

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

GUIRR UPDATE

Meeting of the Federal Demonstration Partnership (FDP)

Susan Sloan
Director, GUIRR
September 22, 2016



Government | University | Industry

RESEARCH ROUNDTABLE

Policy and Global Affairs Division

Government-University-Industry Research Roundtable

- Convening body of the National Academies of Sciences, Engineering, and Medicine (and 'secretariat' for the FDP)
- Created in 1984 "to convene senior-most representatives from government, university, and industry to define and explore critical issues related to the national and global science and technology agenda"
- Roundtable convenes 3 times yearly in Washington, DC
- Meetings designed around topics that are often newly emerging at the leadership level in one sector but impact/involve/affect other sectors

GOVERNMENT-UNIVERSITY-INDUSTRY RESEARCH ROUNDTABLE

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Executive Committee

- **Laurie Leshin**, President, Worcester Polytechnic Institute; former Deputy Associate Administrator for NASA's Exploration Systems Mission Directorate and former Deputy Director for S&T at NASA's Goddard Space Flight Center **[UNIVERSITY CO-CHAIR]**
- **Gordon England**, Chairman, V1 Analytical Solutions, Inc.; former U.S. Deputy Secretary of Defense and (twice) Secretary of the Navy **[INDUSTRY CO-CHAIR]**
- **C. D. (Dan) Mote, Jr.**, President, National Academy of Engineering
- **France Córdoba**, Director, National Science Foundation (NSF)
- **Catherine Woteki**, Under Secretary for Research, Education, and Economics and Chief Scientist, U.S. Department of Agriculture (USDA)
- **Christopher Austin**, Director, National Center for Advancing Translational Sciences (NCATS) at the National Institutes of Health (NIH)
- **Erik Antonsson**, Corporate Director of Technology, Northrop Grumman
- **Stephen Cross**, Executive Vice President for Research, Georgia Institute of Technology
- **Susan Sloan**, Director, GUIRR

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February 2016 Meeting

Critical Infrastructure Security: The Role of Public-Private Partnerships

This meeting explored:

- (1) The state of critical infrastructure security in the United States and identified R&D priorities
- (2) Methods of modeling and assessing vulnerabilities in critical infrastructure security to prevent breaches or minimize cascading effects
- (3) How communication across sectors and public-private partnerships can enhance critical infrastructure security, and
- (4) How pending legislation impacts physical and cyber infrastructure security

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June 2016 Meeting

Building Smart Communities for the Future

This meeting explored:

- (1) The common characteristics of smart communities;
- (2) The role of connectedness and sustainability in developing smart communities;
- (3) The partnerships between governments, universities, and industry that are integral to advancing smart community development;
- (4) Challenges, opportunities, and policy implications associated with the roll-out of intelligent systems

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Coming Up!



The Fourth Industrial Revolution

OCTOBER 25-26, 2016 | National Academy of Sciences Building, Washington, DC 20418

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With this next meeting we will consider:

- (1) The suite of emerging technologies with applications for manufacturing and production;
 - a. **Advanced Analytics:** How IoT tools are being adopted across the manufacturing sector
 - b. **Digital-Physical Systems:** How digital modeling tools are changing manufacturing processes
 - c. **Human-Technology Frontier:** The future of virtualization and robotics in the manufacturing space
- (2) The economic and social implications of a Fourth Industrial Revolution
- (3) Ways in which the U.S. government, universities, and industry may collaborate to ensure that the country has a national advantage within the context of such a transformation

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1st revolution

Water/Steam



2nd revolution

Electricity



3rd revolution

Automation



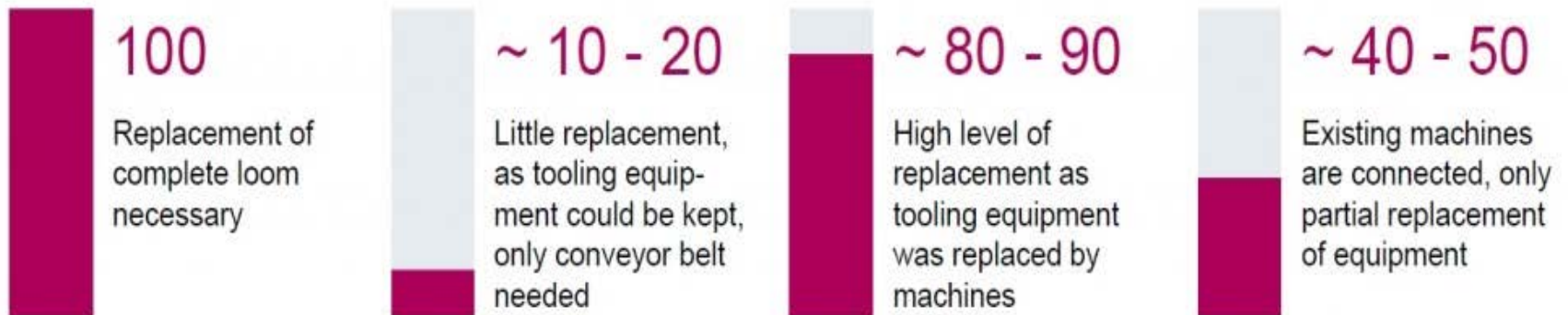
4th revolution

Cyberphysical systems



Replacement of equipment

Percent of installed base



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Upcoming Webinar

FREE * ONLINE REGISTRATION REQUIRED * 1 pm ET/10 am PT

September 27, 2016

Promising Practices for Strengthening the Regional STEM Workforce Development Ecosystem

Richard Celeste, President Emeritus of Colorado College and Former Governor of the State of Ohio, and **Susan Lavrakas**, Consultant on Workforce at the Aerospace Industries Association, will discuss the findings and recommendations of a new Academies report

Webinar Moderator: Megan Nicholson, GUIRR Associate Program Officer

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International Research Collaborations

- Planning an international workshop for Fall 2017
- FOCUS: The role of data and ethics in the context of international research agreements
- Will address such topics as how local and regional attitudes, cultures, and legal systems view data, data ownership, use and control of data as well as issues of privacy and confidentiality

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In Memoriam

Laurena Mostella-Bey



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Questions?

Thank you. Enjoy the meeting!

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