Strategic Foresight, SET for Grand Challenges:

UN SDGs and Post-2015 Development Agenda

Andrew Reynolds
U.S. Department of State
Federal Foresight Community of Interest
Washington, DC
August 20, 2015

Outline of Remarks

- Set for Grand Challenges
- National Security Strategy, QDDR Objectives
- R&D Funding Priorities and Innovation
- Strategic Planning and Foresight
- Project HORIZON - 2025
- Global Trends 2030
- Emerging and Disruptive Technologies – Internet 4.0
- UN Priorities for SET and Innovation – Rio +20, SDGs and Post-2015
- All-of-Society Challenges

SET for Grand Challenges

- Science, engineering and technology (SET) can have disruptive (good and bad) impacts on social, cultural, ethical, civil, economic, political and military affairs
- Emerging, disruptive technologies affect institutions, governments, international relations, national security.
- The New Normal - Private/Public Partnerships for economic growth and development and global - knowledge circulation powered by ICTs, cloud and Internet.
- Nations and their urban centers are shaped by, and compete for, SET assets, R&D, education and an innovation ecology .

Global Grand Challenges are increasing – S&T, engineering and vocational skills are seminal to meet them, foster good governance and international stability and prosperity.

'Engineering Grand Challenges – 2020"
U.S. National Academy of Engineering

'In each of these broad realms of human concern — sustainability, health, vulnerability, and joy of living — specific grand challenges await engineering solutions. The world's cadre of engineers will seek ways to put knowledge into practice to meet these grand challenges. Applying the rules of reason, the findings of science, the aesthetics of art, and the spark of creative imagination, engineers will continue the tradition of forging a better future."

Make solar energy economical
Provide energy from fusion
Develop carbon sequestration methods
Manage the nitrogen cycle
Provide access to clean water
Advance health informatics
Engineer better medicines
Reverse-engineer the brain
Prevent nuclear terror
Enhance virtual reality
Engineer the tools of scientific discovery

Advance personalized learning
Secure cyberspace
Restore and improve urban infrastructure

U.S. National Security Strategy
Obama Administration - 2010

We must first recognize that our strength and influence abroad begins with steps we take at home. We must educate our children to compete in an age where knowledge is capital, and the marketplace is global.

We must develop clean energy that can power new industry and unbound us from foreign oil and preserve our planet.

We have to pursue science and research that unlocks wonders as unforeseen to us today as the microchip and the surface of the moon were a century ago.

"*Simply put, we must see American innovation as a foundation of American power*."

Our Armed Forces will always be a cornerstone of our security, but they must be complemented.

Our security also depends upon diplomats who can act in every corner of the world, from grand capitals to dangerous outposts; development experts who can strengthen governance and support human dignity ; and intelligence and law enorcement that can unravel plots, strengthen justice systems, and work seamlessly with other countries."

National Security Strategy, May 2010

http://www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf

U.S. National Security Strategy
Obama Administration – February 2015

Framing Priorities:

Security – strengthen national defense; reinforce homeland security; combat terrorism, address conflicto; prevent WMD proliferation; confront climate change; assure access to shared spaces; increase global health security

Prosperity – put our economy to work; advance energy security; lead in S&T and innovation (see below); shape global economic order; end extreme poverty

Values – live our values; advance equality; support emerging democracies; empower civil society and young leaders; prevent mass atrocities

International Order – advance rebalance in Asia and Pacific; strengthen enduring alliance with Europe; seek stability and peace in the Middle East and North Africa;

invest in Africa's future; deepen economic and security cooperation in the Americas

"**Scientific Discovery and technological innovation empower American leadership with a competitive edge that secures our military advantate, propels our economy, and improves the human condition.** Sustaining that edge requires robust Federal investments in basic and applied research. We must also STEM education to produce tomorrow's discoverers, inventors, entrepreneurs, and high-skilled workforce. **Our commitment remains strong to preparation and compensation for STEM teachers, broadband connectivity, and high-tech educational tools** for schools, programs that inspire and provide opportunities for girls and underrepresented minorities, and support for innovation in STEM teaching and inclusión in higher education. We will also keep our edge by opening our national labs to more comercial partnerships while tapping research and development in the private sector, including a wide range of start-ups and firms at the leading edge of America's innovation economy."

http://www.whitehouse.gov/sites/default/files/docs/2015_national_security_strategy.pdf

Science and Technology Priorities for FY 2015

(OSTP/OMB Memorandum, November 2014)

"The 2015 R&D budget ($135.4 B proposed) extends the Administration's ongoing commitment to make wise, targeted investments in science and technology in support of job creation, economic growth, and opportunity for all Americans. It builds on &D's proven record of turning ideas into realities, and of generating new technologies, products and businesses that in many cases were barely imagined a few years earlier."

Advanced Manufacturing

Clean Energy and Efficiency

Climate Change with emphasis on Drought, Artic Impacts, Prediction

Information Management Addressing Big Data, Cybersecurity

National Security - Hypersonics, Adv. Computing, Countering WMD

Biological Innovation in Health, Energy and Agriculture

President's BRAIN Initiative (Basic Research through Advancing Innovative Neurotechnologies)

Science, Technology, Engineering and Math (STEM) Education

Commercialization from Federal R&D Investments

Strategic Foresight

Technology foresight" or "future-oriented technology analysis"
Well-developed discipline practiced by governments, corporations, universities, think tanks worldwide

Survey of 1,000 recent foresight exercises indicates modalities such as expert panels, scenarios, trend extrapolation, workshops, Delphi, questionnaires and surveys, opportunities and threat analyses

Qualitative approach is most favored, some quantitative
Foresight modalities often mixed, e.g., brainstorming as input to Delphi, scenarios combined with technology trends

Information and communications technologies used : on-line surveys, Big Data analyses, web-based horizon scanning and creativity platforms

---

"There are no facts about the future." Lincoln Moses, EIA Administrator

"In preparing for battle, I have always found that plans are useless, but planning is indispensable". Dwight D. Eisenhower

Strategic Foresight
Past Examples – Various Horizons

S&T, Engineering Are Seminal in Foreign Policy

USCNS – "The Roadmap for National Security – Imperatives for Change" (1996-8)

NRC Report "The Pervasive Role of S&T and Health in Foreign Policy" (1999)

NDU "The Global Century – Globalization and National Security" (2000)

NIC "Global Trends 2015" and "Mapping the Global Future 2020" (2003, 2006)

RAND "Global Technology Revolution 2020" (2006)

NRC Report "The Fundamental Role of S&T in International Development" (2006)

State Department "Project Horizon" at the Year 2025 (2006)
NIC Global Trends 2025 (2008) and Global Trends 2030 (2012)

http://www.state.gov/s/d/rm/rls/dosstrat/2014/pdf/index.htm

Strategic Foresight
Recent Examples for 2030

"Global Trends 2030: Alternative Worlds", National Intelligence Council, December 2012

"Why and How Latin America Should Think About the Future: Global Trends and the Future of Latin America", Inter-American Dialogue, December 2013

"Envisioning 2030: US Strategy for the Coming Technology Revolution", Atlantic Council, December 2013

"Global Trends 2030: Can the EU Meet the Challenges Ahead", European Strategy and Policy Analysis System, 2015

"No Ordinary Disruption: The Four Global Forces Breaking All the Trends"
Dobbs, Manyika, Woetzel, 2015


HORIZON

Building the Scenarios

- Based on 200 interviews, ‘drivers’ were identified and then distilled into dimensions of broader, more universal scope

PARTIAL LIST OF DRIVERS

- Level of Stability and Conflict
- Non-traditional actors
- Borders: nature and permeability
- Charismatic leadership (source of)
- Terrorism
- Global Media
- Religion
- Poverty & Development
- International Crime/Illicit Economy
- The Global Commons
- Energy
- Agriculture/Food
- Water & Other Critical Resources
- Global Health
- Environment
- Demographics
- Science and Technology
- Global alliance structures
- Role/structure of transnational business and business organizations
- Dynamics of international debt
- Unemployment/ social fabric
- Global Culture
- Global Perception of the U.S.
- U.S. Economy GDP growth;
- Availability of capital/ investment climate
- Employment
- Trade and investment (FDI) relationships
- Resource dependency
- U.S. Political Landscape
- Locus of political power
- Public perception of government
- Integration/ fragmentation of U.S. society
- Education
- Health care
- Aging population of U.S.; societal and political effects

DIMENSIONS

- **Challenge to Nation State Power and Influence**
- **Gap in Global Standard of Living**
- **U.S. Economic Competitiveness**
- **Perception of Serious Threat to U.S. Security and/or Quality of Life**

HORIZON – Forces for Change

Most frequently mentioned forces for change expected to drive the landscape of threats and opportunities through 2025

1. Global Interdependence
2. Science & Technology (S&T) Competition
3. China and India
4. Natural Resources/Energy
5. Global Perceptions of the U.S.
6. Changes in Military Power
7. Environmental Change
8. Global Health and Disease
9. Advances in Science and Technology
10. Globalization, Poverty, and Development
11. Demographics
12. Religion
13. Sovereignty and the Role of the Nation-state
14. Terrorism
15. Interagency Issues

The Project Horizon Scenarios

- *Asian Way*
  - In this world, the global economy increasingly is dominated by Asian mega-corporations that are expanding at the expense of the formerly dominant American and European military and economic powers
- *Be Careful What You Wish For*
  - Not without its problems to manage, this is a world of opportunity, freedom, and great technological advance. The USG is overstretched operationally and is finding that a world made up of activist fellow democracies is challenging in unexpected ways
- *Lockdown*
  - This is a multi-threat world marked by persistent terrorism, nuclear proliferation, and the most challenging economics the U.S. – and the world – have faced in more than 50 years
- *Congagement*
  - Political and economic power increasingly are organized regionally. It is a vibrant, tense and highly competitive world with multiple points of friction
- *Profits and Principles*
  - Many have benefited from hyper-capitalism, many others have not. Public institutions are increasingly weak while new, powerful organizations are emerging. The global clash between profits and principles is causing fear that these divergent paths could end up on a collision course

Strategic Interagency Capabilities - All Scenarios

- Quadrennial Strategic Review
  - A coordinated interagency strategic planning process for USG global affairs activities that links the President's National Security Strategy and other National Strategies with agency-level Strategic and Performance Plans, Budget Submissions, and Performance and Accountability Reports
- Government-Wide Information Sharing
  - Transformed government-wide information sharing, including revised doctrine, procedures, and incentive structures for shifting the USG from a "need to know" model to a "need to share" model of information access
- Global Domain Foresight
  - The ability to maintain anticipatory global domain awareness to enable proactive responses to emerging man-made and natural threats
- Interagency Fusion Groups
  - The streamlined ability to create, staff and monitor time-limited interagency organizations specifically focused on emerging strategic issues featuring clear lines of accountability, cross-agency resource control and authority
- Global Health Engagement
  - A strategic approach to the mobilization of interagency and non-governmental public health assets to advance U.S. leadership and public diplomacy efforts

Strategic Interagency Capabilities - All Scenarios

- Global Hazards Planning and Response
  - An integrated USG preparedness planning and rapid response function capable of managing the interagency response to significant global hazards in partnership with other nations and non-governmental actors as appropriate
- Human Resources Model for Global Affairs
  - A revised set of cross-government HR policies, procedures, and incentive structures to enable the rapid assembly of capable, integrated, and trained USG personnel for global affairs activities
- Global Affairs Learning Consortium
  - A jointly governed network of global affairs training institutions (e.g., FSI, NDU, etc.) that mutually leverages training, exercise, and experimentation offerings to create a rich, coherent curriculum for USG global affairs professionals
- USG Partnership Framework
  - USG capacity to partner effectively with private sector entities, state and local governments, and non-government organizations (NGOs), foundations, and educational institutions
- Science and Technology Incentive Framework
  - An S&T incentive framework that better aligns USG S&T investments with emerging, long-term global priorities and rewards collaborative S&T across the interagency and with academic, private sector and other national partners

QDDR

Leading Through Civilian Power

The First Quadrennial Diplomacy and Development Review

2010

Quadrennial Diplomacy and Development Review "Leading Through Civilian Power" - 2010

A final critical trend reshaping the global context of U.S. foreign policy is a broad set of technological innovations that have increased the pace of international affairs and facilitated a new era of human connectivity. **Science, engineering, technology and innovation are the engines of modern society and a dominant force in globalization and international economic development.** Despite fierce competition and rapidly increasing parity in science, technology, and engineering assets among nations, the United States remains predominant in most fields and is a world leader in education, research, and innovation.

The National Security Strategy and Presidential Policy Directive on Global Development recognize the power of innovation and modern technology to transform lives around the world and our development policy. **Innovation is a key engine of long-term economic growth. History shows how science and engineering open the door to revolutions in development.**

Quadrennial Diplomacy and Development Review "Enduring Leadership in a Dynamic World" - 2015

Builds on 2010-2014 QDDR, President's 2015 National Security Strategy

Four Cross Cutting Areas

- Increasing Partnerships and Engaging Beyond National States
- Focusing on Improving Governance
- Managing and Mitigating Physical Risk
- Enhancing Use of Data, Diagnostics and Technology

Strategic Priorities

- Preventing and Mitigating Conflict and Violent Extremism
- Promoting Open, Resilient and Democratic Societies, Open Internet
- Advancing Inclusive Economic Growth, Use of Data, Diagnostics
- Mitigating and Adapting to Climate Change

Building Dynamic Organizations

- Harnessing Knowledge, Data and Technology and Related Hub
- Promoting Innovation, Risk Management and Problem-Solving
- Advancing Strategic Planning and Performance Management
- Investing in a Skilled, Diverse Workforce

N A T I O N A L I N T E L L I G E N C E C O U N C I L

Global Trends 2030: Alternative Worlds

16 Disruptive Technologies Analyzed Across Four Scenarios:

"Stalled Engines"
"Fusion"
"Gini-Out of the Bottle"
"Non-state World"

December 2012

Agricultural Water Efficiency
Precision Agriculture
Plant Biotechnologies
Synthetic Biology

Multifunctional Graphene

Affordable Solar Energy
Cost-Competitive Advanced Bio-Based Energy

Human Augmentation
Human Social Prediction
Social Impacts of Social Networks

Robotics
Remote and Autonomous Vehicles

Data Solutions
Diagnostics
Cyberweapons
Urban Technologies

Megatrends – An Unprecedented Number of Tectonic Shifts

- Growth of the Global Middle Class
- Individual Empowerment - ICTs and Internet
- Youth Bulges, Millennials and Digital Natives
- Unprecedented and Widespread Aging
- Urbanization
- Food, Water and Energy Nexus, Pressures
- Wider Access to Lethal and Disruptive Technologies
- Definitive Shift of Economic Power to the East and South

Mathew J. Burrows, Director, Strategic Foresight Initiative,
Scowcroft Center, US Atlantic Council, 2014

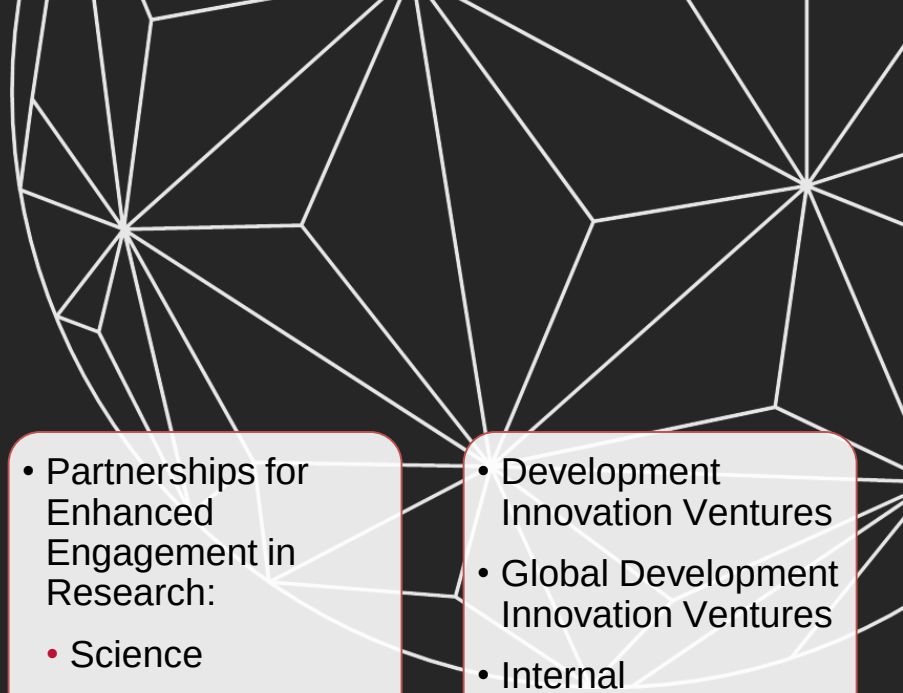
U.S. GLOBAL DEVELOPMENT LAB

October 2014

“To support an open source development approach, our Agency must serve as a platform that connects the world’s biggest development challenges to development problem solvers — all around the world. We recognize that talent is everywhere, but opportunity is not.”

USAID Administrator Dr. Rajiv Shah,
Aspen Institute, August 2012

OUR ACTIVITIES



Prizes

- All Children Reading
- Counter Trafficking in Persons Campus Challenge
- Atrocity Prevention Tech Challenge
- Wildlife Trafficking Tech Challenge
- DEC Data Analytics Challenge
- Rural Broadband Prize
- Desal Prize

Challenges

- Securing Water for Food
- Saving Lives at Birth
- Making All Voices Count
- All Children Reading
- Powering Agriculture

Partnerships

- Partnerships for Enhanced Engagement in Research:
  - Science
  - Health
- Global Partnerships

Ventures

- Development Innovation Ventures
- Global Development Innovation Ventures
- Internal Development Innovation Ventures

Fellowships

- Research Innovation Fellowships
- AAAS Fellows
- Jefferson Fellows
- Lab Fellows

Networks

- Higher Education Solutions Network
- Cornerstone Partners

Platforms

- Mobiles
- Open Data
- Operational Innovation

JOIN US!

- Text: TheLab to 42828 to receive the Lab Insider
- Visit us at: www.usaid.gov/GlobalDevLab
- Facebook: www.usaid.gov/GlobalDevLab
- Twitter: www.twitter.com/GlobalDevLab
- Email: thelab@usaid.gov

The Second Machine Age and Third Industrial Revolution

- Convergence of Broad Technologies - Nano, Bio, IT
- Generic Purpose Technologies – steam, electricity, now ICTs, Internet
- "Recombinant Innovation" – to invent anew from existing knowledge
- Advanced Manufacturing, 3-D, AI, New Materials and Robotics
- Transforming the Way Goods Are Made
- Destroying but also creating Jobs
- Need for multi-disciplinary STEM education, new skills and vocational training for modern workforce, especially in the developing world

Sources: Brynjjolfsson, McAfee, "The Second Machine Age"; Arthur, "The Nature of Technology"; Burrows, "The Future Declassifed"; Rifkin, "The Third Industrial Revolution"; McKinsey Global Institute - various

Global Knowledge Circulation: Powering Innovation and Development

"Clouds, Big Data and Smart Assets: Ten Tech-Enabled Trends"

Distributed Co-creation – Open Source software the key
Making the Network the Organization – "in-reach" to build teams
Collaboration at Scale – "organizational capital" for knowledge extraction
The "Internet of Things" – embedded sensors, actuators, "smart" assets
Experimentation and Big Data – data doubles every 18 months
Wiring for a Sustainable World – smart grids, efficiency reduce GHGs
Imagining Anything as a Service – innovate by integrating the end user
Age of the Multisided Business Model – shift from 1/1 to multiple players
Innovating from the Bottom of the Pyramid – "Alibaba" B2B exchange
Producing Public Good on the Grid – e-gov infrastructure and services

McKinsey Global Institute, August 2010

Global Knowledge Circulation: Life Blood for S&T, Engineering and Innovation

"Clouds, Big Data and Smart Assets: Ten Tech-Enabled Trends"

Distributed Co-creation – Open Source software the key
Making the Network the Organization – "in-reach" to build teams
Collaboration at Scale – "organizational capital" for knowledge extraction
The "Internet of Things" – embedded sensors, actuators, "smart" assets
Experimentation and Big Data – data doubles every 18 months
Wiring for a Sustainable World – smart grids, efficiency reduce GHGs
Imagining Anything as a Service – innovate by integrating the end user
Age of the Multisided Business Model – shift from 1/1 to multiple players
Innovating from the Bottom of the Pyramid – "Alibaba" B2B exchange
Producing Public Good on the Grid – e-gov infrastructure and services

McKinsey Global Institute, August 2010

Powering the Next Generation Internet: Semantic Web 3.0 to Intelligent Web 4.0

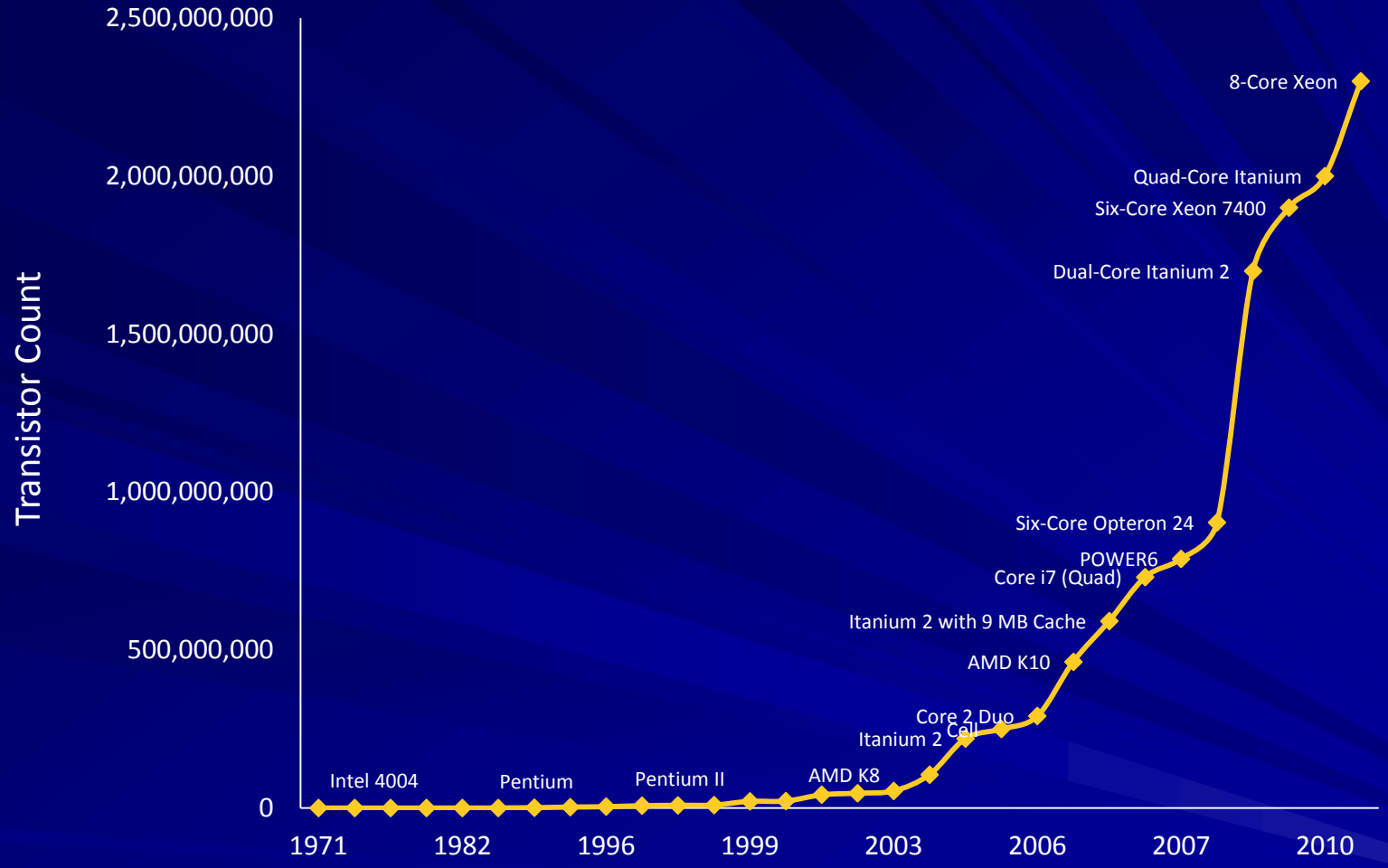
The following three slides courtesy of:

Beverly Neale Rush
Center for the Study of Intelligence

"Where Tomorrow Will Take Us: The Future of Foresight"

Actionable Foresight Conference
National Defense University
June 16, 2010

A world of constant disruption…



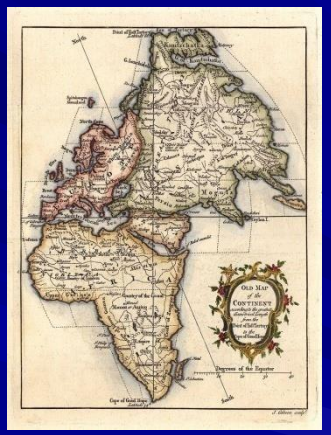
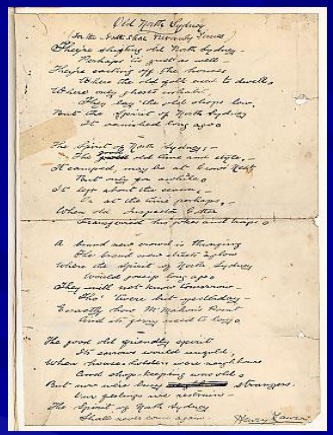
Today's rapidly changing digital infrastructure has altered the equation

A world of constant disruption…

It took two centuries to fill the US Library of Congress with more than:

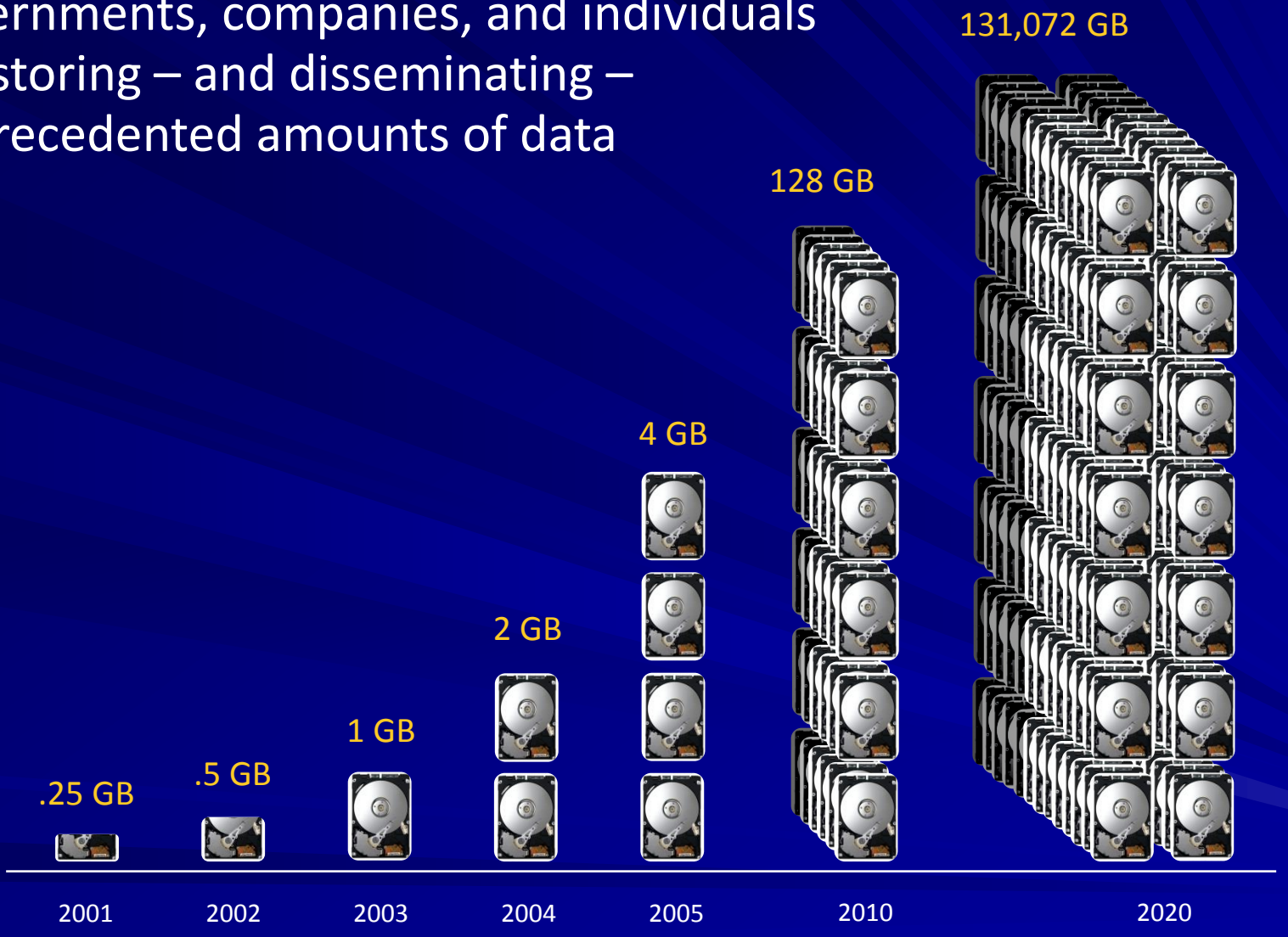
29 million	2.4 million	12 million	4.8 million	57 million
Books and periodicals	Recordings	Photographs	Maps	Manuscripts



Today, it takes about 5 minutes for the world to churn the equivalent amount of new digital information

With nearly unlimited space, governments, companies, and individuals are storing – and disseminating – unprecedented amounts of data



Information stored per person worldwide

Selected Rio + 20 Outcomes "The Future We Want"

- Reaffirm Millennium Development Goals for 2015 (paragraph 5)
- Determination to address green economy in context of sustainable development and poverty eradication (12)
- Strengthen existing, foster new public-private partnerships (71)
- Recognize critical role of technology and innovation (72)
- Reaffirm ECOSOC lead for policy review, dialogue and making recommendations for UN-wide coordination of MDGs, Agenda 21 and related activities (82)
- Framework for Follow Up and Action in areas of:

  Poverty eradication; food security, nutrition and sustainable agriculture; water and sanitation; energy; sustainable tourism; sustainable transport; health and population; productive employment; oceans and seas (104-133; 138-177)
- Bridge digital divide through broadband networks, services (42)
- Sustainable Cities and Human Settlements (134-137)

Millennium Development Goals
Substantial Progress Made

Goal 1: Eradicate extreme poverty and hunger

Goal 2: Achieve universal primary education

Goal 3: Promote gender equality, empower women

Goal 4: Reduce child mortality

Goal 5: Improve maternal health

Goal 6: Combat HIV/AIDS, malaria, other diseases

Goal 7: Ensure environmental sustainability

Goal 8: Develop global partnership for development

http://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf

World Summit on the Information Society
WSIS+10

- **WSIS +10 culminates a decade of activities following Tunis Summit and Agenda with associated "Action Lines" to foster greater access for developing countries to information and communications technologies (ICTs) and Internet**

- **Leads for 11 WSIS Action Lines were assigned to, inter alia, UNESCO, ITU, UNCTAD, WHO, FAO, WTO, WHO, ILO, UN-Habitat and US Regional Commissions to address:**

  - role of governments and all stakeholders in promoting ICTs for development;
  - building infrastructure, capacity-building, and enabling environments;
  - access to information and knowledge;
  - applications in e- government, e-business, e-learning, e-health, e-employment, e-environment, e-agriculture and e-science;
  - cultural diversity and identity;
  - media;
  - ethical dimensions of the information society, and;
  - international and regional cooperation

- **The WSIS +10 providing inputs to UNGA deliberations in December 2015 transition from MDGs to Sustainable Development Goals and post-2015 agenda**

Post-2015 Development Agenda - Sustainable Development Goals
"The Road to Dignity by 2030"
Synthesis Report of the Secretary General on the Post-2015 Agenda
December 2014

Social Sustainability

- Poverty
- Inequality
- Gender Equality and Women's Empowerment
- Peaceful Societies, Rule of Law and Capable Institutions

Economic Sustainability

- Economic Growth, employment and infrastructure
- Industrialization
- Education and Life-long Learning
- Means of Implementation and global partnership

Cities and Settlements

Environmental Sustainability

- Food security, nutrition, agriculture
- Energy
- Water and Sanitation
- Health and Population
- Sustainable Consumption and Production
- Climate change
- Oceans and Seas
- Ecosystems and biodiversity

Urbanization Facts and Forecasts

- By 2030, 60% of the world's population will live in cities, 70% by 2050
- Related investment requirements - $57-67 Trillion by 2030
- Today, 1.0 billion people live in slums with little or no infrastructure and services; by 2030, this could rise to 2.0 billion, by 2040, 4.0 billion
- Growth of megacities is a new experiment for life on Earth; many are situated near seismic hazards and/or threatened by rising sea levels
- With few exceptions (Tokyo 1923; Tangshan, 1976), recent large earthquakes (M>7.5) have spared major urban centers, but this will not persist indefinitely
- In next decades megacities will be damaged by large earthquakes
- Hazards are higher for cities near plate boundaries; mid-continent earthquakes also occur, albeit infrequently (c.f. M>7.6 events, eastern US, India, early 18th C)
- Grand Challenge: retrofit infrastructure under slums; bolster resiliency to earthquakes, other natural hazards; address peri-urban, rural community needs
- Strengthen STEM and vocational education, fostering urban governance, teach ethics and good governance, combat corruption in construction industries

Sources: ECOSOC Integration Segment, May 2014; McKinsey Global Institute, 2013; Roger Bilham University of Colorado – 12th Mallet-Milne Lecture 2009

UN Commission on Science and Technology for Development (CSTD)

Subsidiary body of the UN Economic and Social Council (ECOSOC)
Staffed by UN Commission on Trade and Development (UNCTAD)

Through ECOSOC, provides the General Assembly with best practices, high-level advice, progress reports in the spheres of:

- Strategic Foresight for S&T, engineering, innovation, ICTs for D
- Horizon-Scanning for Emerging and Disruptive Technologies
- Implementation of WSIS Action Lines from the "Tunis Agenda"
- Digital Divide and Internet governance generally

Total of 43 Member Countries - including US, Canada, UK, Mexico, Brazil, Peru, Japan, China, India, Pakistan, Oman, Nigeria, Uganda

Annual Intercessional Panel (3 days) in Chair's country
Annual Ministerial Session (5 days) in Geneva - May

CSTD Priority Themes for 2012-2016

Science, Technology and Innovation for Sustainable Cities and Peri-Urban Communities

Internet Broadband for an Inclusive Digital Society

Science, Technology and Innovation for MDGs and the Post-2015 Development Agenda

ICTs for Inclusive Social and Economic Development

Strategic Foresight for Post-2015 Development Agenda

Digital Development

Smart Cities and Infrastructure

Foresight for Digital Development

SDGs and Post-2015
Key Observations, Near- Term Milestones

SET & ICTs are seminal assets for all SDGs

ICTs are enablers for SET and innovation

Means of Implementation Post-2015 include, inter alia: Finance, Technology, and Capacity-Building

Financing for Development Meeting – Addis - July

UN Summit on SDGs – NYC - September

WSIS+10 High-Level Meeting – NYC – December
COP 21 on Climate Change – Paris - December

HABITAT 3 – Quito – October 2016

S&T and Engineering at State Department and USAID

www.state.gov/e/oes

www.state.gov/e/stas

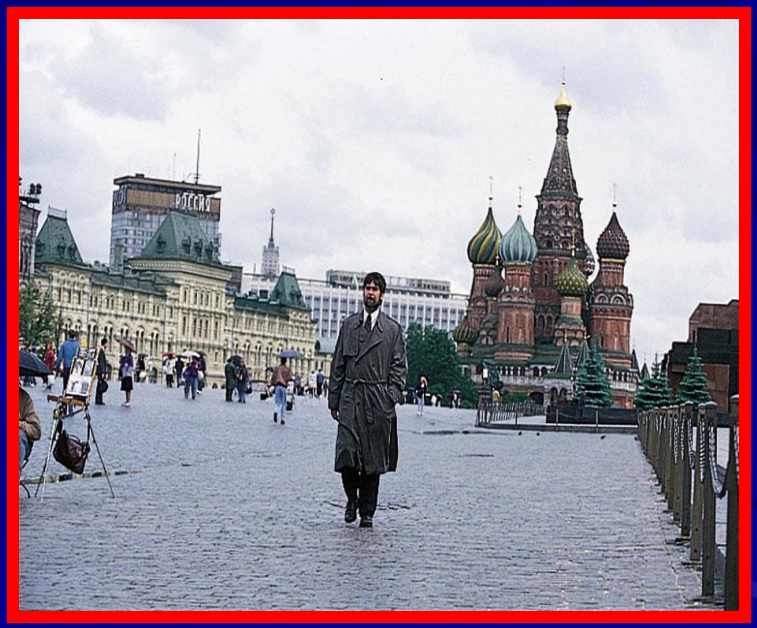
www.usaid/scitech/

U.S. Department of State, USAID

Who We Are

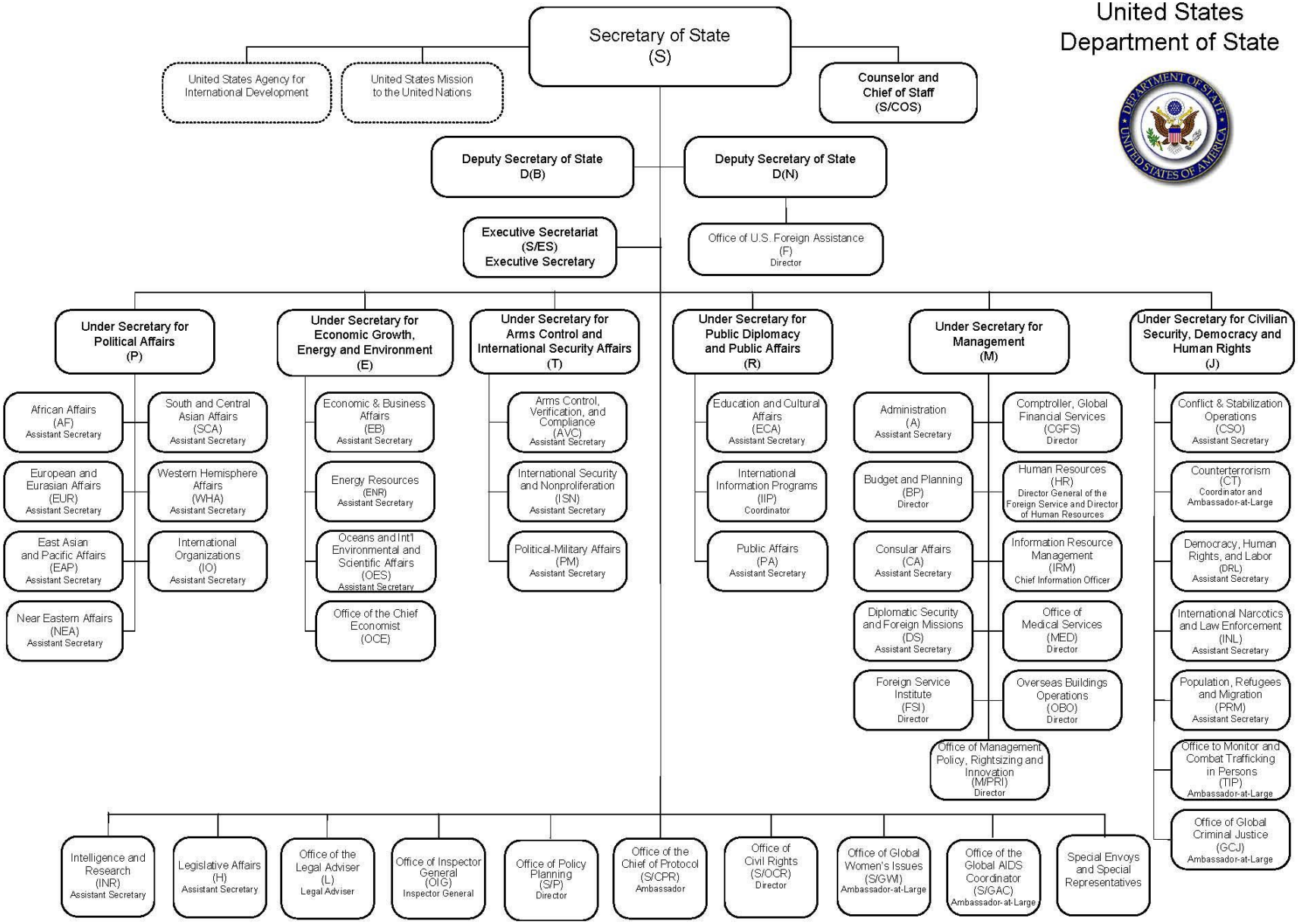
One of Four Original Executive Branch Departments
Secretary of State Third in Succession to President
First Archive for State Documents

- **Declaration of Independence**
- **Constitution**



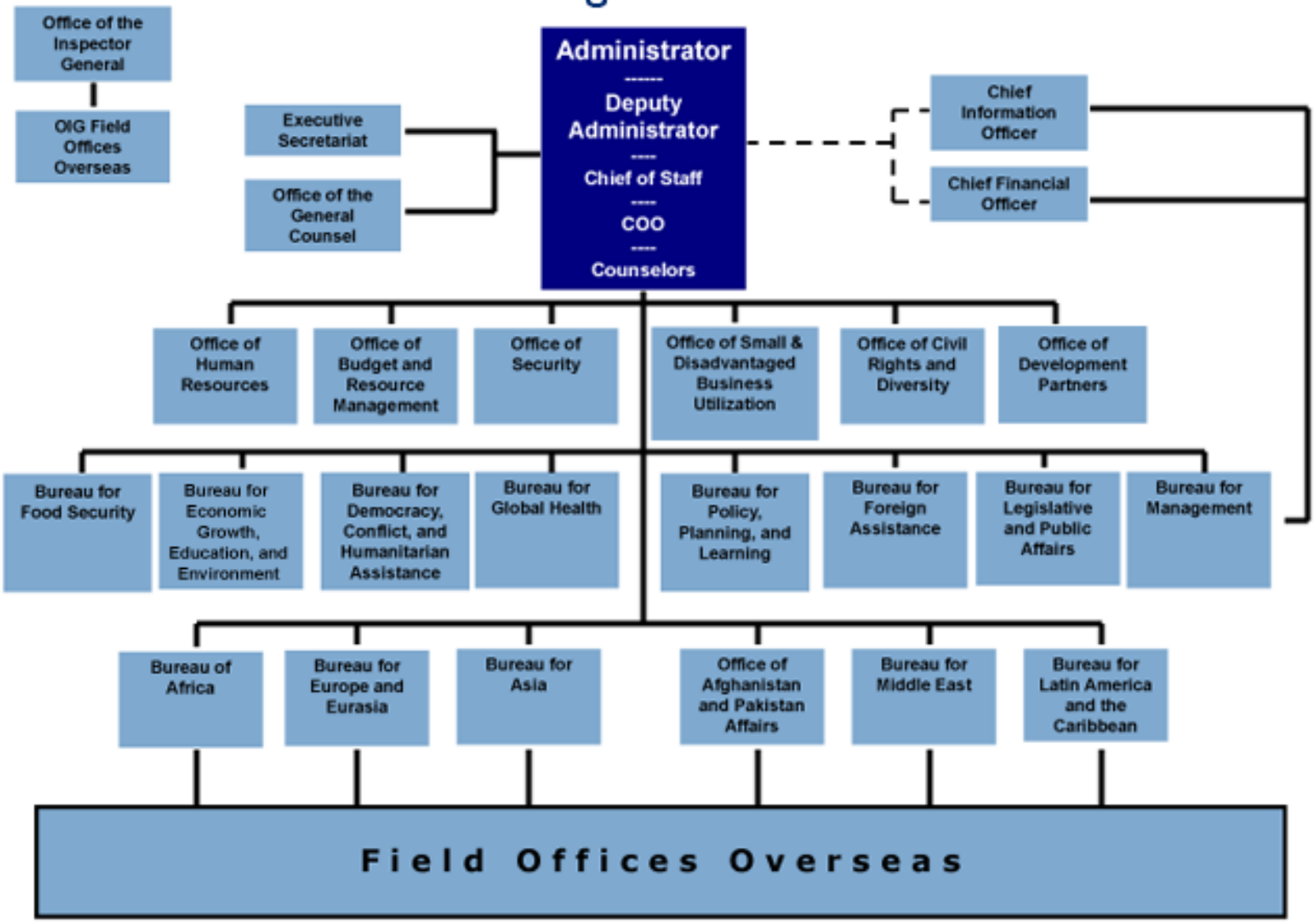
FY13 Budget $50.01 Billion - State, USAID
FY14 - $47.3 B; FY15 - $46.2 B; FY16 - $50.3 B
State ~ 61,000 employees
12,500 Foreign Service
- 7,000 Generalists
- 5,500 Specialists
8,500 Civil Service
40,000 Foreign Service Nationals
HQ, 163 Embassies, 98 Consulates
USAID – 6,000 employees (2,500 in Washington), 90 Missions

United States Department of State



Approved May 2012

USAID Organization Chart



As of 04/29/2011