

2015 ANNUAL REPORT

Government-University-Industry Research Roundtable

Mission

The Government-University-Industry Research Roundtable (GUIRR) was created in 1984 in response to the report of the National Commission on Research which called for an institutionalized forum to enhance communication among the top leaders of government and non-government research organizations. Its mission is to convene senior-most representatives from government, universities, and industry to define and explore critical issues related to the national and global science and technology agenda that are of shared interest; to frame the next critical questions stemming from current debate and analysis; and to incubate activities of on-going value to the stakeholders. This forum facilitates candid dialogue among participants to foster self-implementing activities, and, where appropriate, to carry awareness of consequences to the wider public. [<http://www.nas.edu/guirr>]

Members

GUIRR has three formal categories of membership. The GUIRR Council is composed of the three presidents of the National Academies of Sciences, Engineering, and Medicine, the heads of major federal R&D agencies (for non-R&D agencies, the head of the largest R&D-performing subdivision), and a small selection of university presidents and industry CEOs as appointed by the president of the National Academy of Sciences. Council Associates are designated by individual federal agency heads as their alternative representatives to GUIRR. University-Industry Partners are the dues-paying institutional members. In GUIRR operations, the university-industry partners act as "antennae" to bring into GUIRR discussions the most current ideas and issues facing government-university-industry research cooperation across the country, and help disseminate ideas. Eighteen (18) pairs of University-Industry Partners participated in GUIRR in 2015. An additional five (5) universities were involved while working to identify their industry partners.

Meetings

GUIRR convenes three general meetings per year, providing opportunity for the entire membership to assemble for the purpose of discussion and debate on issues of national and global concern that require greater sustained cross-sector (government-university-industry) cooperation and collaboration. The topics vary and are proposed and selected by the membership *writ large*. Meetings held in 2015 include:

- February 9-10, 2015 – Cross-Sector Impact of the Smart Grid**

The economic and technological environments surrounding the power supply business have resulted in the emergence of new players in the power market and a demand for new technologies. New power technologies need to accommodate countless sources of power generation and allow for interoperability between these sources. This meeting explored (i) the applicability of the Internet of Things (IoT) to the energy sector, (ii) the process used to catalyze the development of cyber security and privacy standards, (iii) partnerships and the role that state governments play, and (iv) the efforts to train and advance the engineering and IT workforce to support shifts in technology. With these four areas in mind, GUIRR sought to identify the successes and challenges that the energy sector has encountered and consider the application to other areas.

- **June 23-24, 2015 – Unmanned Aircraft Systems: Use & Regulation**

The use and regulation of civil unmanned aircraft systems (UAS), commonly known as “drones”, has become a topic of conversation, fueled, in part, by several sensationalized landings in the nation’s capital and elsewhere. Is our current airspace management system prepared for UAS and other autonomous aircraft? This workshop explored (1) the potential applications for recent technological advances in UAS, (2) the existing and evolving regulations to promote safety without inhibiting innovation or economic advancement, and (3) the privacy and security concerns that are unique to UAS.

- **October 20-21, 2015 – The Disruption Myth and Gaps in the Innovation Ecosystem**

The term “disruption” is used broadly to characterize the pattern of technological innovation that unsettles industries and displaces earlier technologies to create new markets and value networks. With this meeting GUIRR members considered (1) what disruptive innovation and disruptive innovators look like today, (2) how patterns of disruption and business dynamism are changing in a modern world, (3) how the study of disruption can affect the structure of innovation ecosystems, and (4) how disruption can inform national science and technology policy in the present and the future.

- **October 20, 2015 – Angel Investing: Helping Innovators Bridge the Valley of Death**
Pre-Meeting Workshop organized with the Angel Capital Association (ACA)

All GUIRR meetings are held in Washington, DC to accommodate federal participants. A written summary is prepared following each meeting and posted on the GUIRR website. The agenda with hotlinks to guest presentations (shared with permission) and the participants’ lists are also posted and may be viewed online.

Projects

International Research Collaborations – This working group, known as the “I-Group”, released a published (NAP) workshop summary report in September 2014 entitled *Culture Matters: International Research Collaboration in a Changing World*. The report is the output from a 2.5 day workshop held in late July 2013 that examined the importance of *culture* and *cultural perception* when engaging in international research collaboration. Dissemination of the report is ongoing.

On **January 28, 2015**, GUIRR joined another unit in the Academies’ Policy and Global Affairs (PGA) division in hosting a public presentation of two distinct yet related workshop summary reports issued by NAS – GUIRR’s *Culture Matters* report and another by the Board on International Scientific Organizations (BISO) and U.S. National Committee for Psychological Science entitled *Building Infrastructure for International Collaborative Research in the Social and Behavioral Sciences*. The summaries of these two workshops were presented in tandem. Both relate to the critical topic of how those who undertake collaborative research that crosses national borders confront issues that go beyond those raised in narrower collaborations.

The working group is currently crafting an agenda for a future workshop on ethics, notably the ethics of research and research agreements, the ethics of business practices, and ethics across research disciplines. Discussions are in the early stage but the group is energized and hopes to host an event in late 2016/early 2017.

Webinars – GUIRR continued with its near-monthly webinar series (established in August 2012) on topics of interest and crossover appeal to the membership. Attendance averages 100 “seats” per event. Webinars are free and typically one hour in duration. Recordings and presentations are archived on the GUIRR website. Webinars held during the year 2015 include:

- January 21, 2015 – *Fostering Collaboration Among our Nation's Federal Labs, Industry, and Research Oriented Universities*
- March 6, 2015 – *The Postdoctoral Experience Revisited*
- March 24, 2015 – *DOE's Better Buildings Challenge*
- April 27, 2015 – *America's Knowledge Economy: A State by State Review*
- June 5, 2015 – *The Future of Mineral Resources and the Products That Require Their Capabilities*
- July 17, 2015 – *NIH CounterACT U54 Research Centers of Excellence*
- August 19, 2015 – *Approaches to Climate Intervention*
- September 15, 2015 – *Tech-to-Market Best Practices at ARPA-E*
- October 22, 2015 – *DARPA's Tactical Technology Office*
- November 18, 2015 – *Women in STEM Education and Careers*
- December 9, 2015 – *What Economics and Policy Can Learn from Engineering Design*

Click [here](#) for a further list of past GUIRR webinars.

Leadership Dinners – GUIRR hosts occasional Leadership Dinners designed to engage individuals serving on its Council. The purpose is to create opportunities for GUIRR's leaders can explore challenging issues, establish a sense of camaraderie, and seek common ground where needed. In 2015, a leadership dinner event was held on September 22 and featured Dr. Ellen Williams, Director of the Department of Energy's Advanced Projects Research Agency-Energy (ARPA-E).

Federal Demonstration Partnership (FDP) – The FDP, now in Phase VI, is a unique forum involving individuals from 154 universities and nonprofits that works collaboratively with officials from 10 federal agencies to improve the national research enterprise and reduce administrative burden. GUIRR provides management and staff support for FDP through an agreement with a consortium of federal agencies. The Partnership is an autonomous activity. The FDP hosts three general meetings per year in Washington, DC, engaging over 400 people at each meeting. All past meeting agendas as well as descriptions of its myriad projects and demonstrations may be viewed on the FDP website at <http://www.thefdp.org>. David Wright is FDP's Executive Director.

University-Industry Demonstration Partnership (UIDP) – UIDP was created in December 2006 as a project convened under GUIRR and organized for the purposes of advancing collaborations between the academic and corporate sectors. The overarching philosophy of the Partnership is that, by including the entire breadth of interests relevant to university-industry research partnering, one can arrive at a set of solutions and innovations that are robust enough to be widely adoptable by diverse partnerships on a national scale. The UIDP has designed templates and crafted collaborative experiments on new approaches to sponsored research and licensing arrangements, among many other projects, with the strategic goal of a healthy, long-term university-industry relationship. The intent with UIDP is to remove barriers and catalyze university-industry collaboration.

Effective **July 1, 2015**, the UIDP became its own independent nonprofit 501(c)(3) organization. The UIDP (with over 125 member organizations) had matured beyond its period of incubation within GUIRR and the National Academies of Sciences, Engineering, and Medicine and thus was spun out. GUIRR is exceedingly proud of this success! Dr. Anthony Boccanfuso continues as Executive Director of the new independent organization.

GUIRR and UIDP have signed a Memorandum of Understanding (MOU) that is intended to facilitate the creation and exchange of information and the reinforcement of efforts of mutual interest where and when deemed appropriate by the two parties. The first planned collaborative activity is a national workshop on workforce preparation and development of the “T-shaped professional” (T-Summit 2016 – March 21-22, 2016, co-sponsored by IBM, Michigan State University, Elsevier, Purdue, and others). For additional information about the UIDP please visit <http://www.uidp.org>.

Members of GUIRR Council

- Gordon England, Industry Co-Chair – Chairman, V1 Analytical Solutions, Inc. [NAE]
- Jacques Gansler, University Co-Chair [NAE], Professor and Roger C. Lipitz Chair in Public Policy and Private Enterprise, School of Public Policy, University of Maryland
- Tilak Agerwala, Emeritus, IBM Thomas J Watson Research Center
- Susan Butts, Senior Director of External Science and Technology Programs, Dow Chemical Company, retired
- Curtis Carlson, Founder and CEO, The Practice of Innovation
- Ralph J. Cicerone [NAS], President, National Academy of Sciences (*ex officio*)
- Francis S. Collins [NAS/IOM], Director, National Institutes of Health (*ex officio*)
- France Córdova, Director, National Science Foundation (*ex officio*)
- Mikael Dolsten, President, Worldwide Research and Development, Pfizer
- Victor Dzau [IOM], President, Institute of Medicine (*ex officio*)
- John Holdren [NAS/NAE], Director, White House Office of Science and Technology Policy (*ex officio*)
- Keith Holtermann, Director, Research and Development Partnerships, S&T Directorate, U.S. Department of Homeland Security (*ex officio*)
- Wayne Johnson, Director of Innovation Partnerships, Mass Insight Global Partnerships
- Linda Katehi [NAE], Chancellor, University of California at Davis
- Ralph Kuncl, President, University of Redlands
- Gina McCarthy, Administrator, Environmental Protection Agency (*ex officio*)
- C.D. (Dan) Mote, Jr. [NAE], President, National Academy of Engineering (*ex officio*)
- Franklin Orr, Jr. [NAE] Under Secretary for Science, U.S. Department of Energy (*ex officio*)
- Stephen Ostroff, Chief Scientist, U.S. Food and Drug Administration (*ex officio*)
- Steven M. Paul [IOM], Director, Appel Alzheimer Research Institute, Weill Cornell Medical College
- Timothy Persons, Chief Scientist, U.S. Government Accountability Office (*ex officio*)
- Luis M. Proenza, President, University of Akron
- David B. Spencer, Founder, Chairman and Chief Technology Officer, wTe Corporation
- Richard Spinrad, Chief Scientist, National Oceanic and Atmospheric Administration (*ex officio*)
- Ellen Stofan, Chief Scientist, National Aeronautics and Space Administration (*ex officio*)
- Catherine Woteki [IOM], Under Secretary for Research, Education, and Economics and Chief Scientist, United States Department of Agriculture (*ex officio*)

University-Industry Partners

University of Michigan	Agilent Technologies Inc.
Georgia Institute of Technology	The Boeing Company
University of Southern California	Chevron Energy Technology Company
Temple University	Comcast NBCUniversal
Auburn University	Dynetics
Purdue University	Elsevier
The University of Florida	Harris Corporation
University of California, Berkeley	Intel Corporation
University of Maryland	Lockheed Martin Corporation
University of California, Davis	Mars, Inc.
George Washington University	Noblis
California Institute of Technology	Northrop Grumman Aerospace Systems
Massachusetts Institute of Technology	Northrop Grumman Electronic Systems
University of Tennessee, Knoxville	Oak Ridge National Laboratory
Washington State University	Pacific Northwest National Laboratory
Northeastern University	Siemens
University of Massachusetts	Raytheon Integrated Defense Systems
University of Texas at Austin	Semiconductor Research Corporation (SRC)
The Ohio State University	<i>[Battelle – awaiting designation of new representative]</i>
Iowa State University	
Drexel University	
Texas A&M University	
West Virginia University	

Staff and Consultants

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