## Plan

#### The United States federal government should substantially increase investment in Intelligent Transportation Systems in the United States for the exclusive purpose of transportation infrastructure.

## Adv 1: computational science

#### No computation science in the status quo – integration into infrastructure is critical to accessing research and development

R&D 12 (News agency dedicated to research and development, “Study: Computing advances vital to sustainability efforts”, June 29, 2012, <http://www.rdmag.com/news/2012/06/study-computing-advances-vital-sustainability-efforts>)

Innovation in computing will …..well-positioned to make progress.

#### Nanotech development is inevitable – it’s only a question of effectiveness which the plan resolves

Francis 4 (Michael Francis is a scientist at Accelrys, “The Big Picture for Nanotechnology and Computational Science, <http://www.scientific-computing.com/features/feature.php?feature_id=66>)

Nanotechnology is now attracting ….. world of technology,' concluded Dr Drexler.

#### It solves multiple extinction scenarios

Vandermolen 6 (Thomas D. Vaandermolen, BS, Louisiana Tech University; MA, Naval War College, Maritime Science and Technology Center, Yokosuka, Japan, “Molecular Nanotechnology and National Security”, <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj06/fal06/vandermolen.html>)

MNT is a potentially ….. could be catastrophic.

#### Only ITS resolves the internal link for computational science and development

Winter et al 10 (Stephan Winter, University of Melbourne, Australia, Monika Sester, Leibniz University Hannover, Germany, Ouri Wolfson, University of Illinois, Chicago, USA, Glenn Geers, National ICT Australia, Sydney, Australia, Journal of Spatial Information Science, “Towards a computational transportation science”, September 2010, http://www.cs.uic.edu/~boxu/mp2p/39-135-1-SM.pdf)

In the near future…..s to say it all.

#### Only the plan creates a spillover effect for biotechnology

Strayer 4 (Michael Strayer, Acting Director of Mathematical, Information, and Computational Science Division of the US Department of Energy, “A Science-Based Case for Large-Scale Simulation Volume 2”, September 19,2004, http://science.energy.gov/~/media/ascr/pdf/program-documents/archive/Scales\_report\_vol2.pdf)

Progress in biology depends ….. in the future in biology.

#### That solves deforestation and starvation – biotech spinoffs are key to agricultural sectors

McGloughlin 2K (Martina McGloughlin is a professor at UC Davis, Journal of Agrobiotechnology Management, 2000, “Ten Reasons Why Biotechnology Will Be Important to the Developing World”, <http://www.agbioforum.org/v2n34/v2n34a04-mcgloughlin.htm>)

Biotechnology companies, national ….. of biotechnology crops?

#### Extinction

Takacs 96 (David Takacs, Instructor in Department of Earth Science and Policy at California State-Monterey Bay, 1996, “Philosophies of Paradise”, http://www.dhushara.com/book/diversit/restor/takacs.htm)

"Habitat destruction and …..century not with a bang but a whimper. 14

## Adv 2 Bioterror

#### Bioterrorism is inevitable – your defense doesn’t apply, attacks don’t to have advanced scientifically

Garrett 12 (Laurie Garrett is senior fellow for global health at the Council on Foreign Relations and recipient of the 1996 Pulitzer Prize for her coverage of the Ebola outbreak, “Flu Season”, January 5, 2012, <http://www.foreignpolicy.com/articles/2012/01/05/flu_season?print=yes&hidecomments=yes&page=full>)

Within government circles around the world, the announcement has highlighted a dilemma: How do you balance the universal mandate for scientific openness against the fear that terrorists ….. synthetic-biology revolution.

#### Makes retaliation likely

Conley 3 (Lt Col Harry W. is chief of the Systems Analysis Branch, Directorate of Requirements, Headquarters Air Combat Command, Langley AFB, Virginia, “Air & Space Power Journal”, Spring, 2003, <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj03/spr03/conley.html#conley>)

The number of American ….. promises had been made.”48

#### Nuclear war

IRC 1 (“How should the U.S. prepare for possible attacks using biological and chemical weapons?” IRC, November 20th, 2001, <http://www.fpif.org/faq/0111bioterror.html>)

Nuclear deterrence is a leading ….. the U.S. a pariah state.

#### Only ITS solves bioterror – response systems, evacuation operations, and information sharing

Pincus 11 (Marcia Pincus is from the ITS Joint Program Office Research and Innovative Technology Administration U.S. Department of Transportation, Final Report, “Intelligent Transportation Systems Benefits, Costs, Deployment, and Lessons, Learned Desk Reference: 2011 Update”, <http://www.benefitcost.its.dot.gov/its/benecost.nsf/files/BCLLDepl2011Update/$File/Ben_Cost_Less_Depl_2011%20Update.pdf>)

A variety of sensors deployed …… during emergencies.

#### Utilizing transportation infrastructure for response is key

Zeng 7 (Daniel Zeng, University of Arizona, Ph.D., Carnegie Mellon University Sudarshan S. Chawathe, University of Maine, Hua Huang, Xi’an Jiaotong University, Fei-Yue Wang, Chinese Academy of Sciences “Protecting Transportation Infrastructure”, From the article “Intelligent Transportation Systems”, September, 2007, <http://www.its.washington.edu/itsc/v9n3.pdf>)

Effective information sharing ….. considerations, and civil rights.

## Solvency

#### Perceived coordination is critical to deployment of ITS

Ezell 10 (Stephen Ezell is a Senior Analyst with the Information Technology and Innovation Foundation (ITIF), with a focus on innovation policy, science and technology policy, international competitiveness, and trade, manufacturing, and services issues, January 2010, “Executive Summary: Intelligent Transportation Systems”, <http://www.itif.org/files/2010-1-27-ITS_Leadership.pdf>)

Given the technical feasibility ….. and integrate ITS systems.

#### Only the federal government resolves that

#### A) National vision and investments – your counterplan probably can’t solve

Ezell 10 (Stephen Ezell is a Senior Analyst with the Information Technology and Innovation Foundation (ITIF), with a focus on innovation policy, science and technology policy, international competitiveness, and trade, manufacturing, and services issues, January 2010, “Executive Summary: Intelligent Transportation Systems”, <http://www.itif.org/files/2010-1-27-ITS_Leadership.pdf>)

Policy factors appear …… national ambitions and objectives towards ITS.

#### B) Integration and coordination

Ezell 10 (Stephen Ezell is a Senior Analyst with the Information Technology and Innovation Foundation (ITIF), with a focus on innovation policy, science and technology policy, international competitiveness, and trade, manufacturing, and services issues, January 2010, “Executive Summary: Intelligent Transportation Systems”, <http://www.itif.org/files/2010-1-27-ITS_Leadership.pdf>)

As discussed subsequently….. this report now turns.