



Public Sector Foresight: The Future is Now

**World Future 2015 –
Public Sector Foresight Network Meeting**

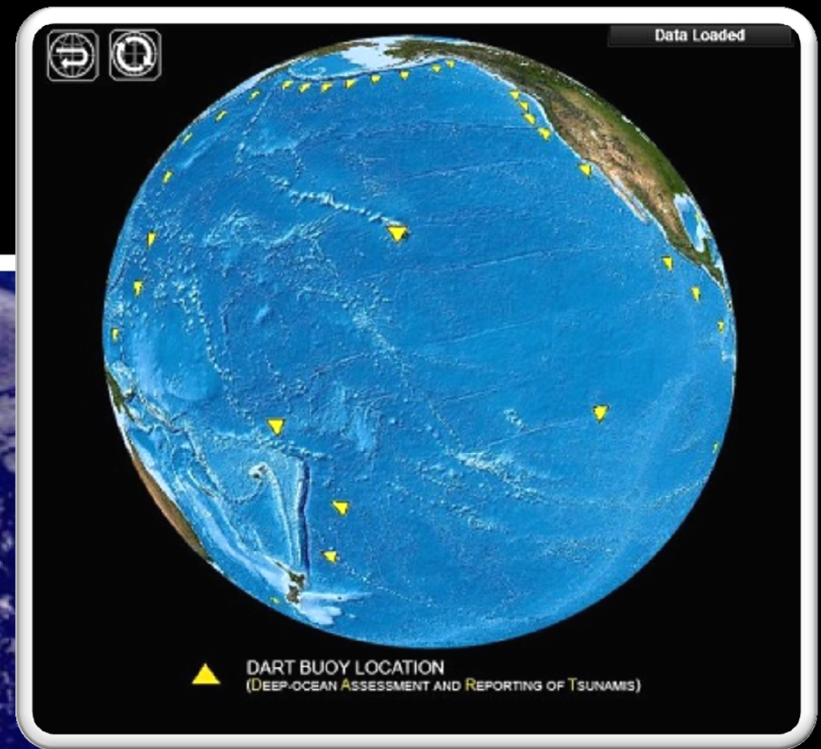
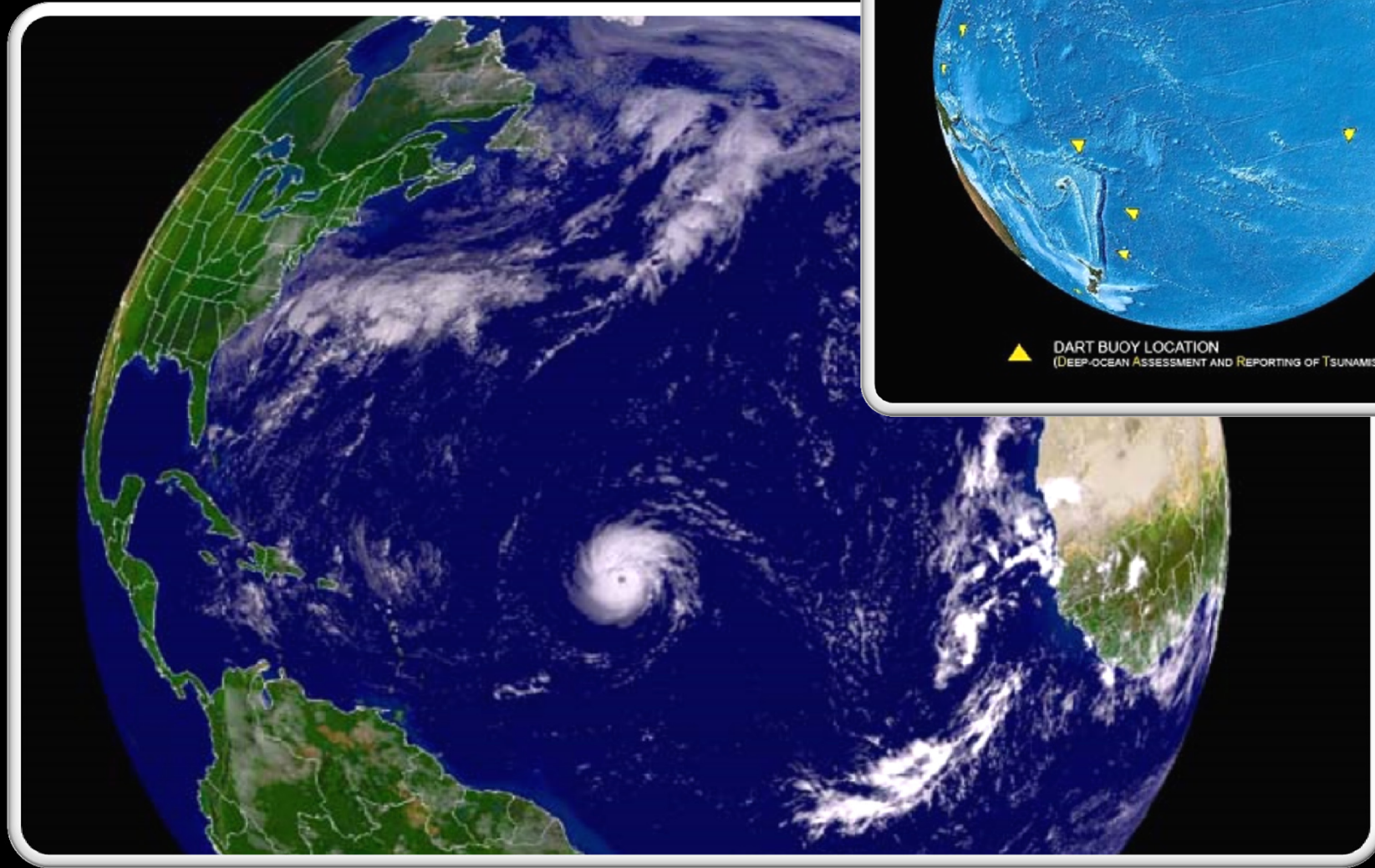
**San Francisco
July 24, 2015**

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The opinions expressed herein are the author's own and do not necessarily reflect the views of the US Government Accountability Office.



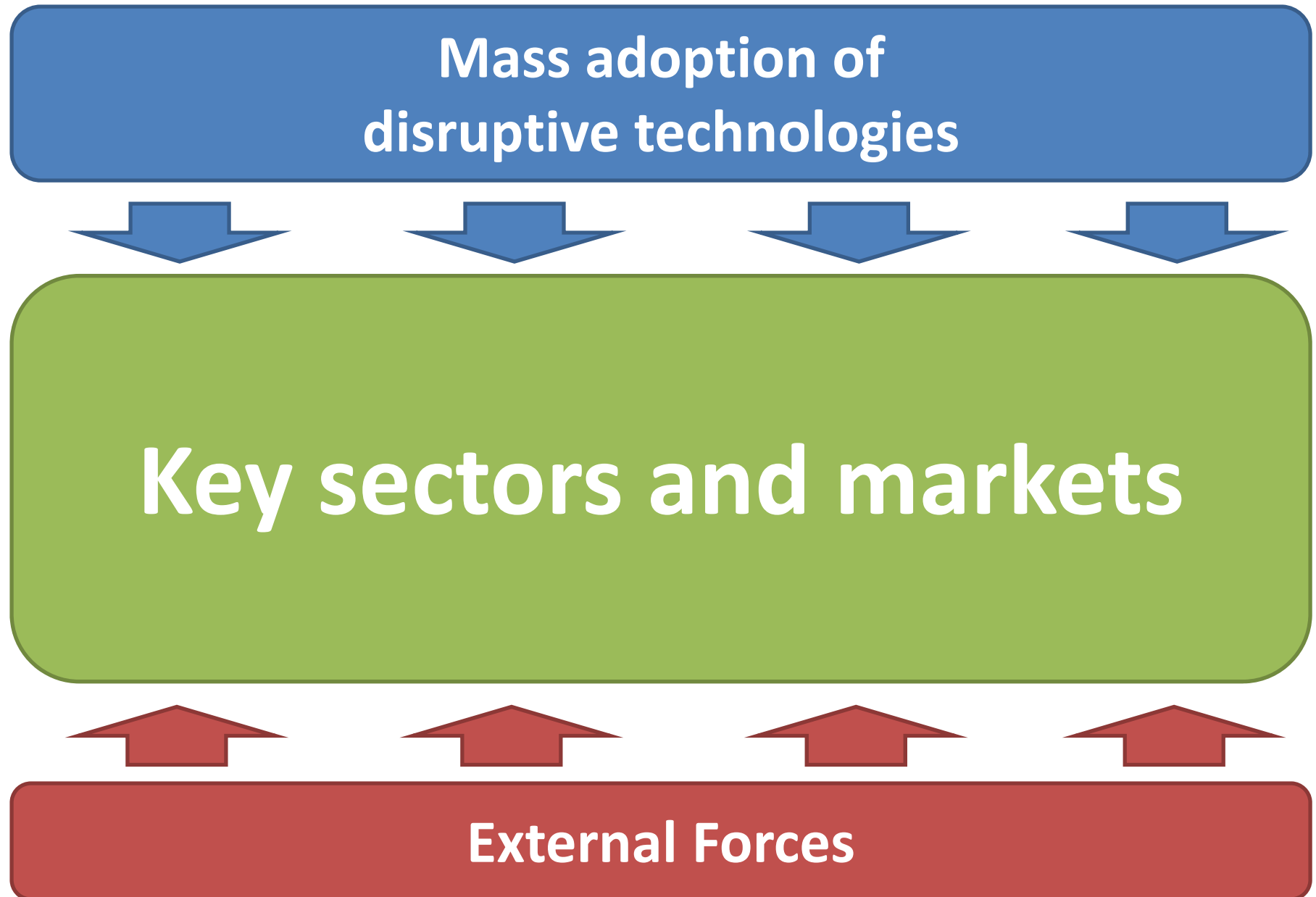
Photo: NASA



Foresight & Disruptive Innovation

- Speed of change
- Uncertainty of outcomes
- Pace of regulatory and policy responses

LANDSCAPE OF DISRUPTION



LANDSCAPE OF DISRUPTION



Internet of Things



Autonomous Systems



Machine Learning



Big Data / Analytics

Transportation & Infrastructure

Public Safety / Security

Health Care / Life Sciences

Finance

Industrial / Manufacturing

Education

Cyber Security

Privacy

Regulation

Citizen Trust

LANDSCAPE OF DISRUPTION



Internet of Things



Autonomous Systems



Machine Learning



Big Data / Analytics

Transportation & Infrastructure

- Smart cities; traffic management; logistics & delivery; driver-assist/driverless systems; V2V & V2I

Public Safety / Security

Health Care / Life Sciences

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LANDSCAPE OF DISRUPTION



Internet of Things



Autonomous Systems



Machine Learning



Big Data / Analytics

Transportation & Infrastructure

Public Safety / Security

- Image capture; tracking (physical & online); UAVs; robotics; data security; insider threats; acoustic sensors

Health Care / Life Sciences

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LANDSCAPE OF DISRUPTION



Internet of Things



Autonomous Systems



Machine Learning



Big Data / Analytics

Transportation & Infrastructure

Public Safety / Security

Health Care / Life Sciences

- Synthetic biology; gene editing; rapid diagnostics; home health; wearables; electronic health records

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LANDSCAPE OF DISRUPTION



Internet of Things



Autonomous Systems



Machine Learning



Big Data / Analytics

Transportation & Infrastructure

Public Safety / Security

Health Care / Life Sciences

Finance

- Blockchain (currency, bonds, contracts); peer-to-peer lending; robo-advisors; virtual banking; payments

Industrial / Manufacturing

Education

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LANDSCAPE OF DISRUPTION



Internet of Things



Autonomous Systems



Machine Learning



Big Data / Analytics

Transportation & Infrastructure

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Health Care / Life Sciences

Finance

Industrial / Manufacturing

- Robotics; “in-shoring”; smart assembly; intelligent plants ; connected products; on-demand production

Education

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LANDSCAPE OF DISRUPTION



Internet of Things



Autonomous Systems



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Education

- MOOCs; personalized education; automated grading; student data; STEM curricula; open data

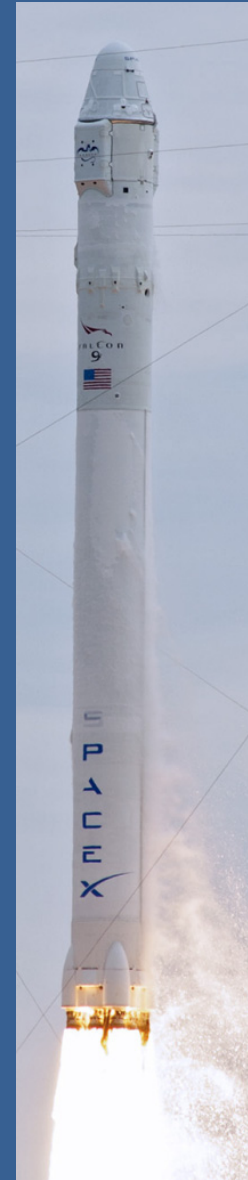
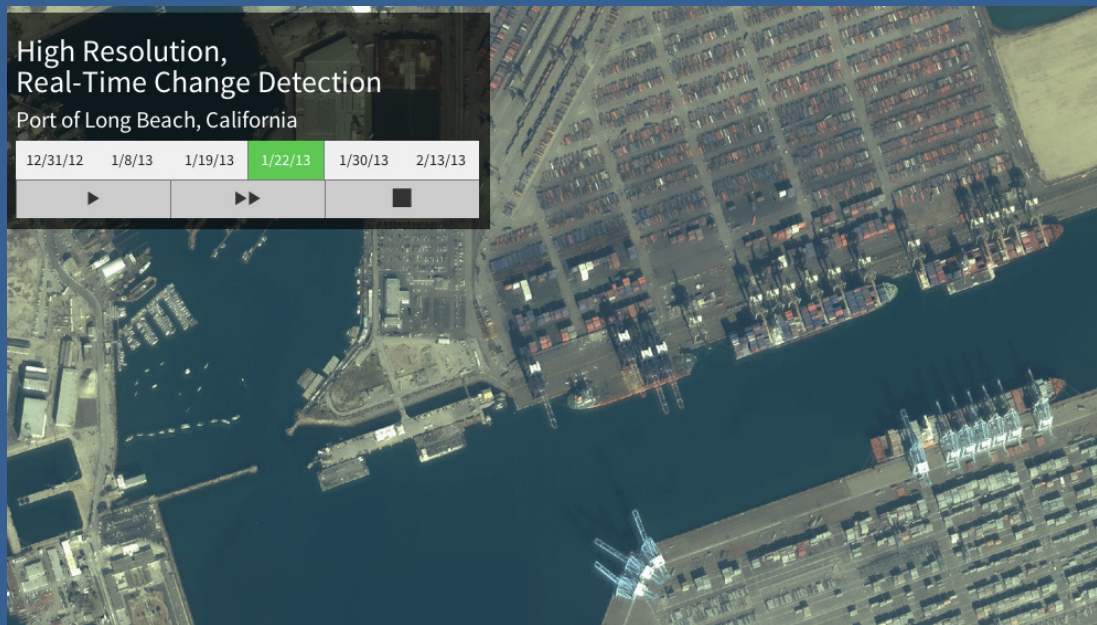
Cyber Security

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Once the Public Sector's Exclusive Domain...



Disruptive Innovation

- Speed of change
- Uncertainty of outcomes
- Pace of regulatory and policy responses

Implications

Imperative to have robust, forward-looking foresight system

- Strategic planning
- Environmental scanning
- Scenarios
- Risk management



GAO'S Foresight Mission

Photo: Architect of the Capitol

GAO Strategic Plan – Key Trends

- Threats Confronting U.S. National Security Interests
- Fiscal Sustainability & Debt Challenges
- Global Interdependence & Multilateral Cooperation
- Science & Technology Trends
- Advances in Communications Networks & Information Technologies
- Shifting Roles in Governance & Government
- Demographic & Societal Changes

Forward-Looking Work

Forums & Technology Assessments on Emerging Issues (3D Printing, Big Data & Privacy, Climate Resilience, Nanomanufacturing, Financial Literacy)

- Fiscal outlook
- Regenerative medicine
- Intelligent transportation systems
- Electromagnetic threats to electric grid
- Debt limit
- Biosurveillance
- Cybersecurity (banking, aviation, federal infrastructure)
- Emerging risks in banking regulation
- Arctic planning
- UAVs (military, civilian)
- GPS jamming
- Budgeting for disasters
- Reducing overlap and duplication in federal programs
- Nuclear smuggling
- Low levels of retirement savings
- Weather satellite gaps
- Flood insurance
- Identity theft
- Air traffic control modernization
- Crop insurance
- Fiscal exposures from climate change and extreme weather

Successful foresight & scanning

- Multi-stakeholder
- Top-down / bottom-up engagement
- Institutionalized
 - Anchored to visible, enterprise-wide activity (e.g., strategic planning)
 - Creates impact in mission work
- Existing practices
 - Look around – it's probably already happening

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