

# **GAO's Role in Foresight**

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***Roundtable on Strategic Foresight***  
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***Disclaimer:***

***These remarks do not necessarily reflect the views of the US GAO***

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# GAO and Its Work for U.S. Congress

- Independent agency within the legislative branch
- Performs audits, investigations and other studies of federal programs and activities, primarily at the request of U.S. Congress (964 products in FY 2012; GAO serves every standing committee)
- Makes recommendations to improve government programs or operations
- Diverse workforce of 2997 staff (FY 2012), 80% of resources spent on people, 72% in Washington, DC, 28% in field offices
- The Comptroller General is appointed to a 15-year term

# Evolution of GAO Mission

- At first, the GAO's primary function was federal financial management, including auditing responsibilities, accounting and claims functions, but over time it evolved to include performance auditing and evaluation



- GAO's legal name became the Government Accountability Office (2004)

# GAO's Study Portfolio

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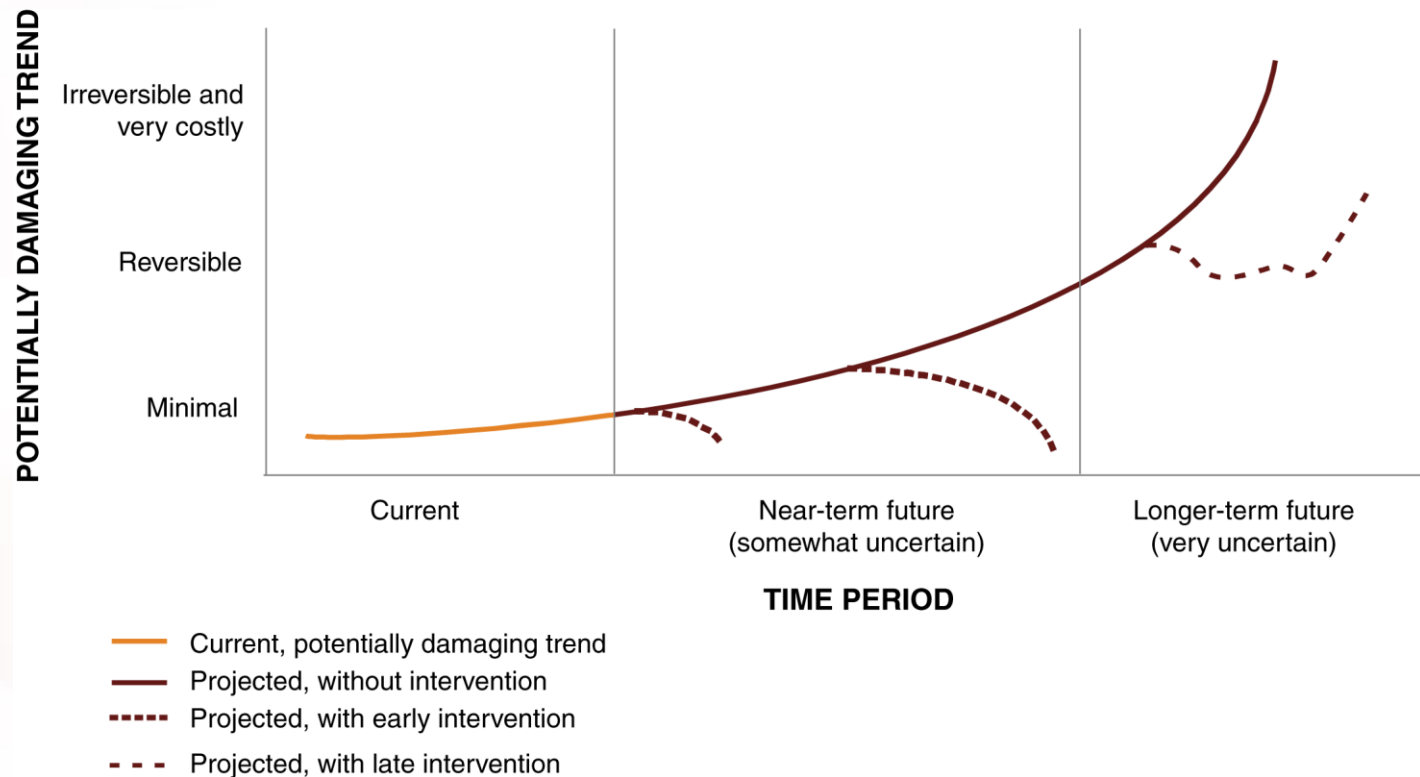
**Oversight:** Government entities are doing what they are supposed to do. . . funds are being spent for the intended purpose. . . applicable laws and regulations are being complied with.

**Insight:** What programs and policies work. . . sharing of various best practices and benchmarking information. . . looking horizontally across the silos of government and vertically between the levels of government.

**Foresight:** Recognizes long-term implications of today's decisions. . . identifies key trends, opportunities, and emerging challenges before they reach crisis proportions. . . informs government's future role and responsibilities.

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# Informing Decisions: Early Warning (Identifying Opportunities for Action)



Source: Adapted from D. Rejeski, "S&T Challenges in the 21st Century: Strategy and Tempo," in A. Teich et al (eds.) **AAAS Science and Technology Policy Yearbook 2003**.

# GAO's Approach to Foresight

- Strategic plan sets the context for our work
- GAO work designed to inform decisions; presentation will highlight various aspects of our portfolio, e.g., oversight/foresight; oversight/insight/foresight
- High-risk list is major communication tool; prioritizes key issues in body of work; informs oversight agenda for Congress

# Serving the Congress and the Nation

## GAO's Strategic Plan Framework



### MISSION

**GAO** exists to support the Congress in meeting its constitutional responsibilities and to help improve the performance and ensure the accountability of the federal government for the benefit of the American people.

### TRENDS

National  
Security  
Threats

Fiscal  
Sustainability  
Challenges

Economic  
Recovery  
and Growth

Global  
Interdependence

Science and  
Technology

Networks and  
Virtualization

Shifting Roles  
of Government

Demographic  
and Societal  
Change

### Goals

### Objectives

**Provide Timely, Quality Service to the Congress and the Federal Government to...**

**...Address Current and Emerging Challenges to the Well-being and Financial Security of the American People** related to...

- Health care needs
- Lifelong learning
- Benefits and protections for workers, families, and children
- Financial security
- Effective system of justice

- Viable communities
- Stable financial system and consumer protection
- Stewardship of natural resources and the environment
- Infrastructure

**...Respond to Changing Security Threats and the Challenges of Global Interdependence** involving...

- Homeland security
- Military capabilities and readiness

- U.S. foreign policy interests
- Global market forces

**Help Transform the Federal Government to Address National Challenges** by assessing...

- Government's fiscal position and options for closing gap
- Fraud, waste, and abuse

- Major management challenges and program risks

**Maximize the Value of GAO by Enabling Quality, Timely Service to the Congress and Being a Leading Practices Federal Agency** in the areas of...

- Efficiency, effectiveness, and quality
- Diverse and inclusive work environment

- Professional networks and collaboration
- Institutional stewardship and resource management

### CORE VALUES

Accountability

Integrity

Reliability





# Informing Decisions:

## Long-Term Fiscal Sustainability Work Highlights

### Importance of Oversight and Foresight

#### GAO assesses financial condition of U.S. government

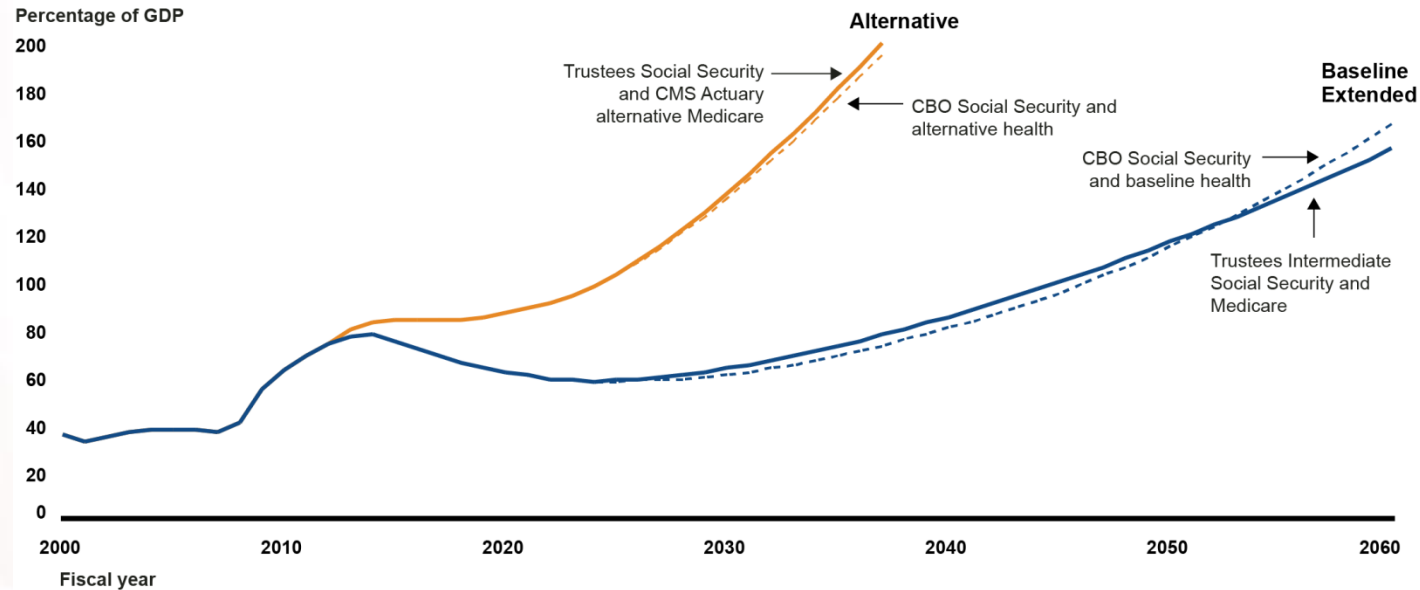
- Performs annual audit of U.S. government's consolidated financial statements (**OVERSIGHT**)
- Conducts periodic long term fiscal simulations (**FORESIGHT**)
- In FASAB role, provides leadership on improving transparency and reporting on long-term fiscal commitments and fiscal sustainability; future statements will include executive branch projections

#### Public website organizes information on GAO's oversight and foresight <http://www.gao.gov/special.pubs/longterm/>

- Audits and analyses
- Federal, state and local fiscal simulations
- Information and analysis of public debt



# Debt Held by the Public Under 2 Fiscal Policy Simulations



Source: GAO.



## Informing Decisions: Long-Term Fiscal Sustainability

- Key trends and long-term challenges facing U.S. identified with implications of today's decisions before crisis proportions are reached.
- Illustrations, not precise forecasts, of the relative fiscal outcomes associated with alternative policy paths.
- Bundle of budgetary and policy assumptions carried far into the future.
- Do not predict what will happen in the future as policymakers would likely take action to prevent damaging out-year fiscal consequences.

# Informing Decisions: Need to Modernize Disability Programs

## OVERSIGHT:

Ability of claims processing function to keep pace with demand.

## INSIGHT:

Numerous federal programs provide a range of services and supports for people with disabilities—including 45 employment-related programs—that together represent a patchwork of policies and programs without a unified strategy or set of national goals.

## FORESIGHT:

Implications of aging baby boomer population for disability systems; need to reflect modern views of disability, advances in assistive technologies and an understanding of types of jobs available in the national economy. Failure to act could be costly in terms of benefits paid and few beneficiaries returning to work going forward.

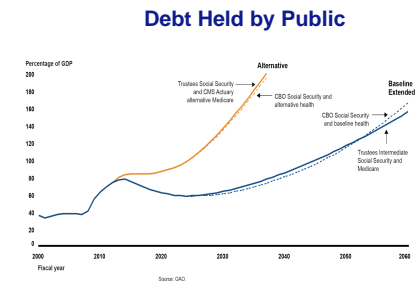
Website: [http://www.gao.gov/highrisk/improving\\_federal\\_disability](http://www.gao.gov/highrisk/improving_federal_disability)



# Informing Decisions: Examples of Use of Scenarios

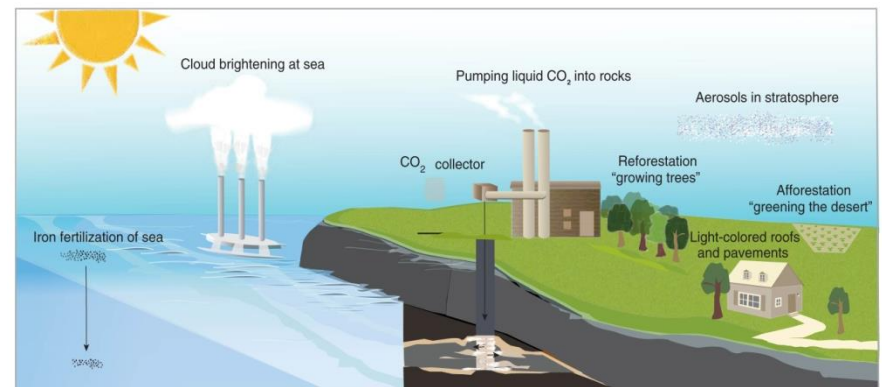
## Quantitative Scenarios/Simulations

- *Reducing SSA backlog of disability determinations*
- *Estimating cost of options for storage of nuclear waste*
- *Long-term fiscal simulations*



## Qualitative Scenarios/ Narrative

*Future of climate engineering research*



## **Informing Decisions: Evaluating Foresight at DOT**

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- **Apply FORESIGHT to identify relevant trends & forces at work**
  - **Identify key emerging or future challenges posed by trends & forces**
  - **Pose illustrative fundamental questions about the program, policy, protocols, or other activity**
  - **Use OVERSIGHT to assess how organization addresses questions**
  - **Make recommendations for change**
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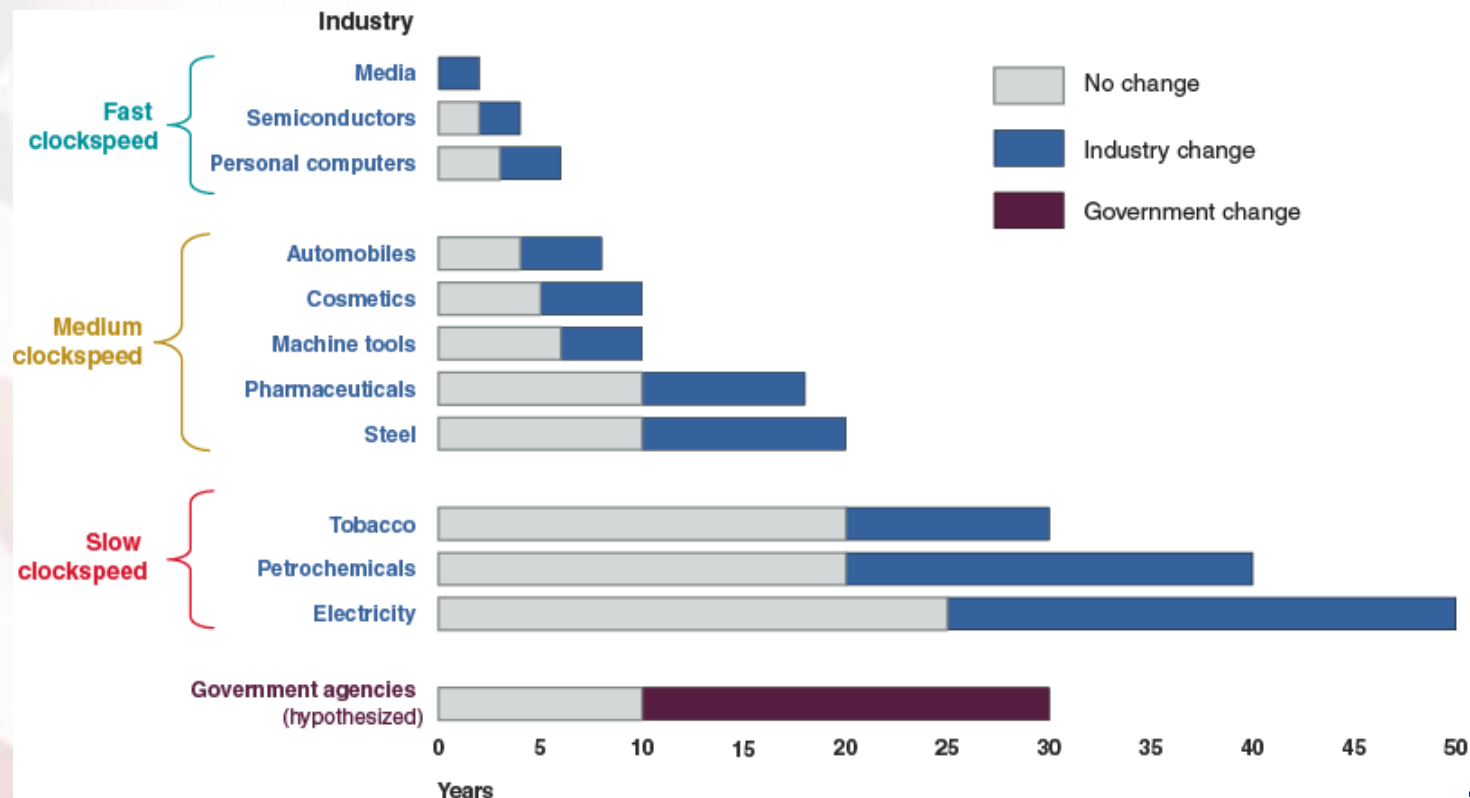
## **Chair of Senate Committee on Commerce, Science & Transportation Requests Work on Highway Safety**

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- **Technology-based highway safety trends that may affect future fatality rates**
- **How DOT addresses high-clockspeed technology-based trends that may affect fatalities**
- **DOT communications with Congress and others about these and new trends, DOT responses and implications**

# High Clockspeed Technologies Challenge Government Agencies

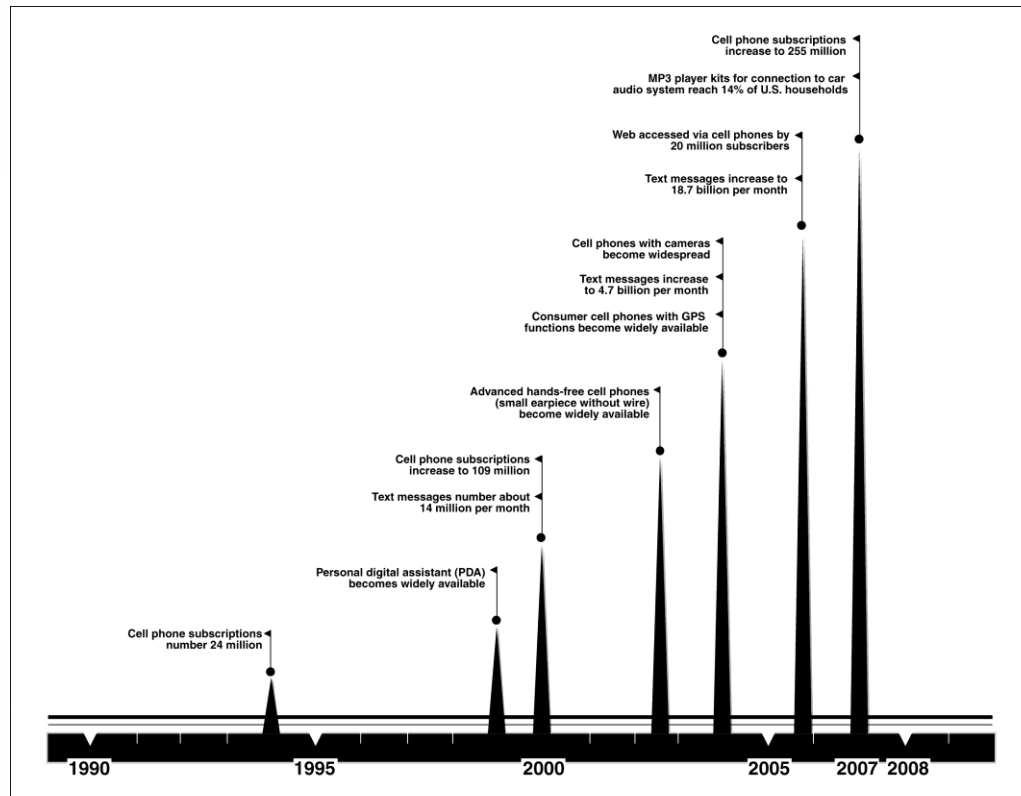
\*Organizational Clockspeed (Estimated Ranges)



Source: Adapted from D. Rejeski, "S&T Challenges in the 21st Century: Strategy and Tempo," ch. 5 in *AAAS Science and Technology Policy Yearbook*, 2003. The clockspeed concept and assessment of industry clockspeeds shown above are based on C. Fine's *Clockspeed: Winning Temporary Control in the Age of Industry Advantage*, 1998. Clockspeed is defined as the rate at which organizations "change processes and products, reinvent mindsets, and modify organizational structures in response to external threats or opportunities."

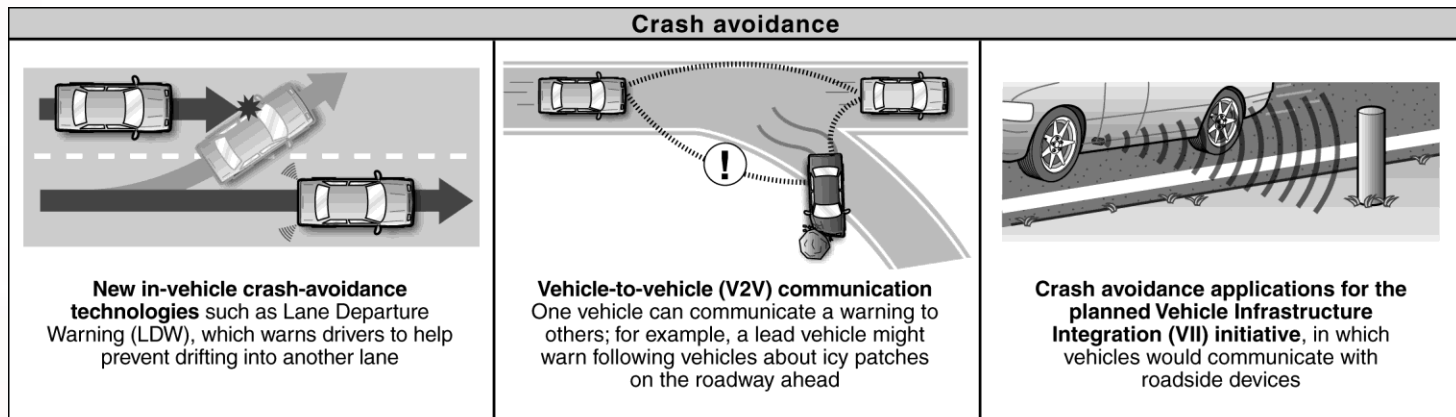


# Trend 1: Evolution and Spread of Portable Electronic Devices (2008)



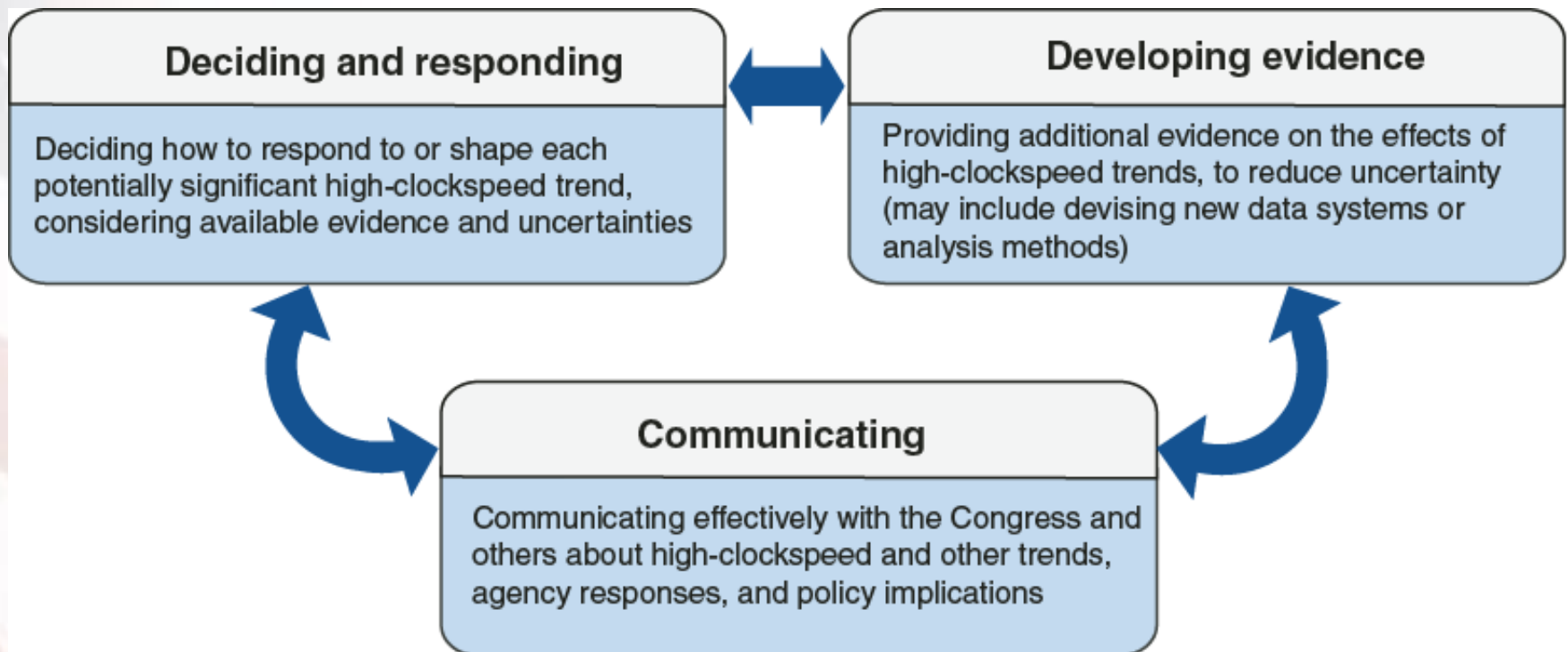
Source: GAO analysis based on expert opinion and data from Consumer Electronics Association (CEA), CTIA—The Wireless Association®, Telecommunications Industry Association (TIA), and documents such as industry reports and estimates.

# Trends 2 and 3: Vehicle and Road Crash Avoidance Technologies (2008)



Source: GAO.

# GAO Develops Framework to Evaluate How a Federal Agency Exercises Foresight



# GAO Develops Framework Relating Levels of Evidence to Governance Options

## Levels of evidence on safety impacts of a new technology-based opportunity or threat

### Level 1: Early signals

Networking with industry to learn about products "in the pipeline," scanning for instances or qualitative data indicating possible impacts on safety. May signal future developments or interrelationships among trends

### Level 2: Confirming qualitative or limited quantitative evidence

Results from studies or tests that confirm the existence of an evolving opportunity for or threat to safety; suggest a general level of impact on safety or how that impact is changing<sup>a</sup>

### Level 3: Strong quantitative evidence

Results from studies that quantify the magnitude of the overall safety impact of an opportunity or threat; may also define the pace of change and anticipated trajectory of an evolving trend<sup>a</sup>

## Governance options for addressing a new safety opportunity or threat

### Option A: No self-initiated response

- Decision not to self-initiate efforts to pursue opportunities or counter threats at this time

### Option B: "Starting point" actions

- Discussion forums (issue clarification, agenda setting), early work to develop policy proposals or priorities, outlining a "vision"

### Option C: Research to explore or evaluate approaches to action or to stimulate action; early interventions

- Research to explore new countermeasures or other programs; evaluation and demonstrations programs
- Information programs designed to be supportable by Level 1 or Level 2 evidence
- Involve manufacturers or suppliers in conducting research to encourage development of certain types of new safety products

### Option D: Mid-level interventions

- Consumer information programs that include very specific or comparative safety information or require competing products to be directly compared in terms set by the government
- Provide information to states; encourage states to develop new programs or pass new laws

### Option E: Stronger interventions

- Regulation
- Federal incentives
- Grants to states

Source: Highway Safety: Foresight Issues Challenge DOT's Efforts to Assess and Respond to New Technology-Based Trends, October 2008 (GAO-09-56).

# Framework Allows Evaluation of DOT Response to Technology Trends & Foresight

## Deciding & responding

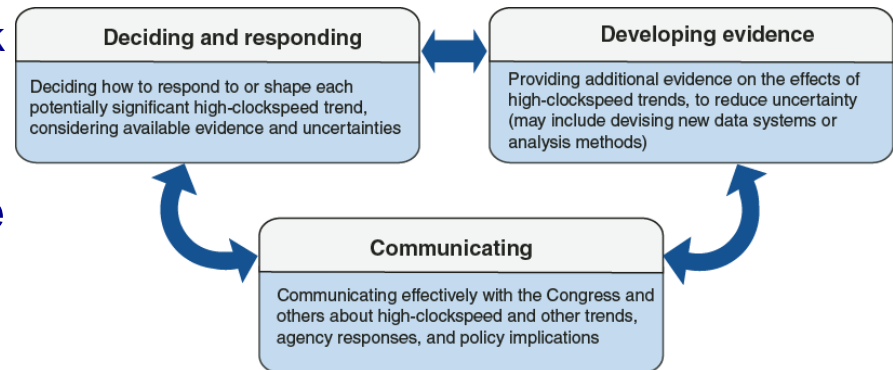
No self-initiated DOT action/research due to evidence-based standard; with uncertainty, need for anticipatory risk management

## Developing additional evidence

DOT studying impact on safety, but studies insufficient to meet standard; potential use of new technology

## Communicating

Lack of DOT foresight information => Congress; need for transparency, comprehensive re: multiple trends



# **Recommendations for Change: Secretary of U.S. DOT**

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## **Deciding and responding**

Develop an approach to guide decision-making  
based on evaluation of principles and practices for  
making decisions under conditions of risk and  
uncertainty

## **Developing additional (timely) evidence**

Potential use of new data-collection technology

## **Communicating**

Foresight capability, use of analytical techniques,  
comprehensiveness

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# Importance of Communicating Information on Trends to Congress

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- Agency assessment of trends or factors external to its environment may help Congress in judging likelihood of achieving strategic goals and actions needed to meet those goals (GAO, 1997)
- Conceptual frameworks as tool for communicating with Congress and other decision-makers
- Foresight tools can enhance communication on fast-paced and complex trends, e.g., technology roadmaps, backcasting and technology assessment



# Communicating with Congress: 2013 GAO High Risk List



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## **STRENGTHENING THE FOUNDATION FOR EFFICIENCY AND EFFECTIVENESS:**

LIMITING THE FEDERAL GOVERNMENT'S FISCAL EXPOSURE BY BETTER MANAGING CLIMATE CHANGE RISKS  
MANAGEMENT OF FEDERAL OIL AND GAS RESOURCES  
MODERNIZING THE U.S. FINANCIAL REGULATORY SYSTEM AND FEDERAL ROLE IN HOUSING FINANCE  
RESTRUCTURING THE U.S. POSTAL SERVICE TO ACHIEVE SUSTAINABLE FINANCIAL VIABILITY  
FUNDING THE NATION'S SURFACE TRANSPORTATION  
STRATEGIC HUMAN CAPITAL MANAGEMENT  
MANAGING FEDERAL REAL PROPERTY

## **TRANSFORMING DOD PROGRAM MANAGEMENT:**

DOD APPROACH TO BUSINESS TRANSFORMATION  
DOD BUSINESS SYSTEMS MODERNIZATION  
DOD SUPPORT INFRASTRUCTURE MANAGEMENT  
DOD FINANCIAL MANAGEMENT AUDITING AND FINANCIAL MANAGEMENT  
DOD SUPPLY CHAIN MANAGEMENT  
DOD WEAPON SYSTEMS ACQUISITION

## **ENSURING PUBLIC SAFETY AND SECURITY:**

MITIGATING GAPS IN WEATHER SATELLITE DATA  
STRENGTHENING DEPARTMENT OF HOMELAND SECURITY MANAGEMENT FUNCTIONS  
ESTABLISHING EFFECTIVE MECHANISMS FOR SHARING AND MANAGING TERRORISM-RELATED INFORMATION TO PROTECT THE HOMELAND  
PROTECTING THE FEDERAL GOVERNMENT'S INFORMATION SYSTEMS AND THE NATION'S CYBERCRITICAL INFRASTRUCTURES  
ENSURING THE EFFECTIVE PROTECTION OF TECHNOLOGIES CRITICAL TO U.S. NATIONAL SECURITY INTERESTS  
REVAMPING FEDERAL OVERSIGHT OF FOOD SAFETY  
PROTECTING PUBLIC HEALTH THROUGH ENHANCED OVERSIGHT OF MEDICAL PRODUCTS  
TRANSFORMING EPA'S PROCESS FOR ASSESSING AND CONTROLLING TOXIC CHEMICALS

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# Communicating with Congress: 2013 GAO High Risk List

## **MANAGING FEDERAL CONTRACTING MORE EFFECTIVELY:**

DOD CONTRACT MANAGEMENT FOR THE NATIONAL NUCLEAR SECURITY ADMINISTRATION AND OFFICE OF ENVIRONMENTAL MANAGEMENT  
NASA ACQUISITION MANAGEMENT

## **ASSESSING THE EFFICIENCY AND EFFECTIVENESS OF TAX LAW ADMINISTRATION:**

ENFORCEMENT OF TAX LAWS

## **MODERNING AND SAFEGUARDING INSURANCE AND BENEFIT PROGRAMS:**

IMPROVING AND MODERNIZING FEDERAL DISABILITY PROGRAMS  
PENSION BENEFIT GUARANTY CORPORATION INSURANCE PROGRAMS  
MEDICARE PROGRAM  
MEDICAID PROGRAM  
NATIONAL FLOOD INSURANCE PROGRAM



# New High Risk Areas Are Future-Oriented

## **LIMITING THE FEDERAL GOVERNMENT'S FISCAL EXPOSURE BY BETTER MANAGING CLIMATE CHANGE RISKS**

CLIMATE CHANGE CREATES SIGNIFICANT FINANCIAL RISKS FOR THE FEDERAL GOVERNMENT

FEDERAL ROLE: EXTENSIVE INFRASTRUCTURE, E.G., DEFENSE INSTALLATIONS;  
INSURES PROPERTY THROUGH THE NATIONAL FLOOD INSURANCE PROGRAM;  
EMERGENCY AID PROVIDED IN RESPONSE TO NATURAL DISASTERS

FEDERAL GOVERNMENT NOT WELL POSITIONED TO ADDRESS THE FISCAL EXPOSURE  
PRESENTED BY CLIMATE CHANGE

GOVERNMENT WIDE STRATEGIC APPROACH NEEDED WITH STRONG LEADERSHIP TO  
MANAGE RELATED RISKS

## **MITIGATING GAPS IN WEATHER SATELLITE DATA**

CONCERNS FOR LESS ACCURACY AND TIMELINESS FOR FUTURE WEATHER  
FORECASTS AND WARNINGS (EXTREME EVENTS SUCH AS HURRICANES, STORM  
SURGES, AND FLOODS)

# **Impact of GAO's High-Risk Program**

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**Promotes sustained congressional attention to key problems**

**Over \$28 billion in FY 2012 in financial benefits**

**Many additional non-financial improvement actions**

**Provides impetus for government-wide management reforms**

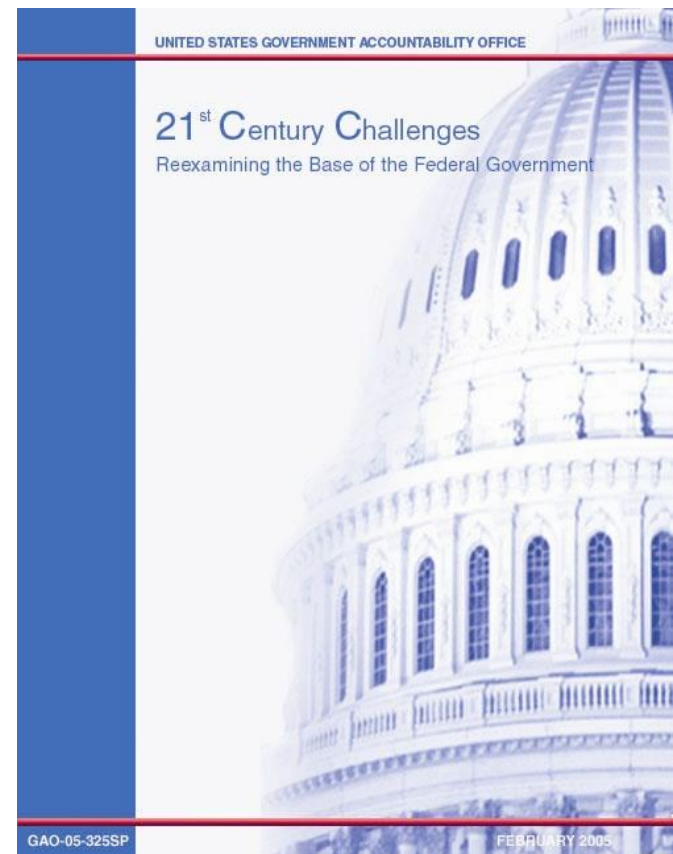
**Increases the priority placed on President's Management Agenda and OMB corrective action initiative**

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# GAO's 21st Century Challenges Report: The Importance of Foresight

“In response to forces shaping  
the United States and its place  
in the world. . .

. . .the governance structures and  
management processes that  
emerge will depend on having  
**sufficient foresight. . .”**



# **GAO's Role in Foresight**

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