delay-plagued effort by the Federal Aviation Administration to create a satellite-based traffic control network. The new network would allow aircraft to fly shorter, more direct routes, thereby saving fuel and reducing congestion, and give pilots greater leeway in choosing routes and keeping their planes separated from nearby traffic. The system, dubbed NextGen, is a satellite-based project slated to replace the nation's current air-traffic control system, which is based on decades-old ground-radar technology and doesn't make the most efficient use of airspace or runway capacity. Expected to cost more than $40 billion overall, the next-generation solution has been stymied by a persistent reluctance by airlines to invest billions of dollars to upgrade airborne devices. Now, after years of delays and futile industry lobbying for direct federal aid, ITT and its partner believe they have found the key to overcoming airline resistance. ITT's objective "was to put forward a positive alternative" for bridging the funding gap, said John Kefaliotis, the company's point man on the topic. In discussions with senior FAA officials, he said in a recent interview, "what we get is interest and agreement that it is a viable concept." Executives at JetBlue Airways JBLU +2.15% Corp, Alaska Air Group Inc. ALK +0.20% and the United Airlines unit of United Continental Holdings Inc. UAL +0.72% have also expressed support for the idea, according to people familiar with the matter, and have engaged in detailed discussions with the fund's creators. No final agreements are in place, but airline executives generally like the concept because the equipment will be leased and therefore won't add debt to their balance sheets. Senior FAA officials, including Hank Krakowski, who heads the agency's air-traffic control organization, have also been briefed about the prospective fund and informally endorsed the concept, according to the people familiar with the discussions. The FAA's leadership looks favorably on ITT's initiative partly because it avoids adding substantially to the government's deficit. The FAA is reviewing various options, and on Sunday, an FAA spokeswoman declined to comment. "It takes into account today's political realities" by focusing on a "private-enterprise approach instead of a grand government giveaway," said James May, a consultant advising ITT and a former head of the Air Transport Association, which represents the country's largest carriers. Monday's announcement is particularly timely because as part of a broad FAA reauthorization bill, the House on Friday adopted a provision prodding the FAA to embrace such arrangements. Lawmakers voted to require the agency to "leverage the use of private-sector capital" to "expedite the equipage of" NextGen technologies. Without a breakthrough, it could take until the end of the decade or longer for industry to purchase the equipment in traditional ways. ITT and its partner said the initiative could prod suppliers to cut costs by $1 billion over the life of the fund. ITT Chairman Steven Loranger has championed the loan-guarantee fund despite initial disinterest—and sometimes even hostility—from various industry players. The most unusual aspect is that airlines would gradually repay the cost of equipping planes only after they start reaping fuel and schedule benefits. Mr. Loranger's dream still faces huge challenges, including formal congressional approval amid heightened public and Capitol Hill opposition to launching any new federal program. But "the debate has matured to the point" that there is a political climate "making this kind of approach possible," according to former FAA chief Marion Blakey, who now heads the Aerospace Industries Association, a trade group representing major aerospace contractors.

#### ( ) Congress and the FAA want NextGen – they’d never cut it

Halsey 11

(Ashley, Reporter – Washington Post, “Antidote To Air Gridlock May Not Get Off Ground”, Washington Post, 7-4, http://o.seattletimes.nwsource.com/html/boeingaerospace/2015510103\_airtraffic05.html)

Case for investing Making the business case that will persuade airlines to take the financial plunge is at the core of the debate. The single biggest incentive to airlines would be persuasive evidence of an immediate return on their investment in fuel savings and fewer delays. One suggestion has been to allow NextGen-equipped planes to land and take off first. Given that a jetliner can burn through $1,000 in fuel in less than a half-hour, circling the airport in a holding pattern becomes an expensive proposition. With most U.S. airlines operating in the red, Chew says few will take the investment leap unless the government has more "skin in the game" than promises and deadlines. Chew is leading an investment group that proposes to lend the airlines money to equip their planes, with a repayment plan that is deferred until the FAA delivers the system. The key, however, is that the federal government must agree to make loan payments if the FAA misses its deadlines. "If the government OKs loan guarantees for equipage, it would jump-start the process," Chew said. "The airlines are not going to want to make any kind of payments until the FAA is ready to deliver. If they don't deliver by 2018, then the airlines are off the hook for these payments." Chew says the FAA and Congress have been receptive to that form of loan guarantee, but so far without committing to it. With Congress in a cost-cutting mood, loan guarantees may provide a viable alternative to slashing a program that virtually everyone supports.

### Doesn’t Solve Aviation

#### ( ) Their internal link is about air-traffic-control inefficiency – lack of runways and experts make this inevitable

Williams 9

(Genevra, J.D. Candidate – Southern Methodist University Dedman School of Law and B.B.A. –University of Iowa, “GPS For The Sky: A Survey of Automatic Dependent Surveillance-(ADS-B) and its Implementation in the United States”, Journal of Air Law and Commerce, Spring, 74 J. Air L. & Com. 473, Lexis)

The U.S. aviation infrastructure faces many challenges if it is going to accommodate this expansion in air traffic. For example, there is a shortage in the number of runways from which all of these planes must take off and land. 44 While an in-depth analysis of the airport capacity problems relating to takeoff and landing are outside the scope of this paper, it is worth noting that runway and airport expansion is a special kind of problem. Long takeoff and landing delays, often suffered in the cramped quarters of a plane on the tarmac or circling over an airport, are infuriating to passengers, yet no one wants an already noisy airport further crowding into their neighborhood. 45 Another problem is the profound shortage of qualified air traffic controllers. 46 Over the next ten years, the bulk of today's air traffic controllers must be replaced. 47 The majority of today's controllers were hired in the 1980s after President Reagan fired 10,000 striking controllers, 48 and now they are all approaching the mandatory retirement age of fifty-six years. 49 The FAA has been scrambling to retain experienced air traffic controllers who have not yet hit retirement age by offering six-figure salaries in some locations, and relocation bonuses of up to [\*479] $ 75,000. 50 The shortage is compounded by a protracted labor dispute between the National Air Traffic Controllers Association and the FAA that contributes to serious worker dissatisfaction. 51 Of the 1,876 controllers who retired between 2005 and 2008, only thirty-seven did so because they reached mandatory retirement age. 52 "The attrition rate was 23 percent higher than projected, and even the FAA acknowledges some of that is because of the labor dispute." 53

#### ( ) NextGen’s too slow to solve

Halsey ‘12

[Ashley. Staffer for the Washington Post. “New Guidance System for Skies Could Face Delays” The Washington Post, 7/4/11 http://www.washingtonpost.com/local/antidote-to-air-gridlock-is-complex- undertaking/2011/06/30/AG9bdnwH\_story\_4.html]

The very business of getting aloft — the time that passengers know as the minutes between the “buckle your seat belts” order and “you are free to move about the cabin” — is an intricate choreography between controllers and the cockpit. “Two seventy on the heading, Southwest 658 going to departure,” the pilot says just after liftoff from Dulles, repeating the compass direction given by the Dulles tower. Then he tells a controller based in Warrenton that he’s climbing. “Potomac departure, Southwest 658, passing [1,800 feet] for 3,000, heading 270,” he radios. The new controller tells him to keep climbing to 5,000 feet and maintain that altitude. That keeps him 1,000 feet below flights heading to land at Dulles. When the plane reaches a waypoint known as “Blues,” a new controller takes over and orders Flight 658 to 12,000 feet. When Flight 658 reaches another waypoint, over Linden, Va., the pilot is told to head for 17,000 feet. Then he is handed over to a new controller, on a different radio frequency, who takes the flight to 27,000 feet before handing over to yet another controller who ultimately guides the plane to its 40,000-foot cruising altitude. Now, “you are free to move about the cabin.” If all that sounds complicated and open to human error, one goal of NextGen is to replace almost all of it with new technology, much of it in the cockpit. Can the FAA deliver? NextGen has virtually no credible enemies — not in the administration, not on Capitol Hill and not in the airline industry. But the seemingly simple concept is layered like an onion with complexities. In addition to demanding an enormous investment, there is a confluence of history and technology that creates a hurdle to progress. Airlines fear that the FAA will not meet its timetable for creation of the network of ground-based stations and satellite links that will make it all work. “The FAA’s track record on deployment hasn’t been good,” said Russ Chew, a former airline executive and former FAA chief operating officer. “The FAA could be perfect in meeting NextGen deadlines, but [private investors] are looking at past history.” Michael P. Huerta, the FAA deputy administrator who was given charge of NextGen after an internal shake-up this year, said he is well aware of that. “How can they be sure that FAA will deliver on its commitments? That’s a fair question,” Huerta said As for evidence of the rapid pace of technological advancement, one need look no further than GPS. The technology is advancing so quickly that some car buyers opt against the factory-installed unit for fear that it will be outdated in a year or two. Airlines have the same issue. “If I go first, I’ll have to bear the cost of updating the software, and when [NextGen is] turned on, I’ll have the oldest, most obsolete systems out there,” Chew said. In addition, the FAA must clear through a jungle of procedures and retrain 15,475 air traffic controllers to deal with a system that will entirely replace the old one. “A lot of the tough stuff is new procedures, is human-machine interface and human factors, moving from an air traffic control mind frame to an air traffic management mind frame” that puts greater responsibility in the hands of pilots, said Bobby Sturgell, former acting FAA administrator. Congress has tossed more uncertainty into the mix by extending the current FAA funding plan 20 times rather than approving a comprehensive long-term spending plan that imposes strict NextGen deadlines on the agency. “NextGen is threatened,” Chew said. “Everyone knows it. The FAA budget is under pressure. Even they will say that NextGen is on track, but it’s not.” JetBlue, with $4.2 million in federal funding help, and Southwest Airlines, with federal incentives, have installed some of the technology, but other airlines are reluctant to move ahead. “Absolutely I’m concerned about the schedule,” said Gary Kelly, chief executive of Southwest, which has spent $94 million on NextGen. “I’m concerned that we don’t have metrics in place to measure the progress. Any investment, any project, has to be evaluated based upon the risk of the return, and I’m not going to argue with you, this is a very high risk-return, because we’re not in control of the benefits.”

### Economic Collapse Defense

#### ( ) The US economy is resilient – it will never fully collapse

**Behravesh ‘6**

[Nariman. Chief Global Economist for Global Insight. He is also the Most Accurate Economist as ranked by the Associated Press and USA Today. “The Great Shock Absorber” Newsweek, 10/15/6 ln//Cal-JV]

The U.S. and global economies were able to withstand three body blows in 2005--one of the worst tsunamis on record (which struck at the very end of 2004), one of the worst hurricanes on record and the highest energy prices after Hurricane Katrina--without missing a beat. This resilience was especially remarkable in the case of the United States, which since 2000 has been able to shrug off the biggest stock-market drop since the 1930s, a major terrorist attack, corporate scandals and war. Does this mean that recessions are a relic of the past? No, but recent events do suggest that the global economy's "immune system" is now strong enough to absorb shocks that 25 years ago would probably have triggered a downturn. In fact, over the past two decades, recessions have not disappeared, but have become considerably milder in many parts of the world. What explains this enhanced recession resistance? The answer: a combination of good macroeconomic policies and improved microeconomic flexibility. Since the mid-1980s, central banks worldwide have had great success in taming inflation. This has meant that long-term interest rates are at levels not seen in more than 40 years. A low-inflation and low-interest-rate environment is especially conducive to sustained, robust growth. Moreover, central bankers have avoided some of the policy mistakes of the earlier oil shocks (in the mid-1970s and early 1980s), during which they typically did too much too late, and exacerbated the ensuing recessions. Even more important, in recent years the Fed has been particularly adept at crisis management, aggressively cutting interest rates in response to stock-market crashes, terrorist attacks and weakness in the economy. The benign inflationary picture has also benefited from increasing competitive pressures, both worldwide (thanks to globalization and the rise of Asia as a manufacturing juggernaut) and domestically (thanks to technology and deregulation). Since the late 1970s, the United States, the United Kingdom and a handful of other countries have been especially aggressive in deregulating their financial and industrial sectors. This has greatly increased the flexibility of their economies and reduced their vulnerability to inflationary shocks. Looking ahead, what all this means is that a global or U.S. recession will likely be avoided in 2006, and probably in 2007 as well. Whether the current expansion will be able to break the record set in the 1990s for longevity will depend on the ability of central banks to keep the inflation dragon at bay and to avoid policy mistakes. The prospects look good. Inflation is likely to remain a low-level threat for some time, and Ben Bernanke, the incoming chairman of the Federal Reserve Board, spent much of his academic career studying the past mistakes of the Fed and has vowed not to repeat them. At the same time, no single shock will likely be big enough to derail the expansion. What if oil prices rise to $80 or $90 a barrel? Most estimates suggest that growth would be cut by about 1 percent--not good, but no recession. What if U.S. house prices fall by 5 percent in 2006 (an extreme assumption, given that house prices haven't fallen nationally in any given year during the past four decades)? Economic growth would slow by about 0.5 percent to 1 percent. What about another terrorist attack? Here the scenarios can be pretty scary, but an attack on the order of 9/11 or the Madrid or London bombings would probably have an even smaller impact on overall GDP growth.

#### ( ) Economic collapse doesn’t cause war

**Ferguson ‘6**

[Niall. Prof History Harvard. Foreign Affairs, September/October 2006. Ln]

Nor can economic crises explain the bloodshed. What may be the most familiar causal chain in modern historiography links the Great Depression to the rise of fascism and the outbreak of World War II. But that simple story leaves too much out. Nazi Germany started the war in Europe only after its economy had recovered. Not all the countries affected by the Great Depression were taken over by fascist regimes, nor did all such regimes start wars of aggression. In fact, no general relationship between economics and conflict is discernible for the century as a whole. Some wars came after periods of growth, others were the causes rather than the consequences of economic catastrophe, and some severe economic crises were not followed by wars.

#### ( ) Studies prove your authors are wrong

**Miller ‘2k**

[Mo. Prof Econ @ Ottawa. Also a Former Senior Economist at the World Bank. “Poverty as a Cause of Wars?” Interdisciplinary Science Reviews, Winter 2000. Ebsco]

The question may be reformulated. Do wars spring from a popular reaction to a sudden economic crisis that
exacerbates poverty and growing disparities in wealth and incomes? Perhaps one could argue, as some scholars do, that it is some dramatic event or sequence of such events leading to the exacerbation of poverty that, in turn, leads to this deplorable denouement. This exogenous factor might act as a catalyst for a violent reaction on the part of the people or on the part of the political leadership who would then possibly be tempted to seek a diversion by finding or, if need be, fabricating an enemy and setting in train the process leading to war. According to a study undertaken by Minxin Pei and Ariel Adesnik of the Carnegie Endowment for International Peace, there would not appear to be any merit in this hypothesis. After studying ninety-three episodes of economic crisis in twenty-two countries in Latin America and Asia in the years since the Second World War they concluded that:19 Much of the conventional wisdom about the political impact of economic crises may be wrong ... The severity of economic crisis – as measured in terms of inflation and negative growth - bore no relationship to the collapse of regimes ... (or, in democratic states, rarely) to an outbreak of violence ... In the cases of dictatorships and semidemocracies, the ruling elites responded to crises by increasing repression (thereby using one form of violence to abort another).

### Space Interoperability Defense

#### ( ) Increased interoperability doesn’t increase security – nations will use our information against us

**Ackerman ‘10**

[Edward T. Ackerman, Lt Col, Usaf , Us Military, Commercial, and International Cooperation for Improved Space Situational Awareness, 17 February 2010 Ebsco//Cal-JV]

With any endeavor that involves the interests of so many entities, there are bound to be challenges. Separating space‟s national security aspects from the benefits derived through cooperation is one major challenge; other issues include interoperability and legal ramifications. From the military perspective, the primary challenge to a shared SSA capability is the issue of security. Determining who can receive SSA data, what data to release, how to release it, and when to release it are key questions that must be answered. If the US military has information on satellites that requires protection, then vigilance and perhaps discretion in 13 publishing or passing this information must be exercised. In a November 2008 memo, Lt Gen William Shelton, then the commander of Fourteenth Air Force stated, “As space becomes an increasingly contested environment, we must be cautious about disseminating Space Situational Awareness data to unknown recipients.”43 Without proper consideration as to what data is being released and to whom, could in General Shelton‟s words, “potentially provide cueing and/or targeting data to our adversaries.”44

#### ( ) The information is unreliable

**SSA leads to dependence- information may not always be available**

**Ackerman ‘10**

[Edward T. Ackerman, Lt Col, Usaf , Us Military, Commercial, and International Cooperation for Improved Space Situational Awareness, 17 February 2010 Ebsco//Cal-JV]

The systems put in place must employ technical and procedural controls to restrict information as appropriate in order to protect US space assets or employ capabilities in battle against adversaries. However, political concerns could well affect wartime SSA data. For example, SSA could become analogous to GPS, a global utility so highly integrated into everyday life that the thought of limiting its access introduces global economic and worldwide safety concerns. Should SSA end up providing the ubiquitous and unexpected benefits that GPS has, similar ramifications in restricting access may well be felt. Additionally, the US military must be cautious and not develop complete dependencies on external sources for conducting military missions since member provided information may not always be available.

### Accidental Launch Defense

#### ( ) No impact to accidental launch – it would never happen and an accidentally-fired weapon would just hit the ocean

**Slocombe ‘9**

[Walter. Former Undersecretary of Defense. “De-Altering: Diagnoses, Prescriptions, and Side-Effects”, a paper presented at the seminar on Re-framing De-Altert. June 2009, [www.ewi.info/systems/files/Slocombe.pdf](http://www.ewi.info/systems/files/Slocombe.pdf) //Cal-JV]

Let’s start with Technical Failure – the focus of a great deal of the advocacy, or at least of stress on past incidents of failures of safety and control mechanisms.4 Much of the “de-alerting” literature points to a succession of failures to follow properprocedures and draw from that history the inference that a relatively simple procedural failure could produce a nuclear detonation. The argument is essentially that nuclear weapons systems are sufficiently susceptible of pure accident (including human error or failure at operational/field level) that it is essential to take measures that have the effect of making it necessary to undertake a prolonged reconfiguration of the elements of the nuclear weapons force for a launch or detonation to be physically possible. Specific measures said to serve this objective include separating the weapons from their launchers, burying silo doors, removal of fuzing or launching mechanisms, deliberate avoidance of maintenance measures need to permit rapid firing, and the like. . My view is that this line of action is unnecessary in its own terms and highly problematic from the point of view of other aspects of the problem and that there is a far better option that is largely already in place, at least in the US force – the requirement of external information – a code not held by the operators -- to arm the weapons. Advocates of other, more “physical,” measures often describe the current arrangement as nuclear weapons being on a “hair trigger.” That is – at least with respect to US weapons – a highly misleading characterization. The “hair trigger” figure of speech confuses “alert” status – readiness to act quickly on orders -- with susceptibility to inadvertent action. The “hair trigger” image implies that a minor mistake – akin to jostling a gun – will fire the weapon. The US StratCom commander had a more accurate metaphor when he recently said that US nuclear weapons are less a pistol with a hair trigger than like a pistol in a holster with the safety turned on – and he might have added that in the case of nuclear weapons the “safety” is locked in place by a combination lock that can only be opened and firing made possible if the soldier carrying the pistol receives a message from his chain of command giving him the combination. Whatever other problems the current nuclear posture of the US nuclear force may present, it cannot reasonably be said to be on a “hair trigger.” Since the 1960s the US has taken a series of measures to insure that US nuclear weapons cannot be detonated without the receipt of both external information and properly authenticated authorization to use that information. These devices – generically Permissive Action Links or “PALs” – are in effect combination locks that keep the weapons locked and incapable of detonation unless and until the weapons’ firing mechanisms have been unlocked following receipt of a series of numbers communicated to the operators from higher authority. Equally important in the context of a military organization, launch of nuclear weapons (including insertion of the combinations) is permitted only where properly authorized by an authenticated order. This combination of reliance on discipline and procedure and on receipt of an unlocking code not held by the military personnel in charge of the launch operation is designed to insure that the system is “fail safe,” i.e., that whatever mistakes occur, the result will not be a nuclear explosion. Moreover, in recent years, both the US and Russia, as well as Britain and China, have modified their procedures so that even if a nuclear-armed missile were launched, it would go not to a “real” target in another country but – at least in the UScase - to empty ocean. In addition to the basic advantage of insuring against a nuclear detonation in a populated area, the fact that a missile launched in error would be on flight path that diverged from a plausible attacking trajectory should be detectable by either the US or the Russian warning systems, reducing the possibility of the accident being perceived as a deliberate attack. De-targeting, therefore, provides a significant protection against technical error.5

### Not a N/B to States

#### ( ) This isn’t a net benefit to the States counterplan – state infrastructure investment trades off too

Yusuf and Liu 2008

\*Juita-Elena, assistant professor in the Department of Urban Studies and Public Administration at Old Dominion University and \*\*Gao, Ph.D. candidate at the Martin School of Public Policy and Administration, University of Kentucky (“State Infrastructure Banks and Intergovernmental Subsidies for Local Transportation Investment,” 25 Nov 2008, Public Budgeting & Finance, Volume 28, Issue 4, pp 87, Wiley Online Library, AMukund)

While this study’s analysis determined that SIBs can and do offer borrowing cost savings, the extent of this savings depends on how SIB loan rates are determined. In Ohio, loan rates are required by policy to be at most three-fourths of the prime rate. However, actual loan rates were consistently set at much lower than this maximum level and rarely varied according to project type and level of risk, indicating that there is little pricing of loans according to risk.30 This raises the question of whether this policy is a wise strategy for the Ohio SIB, and if so what are the trade-offs of such a policy? The fixed rate structure simplifies the administration of the SIB, particularly when the SIB lacks the expertise needed to assess risk and incorporate measures of risk into the interest rate or when such risk assessment is not cost effective. However, this policy could potentially damage the revolving nature of SIB funds. When riskier loans are not compensated for with higher interest rates, the Ohio SIB loan policy of a fixed rate structure discriminates against less risky projects and potentially reduces the corpus of funds available for future loans. Another important question is whether the Ohio SIB is targeting the right transportation projects. With a policy that assigns a fixed interest rate regardless of risk, the SIB advantages higher risk projects, resulting in adverse selection. SIB loans become more attractive to high-risk borrowers who may otherwise face higher borrowing costs or who may not be able to raise capital through alternative means.