

# PCAST Semiconductor Working Group: Strengthening the U.S. Semiconductor Industry to Bolster the U.S. Economy

## **Context:**

- Semiconductor innovation has important implications for the U.S. economy and for national security
- The semiconductor industry creates foundational technologies that enable innovation in virtually every sector of the U.S. economy
- The semiconductor industry directly employs 250,000 workers, is the third largest source of U.S. manufactured exports, and has the highest level of investment in R&D as a percentage of sales of any major industry

## **Motivation:**

- The industry is approaching technological and economic inflection points – such as the slowing of “Moore’s Law”, exponentially growing cost of designing and fabricating high-performance chips
  - Some countries that are important in this domain are subsidizing their domestic semiconductor industry or implicitly requiring transfer of technology and intellectual property in exchange for market access, which can slow the pace of semiconductor innovation
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## Goals of Study:

- Sharpen understanding of core challenges facing the semiconductor industry and implications for the U.S. economy and national security
- Identify actions the Federal government, industry, and academia could pursue to address challenges and strengthen semiconductor innovation

## Membership

Co-Chairs: John Holdren, Paul Otellini (Former President and CEO, Intel)

### Members:

1. Richard Beyer (Former Chairman and CEO, Freescale Semiconductor)
2. Wes Bush (Chairman, CEO, and President, Northrop Grumman)
3. Diana Farrell (President and CEO, JP Morgan Chase Institute)
4. John Hennessy (President Emeritus, Stanford University)
5. Paul Jacobs (Executive Chairman, Qualcomm)
6. Ajit Manocha (Former CEO, GlobalFoundries)
7. Jami Miscik (Co-CEO and Vice Chairman, Kissinger Associates)
8. Craig Mundie (President, Mundie and Associates; Former Senior Advisor, Microsoft)
9. Mike Splinter (Former CEO and Chairman, Applied Materials)
10. Laura Tyson (Distinguished Professor of the Graduate School, UC Berkeley; Former CEA Chair and NEC Director)