

Unleashing American Innovation

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Under Secretary of Commerce for Standards and Technology &
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Public Sector R&D: Creating Seed Corn

- The **Federal government invests over \$150 billion per year in R&D:**
 - **~1/3** at 300+ Federal laboratories
 - **~2/3** at universities, R&D institutes, industry
- For economic vitality, competitiveness and national security, the results of this investment must be put to **increasingly productive use** through:
 - **applied research and services to the public**
 - **maturation and transfer to companies to create new products and services**



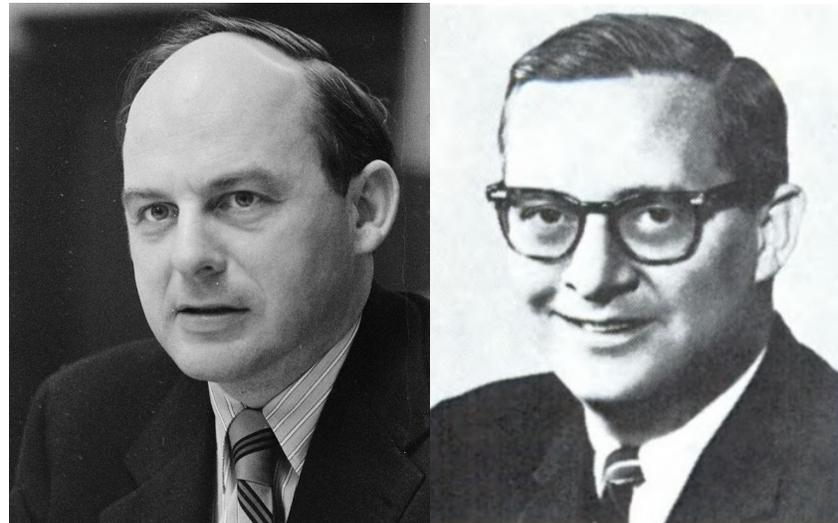
20th Century Landmark Legislation

Senator Birch Bayh



Senator Bob Dole

Senator Adlai Stevenson III



Representative John Wydler

Technology Convergence: Accelerating Innovation **NIST**



Invention and Innovation

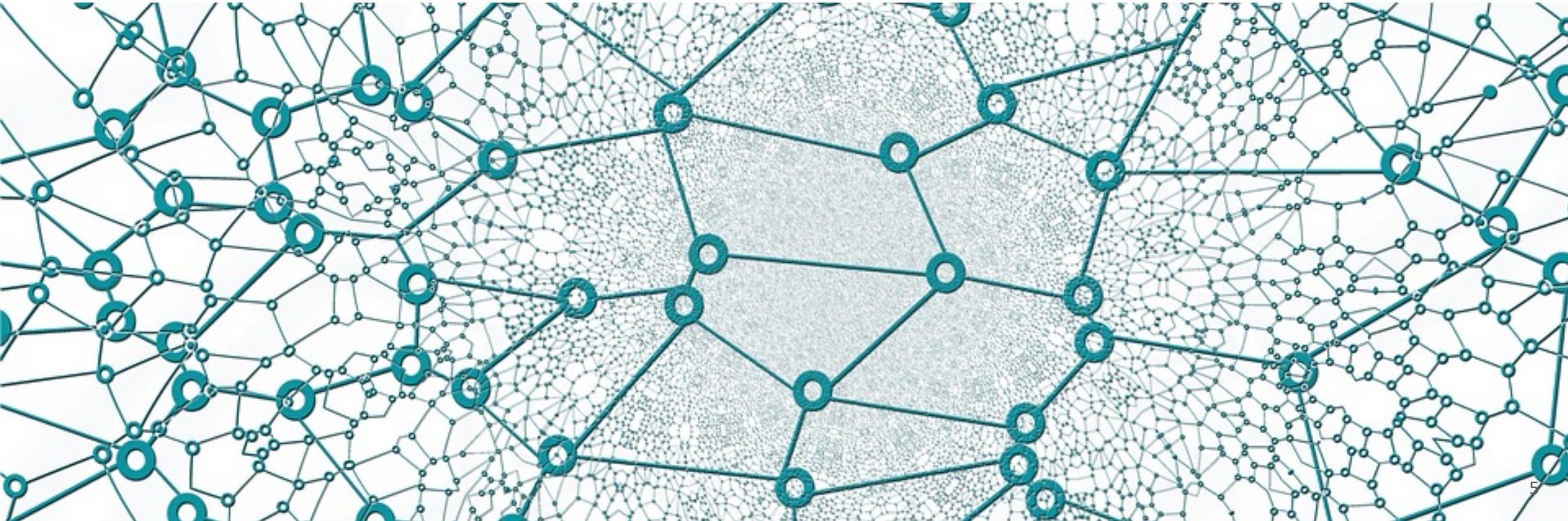
Humans + Computation + Data +
Machines + Sensing + Networks +
AI / ML + Supply Chains + ...

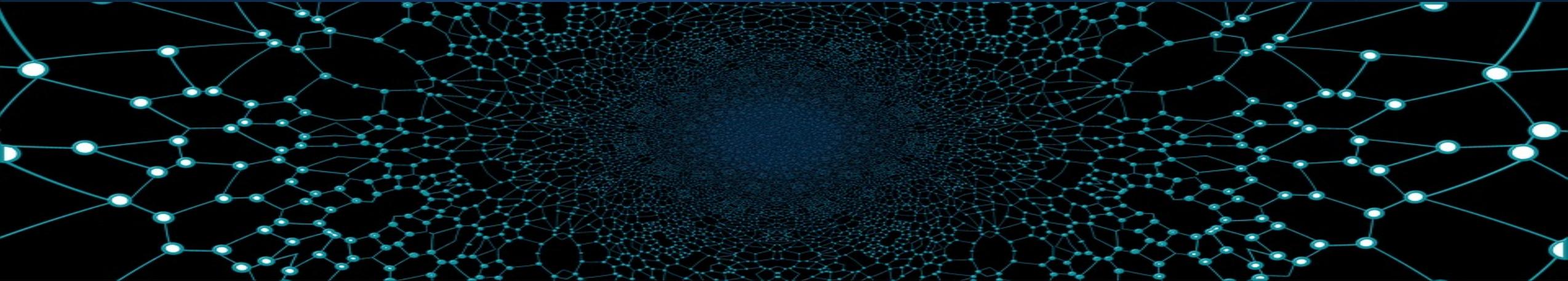
- Advanced Communications
- Smart Manufacturing
- IoT → IoEverything
- Autonomous Vehicles / Transport
- Quantum
- Materials Genome
- Biosciences
- Measurement Dissemination
- Smart Homes
- Personalized & Remote Medicine
- Modern Agriculture
- ...

21st Century Innovation Ecosystems

We've come a long way since 1980....

Federal Government, Universities, Federal Labs, Research Organizations, Entrepreneurs
remain at the heart of innovation ecosystems





Technology transfer - *processes by which knowledge, facilities and capabilities developed under Federal research and development (R&D) funding are used to fulfill public and private need*

Enable evolving paradigms and models of U.S. innovation and Lab-to-Market system

President's Management Agenda

To advance the *President's Management Agenda*, the U.S. seeks to enable even greater return on the Federal government's investment in R&D through the *Lab-to-Market CAP Goal*



Federal R&D Investment
\$150B/year

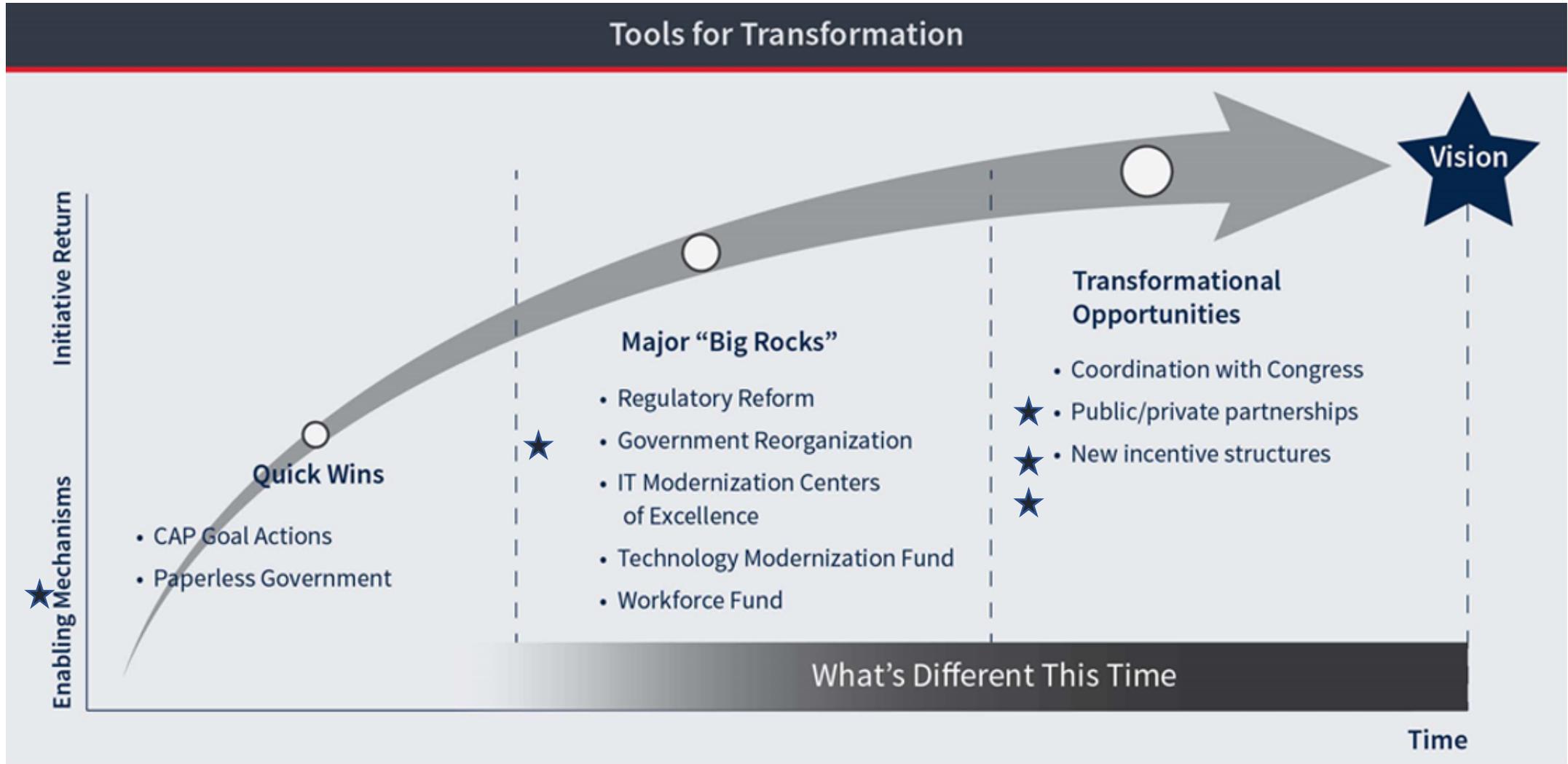


Technology Transfer
System



New IP, licensing, products, processes, services and companies return value via economic growth and enhanced national security

Modernizing Government for 21st Century



Return on Investment Initiative



VISION: Unleash the innovation power of America into our economy

GOAL: Maximize the transfer of federal investments in science and technology into value for America

meet current and future economic and national security needs in a rapidly shifting technology marketplace and enhance U.S. competitiveness globally

attract greater private sector investment to create innovative products, processes, services, as well as new businesses and industries

(L to R): Michael Kratsios (WH/OSTP), Walter Copan (U/S NIST), Wilbur Ross (Commerce Secretary), Margaret Weichert (Deputy Director OMB), and Andrei Iancu (U/S USPTO)

Coordination & Implementation



PMA Cross Agency Priority Goal: Improve Transfer of Federally-Funded Technologies from Lab-to-Market

CAP Goal Leads



Walter Copan

Under Secretary of Commerce for Standards and Technology
Director, National Institute of Standards and Technology



Michael Kratsios

Deputy Assistant to the President for Technology Policy
White House Office of Science and Technology Policy

Participating Agencies



Interagency Contributors

National Science and Technology Council Lab-to-Market Subcommittee

Interagency Working Group for Technology Transfer

Interagency Working Group for Bayh-Dole

Small Business Innovation Research (SBIR) Program Managers Working Group

Interagency I-Corps Community of Practice

Federal Laboratory Consortium for Technology Transfer

Lab-to-Market CAP Goal Strategies



Identify regulatory impediments and administrative improvements in Federal technology transfer policies and practices



Increase engagement with private sector technology development experts and investors



Build a more entrepreneurial R&D workforce



Support innovative tools and services for technology transfer



Improve understanding of global science and technology trends and benchmarks.

ROI: A National Conversation About the Enduring Importance of Technology Transfer and Innovation

Measuring and Reporting on Impacts that Benefit American Taxpayers

Telling stories of impacts that are:

- **Global**
- **National**
- **Regional**

Measuring Meaningful Outcomes

- High value jobs
- U.S. competitiveness
- Economic vitality ↔ National security
- Entrepreneurship and business creation
- New and/or improved products and services
- Advanced manufacturing and U.S. trade balance
- Workforce development
- Private sector investment
- Industry collaboration / sponsored R&D
- Community engagement
- Quality of life



INVENTIONS

LEADERSHIP



TOOLS

CULTURE



PEOPLE

ENABLING POLICY

INNOVATION ECOSYSTEMS

ROI Final Green Paper



RETURN ON
INVESTMENT
INITIATIVE

TO ADVANCE
THE PRESIDENT'S
MANAGEMENT
AGENDA

FINAL GREEN PAPER
APRIL 2019



UNLEASHING
AMERICAN
INNOVATION

NIST Special Publication 1234



Green Paper

- Published as **NIST Special Publication 1234** **TODAY** - April 24, 2019
- Closely coordinated with interagency working groups
- 15 key findings to inform actions that will help remove unwarranted impediments to innovation at the public private sector interface, and streamline and accelerate technology transfer

Next Steps:

1. Draft Legislative and Regulatory Reform Packages will be developed and submitted for interagency review and clearance.
2. Share stakeholder inputs outside NIST purview with relevant agencies for action.
3. Develop interagency Lab-to-Market action and deployment plan.
4. Conduct further analysis on issues where more input is necessary.

Thank you!



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