



Government | University | Industry
RESEARCH ROUNDTABLE

2012 ANNUAL REPORT
GOVERNMENT-UNIVERSITY-INDUSTRY RESEARCH ROUNDTABLE
(GUIRR)

NATIONAL ACADEMY OF SCIENCES
NATIONAL ACADEMY OF ENGINEERING
INSTITUTE OF MEDICINE
500 FIFTH STREET, N.W., WASHINGTON, DC 20001

2012 ANNUAL REPORT OF THE GOVERNMENT-UNIVERSITY-INDUSTRY RESEARCH ROUNDTABLE (GUIRR)

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 formal mission, revised in 1995, 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 question stemming from current debate and analysis; and to incubate activities of on-going value to the stakeholders. This forum will be designed to facilitate candid dialogue among participants, to foster self-implementing activities, and, where appropriate, to carry awareness of consequences to the wider public.” [\[www.nas.edu/guirr\]](http://www.nas.edu/guirr)

GUIRR Member Meetings

Council Members, Council Associates, and University-Industry Partners (21 pairs; 42 organizations) met three times in 2012 for timely discussion on technology research advancements and associated challenges that cut across all three sectors – government, universities, and industry – and that can benefit from greater cross-sector collaboration. Meeting topics are proposed by the membership and reviewed/selected by the Executive Committee. Meeting attendance is of members and invited guests. The number of attendees at each meeting has steadily grown, with 80-100 participants now expected.

In 2012, a fourth membership category was established: GUIRR Distinguished Fellows. Members of this category are individuals who are former Council members and have either (1) served the maximum allowable two consecutive three-year terms or (2) no longer qualify as federal *ex officio* members because their federal appointment was during a previous Administration, and yet these individuals wish to remain engaged in Roundtable activity. GUIRR’s Executive Committee approves nominations of individuals for this special member category. Two people became Distinguished Fellows in 2012.

On February 28-29, 2012, GUIRR convened its first members’ meeting of the year and considered “Challenges and Opportunities of an Aging Population.” With this particular meeting, we asked: How does a society with a relatively smaller base of workers provide humanely for the pension and healthcare needs of an expanding elderly population? The meeting focused on the implications of a growing elderly population, the issues created by the situation, as well as potential opportunities to turn it into a competitive advantage. Speakers covered topics such as redefining aging, new technologies that could allow the elderly to live healthier lives, and ways to keep the elderly active mentally and physically in order to prevent cognitive diseases like dementia. Although a growing elderly population means more people who need to be taken care of financially, this can be mitigated somewhat if the retirement age is raised and the elderly can remain relatively productive.

The title of the June 19-20, 2012 meeting was “Decision Making Under Risk and Uncertainty.” This meeting focused on how to make decisions that have unclear outcomes, particularly when considering high-risk, low-probability occurrences. Leaders from government, university, and industry shared their own experiences in dealing with risk and discussed methods for decision making in these situations. Topics discussed included the uncertainties inherent in responding to

budget cuts, determining which technologies to invest in, the psychology of decision making, how to prepare for national emergencies and natural disasters, and how to deal with the uncertain future of our economy. It was concluded that taking some risks is necessary, but it is possible to reduce risk by varying investments, insuring for potential catastrophes, and using past outcomes as a guide.

The topic of the October 9-10, 2012 meeting was “Reimagining the University.” At this meeting, it was recognized that colleges today face various financial challenges, such as reduced state funding, reduced endowment performance, and increasing demand for student services; however, new opportunities are emerging as well, such as the proliferation of online courses and potential university-industry partnerships. The speakers discussed various other topics, including the rising burden of student debt, how finances increasingly impact one’s choice of school, declining completion rates, increasing access to online courses, and declining faculty numbers. The challenges confronting colleges are many, but online courses and other ways of reimagining the educational experience could reduce costs and make higher education accessible for many more people.

GUIRR Support

In 2012, GUIRR activity (program and administration) was supported by federal grant awards from NIH, DOD, NIST, and USDA, totaling roughly \$282,000. University-Industry Partner dues accounted for an additional \$600,000 in core funding. [NOTE: Additional public/private funds were secured to support two distinct, semi-autonomous programs under GUIRR’s purview, namely the Federal Demonstration Partnership (FDP) and the University-Industry Demonstration Partnership (UIDP).]

Projects

International Research Collaborations. In July 2010, this GUIRR working group, known as the “I-Group”, organized and hosted a two-day workshop entitled “Examining Core Elements of International Research Collaboration.” In 2012, planning began for a follow-on workshop to be held in the summer of 2013 and focused on the importance of *culture* when engaging in international research collaboration.

Webinars. In 2011 GUIRR elected to host webinars on an occasional basis as a means of bringing information of expected value to GUIRR stakeholders in a more immediate and freely accessible manner. One webinar was held in 2011 and based on the positive response, a monthly webinar series was launched in August 2012. Audience sizes range from 50 to 250 attendees. The webinars are recorded and available through the [GUIRR website](#). The topics of webinars held in 2012 are as follows:

- The NSF Industry/University Cooperative Research Centers (I/UCRC) Program: Building Innovation Capacity through Partnerships, December 2012
- Making America’s Research Universities Flourish: Reviewing the Findings of the National Research Council’s “Prosperity Report”, November 2012
- NSF Innovation Corps (I-Corps): Using Entrepreneurship to Promote Technology Commercialization, October 2012
- Research Arms Race: *The Current Health and Future Well-being of the American Research University*, September 2012
- Challenge.gov: A Tool for the Government and the Public to Innovate Together, August 2012

Advanced Manufacturing – The National Institute for Standards and Technology’s Advanced Manufacturing National Program Office invited GUIRR to host and co-organize **Designing for Impact III: Workshop on Building the National Network for Manufacturing Innovation**. Other coordinating organizations included the UIDP, National Academy of Engineering, NASA’s JPL and UC Irvine. The event was held at the National Academies Beckman Center in Irvine, CA on September 27, 2012. See http://manufacturing.gov/event_092712.html.

University-Industry Demonstration Partnership (UIDP) – The UIDP is a semi-autonomous activity that falls under GUIRR’s administrative oversight and programmatic umbrella. UIDP members devote their energies and resources to the identification and implementation of projects that will advance university-industry research collaborations in the United States and ultimately promote U.S. competitiveness. Two general meetings are held each year. In 2012, the meetings were held in New Brunswick, NJ in April (Rutgers, host) and in Lexington, KY (Lexmark, host) in October.

The Partnership has pursued a number of dedicated projects, including:

- **Advisor Corps:** UIDP member representatives possess a wealth of knowledge across the broad spectrum of research and commercialization fields. This project is exploring methods for providing UIDP members increased opportunities to tap into this valuable resource in specific areas of interest to these parties.
- **Business Advising:** This project focuses on how universities can effectively provide business advising services to companies both inside and outside the university ecosystem. The project also provides companies with insights and strategies on how to tap into these services and guide the work to provide a high return on their investment.
- **Case Studies:** To raise awareness of university-industry collaborations and share lessons learned to inspire new high value, high return partnerships, the UIDP is soliciting its members for “case studies” describing engagements that provided benefits and insights to the U-I partners and other parties involved. Seven case studies were completed in 2012 and posted on the UIDP website.
- **Conflicts of Interest – Principled Partnerships:** This working group aims to outline best practices for public disclosure to align how universities and industry talk about the nature and value of principled partnerships.
- **Contract Accords:** This project tackles significant issues affecting university-industry sponsored research agreements. The first five contract accords were published in 2009, with five additional contract accords released in 2012 (combined into a single booklet). Webinars on all ten contract accords were offered as a “University-Industry Contracting ‘How-To’ Series” from June to November 2012.
- **Federal Flowdown Clauses:** This project aims to raise the level of awareness of U.S. Government contract clauses that are problematic for universities.
- **Ideas to Innovation (I2I) Workshops:** These workshops provide a unique forum for representatives from diverse arenas to come together and discuss ways to advance the idea to innovation process in emerging technology areas. In addition, these workshops serve as a testbed to demonstrate how best practices and lessons identified by the UIDP can be tested and evaluated. Planning for a first I2I began in 2012. UIDP member MedStar Health will co-host the workshop focusing on the emerging field of resilience engineering.
- **Negotiation Agreement Workshops:** One of the best ways to enhance collaborations is to reduce the time needed to reach sponsored research agreements between parties. These workshops use the learnings from the contract accords and real life agreements to add

significant understanding to the important issues affecting agreements. Workshops on software and advanced manufacturing were held on October 16-17, 2012,

- **Partnership Continuum:** This 28-page publication came out in 2012 and explores the multiple pathways for companies and universities to partner and provides information on the benefits and investments needed to make these relationships "stick".
- **Partnership Webinar Series:** The UIDP hosts a webinar series to highlight programs and initiatives that support or impact university-industry collaborations and promote US competitiveness. Eleven webinars were held in this series.
- **Researcher Collaborative Visits:** This working group is identifying key elements that must be addressed in order to provide maximal value to both parties engaged with researcher collaborative visits, emanating from universities or companies. Examples include university faculty doing sabbaticals in industry and industry researchers spending a period of time at an academic institution.
- **Researcher Guidebook:** In 2012, UIDP released an 80-page *Researcher Guidebook: A Guide for Successful Institutional-Industrial Collaborations* that provides specific information and strategies for identifying potential partners, establishing productive relationships and navigating the myriad issues associated with these engagements. A related webinar series delving deeper into the guidebook's content began in December 2012.
- **University-Industry-Startup (UIS) Nexus:** This working group is looking at the ways in which startup companies are shaping and facilitating industry-university research relationships. Included in the definition of "startups" are university spinouts as well as young small companies that have a non-trivial link to the university (through intellectual property, incubation, use of university resources, supportive sponsored research, etc.). The focus is on producing a "primer" document that will be of use to the general UIDP membership, including both university and industry stakeholders.

The UIDP has its own membership structure and fees. The group is in Phase II with nearly 100 organizational members. [www.uidp.org]

Federal Demonstration Partnership (FDP) – The FDP, currently in Phase V, is a unique forum for individuals from 119 universities and nonprofits to work collaboratively with officials from 10 federal agencies to improve the national research enterprise and reduce administrative burden. GUIRR provides the management support for FDP through an agreement with a consortium of federal agencies.

The FDP hosts three meetings per year in Washington, DC. Over 300 people attend. Meetings in 2012 were held January 11-13, May 13-15, and August 26-28. All past meeting agendas may be viewed online at www.thefdp.org.

The FDP is and has been pursuing a number of important projects, as follows:

- **Faculty Workload Survey** (newly renamed; previously called the *Faculty Burden Survey*). The FDP continues its efforts to implement the recommendations arising from the original survey done in 2005 (report issued in 2007). A follow-up survey #2 launched **January 23, 2012** and closed **March 16, 2012**, with **>13,000 respondents; an impressive 32% response rate!** (7,000 faculty members responded to the first survey.) The purpose of the survey is to determine if any inroads have been established or new barriers erected since the previous/initial survey. The data was reported on at the September 2012 FDP

meeting. Further analysis is nearing completion and the final report should be issued in 2013. Both, the Task Force on Administrative Burden of the National Science Board and the Government Accountability Agency (GAO) have been briefed on the results as well.

- **STAR METRICS.** The STAR Metrics project continues to expand with 101 campuses representing 51 universities currently participating. The initial phase of the project (level 1) focuses on the economic impact of the federal investment in the American research enterprise. The second phase (level 11) - determining the impact of the nation's investment in research - has launched. Data from regional consortia, (e.g., the Midwest Committee on Institutional Cooperation (CIC)) are being aggregated to determine regional impact. The STAR Metrics project originally administered by the National Science Foundation is currently the administrative responsibility of the National Institutes of Health.
- **Career Life Balance Initiative.** This is a project, in collaboration with NSF and NIH collaborative activity that focuses on the development of the first comprehensive set of federal-university policies, best practices/design principals and resources to promote career-life balance for our nation's scientists and engineers, especially the advancement of women's STEM academic careers. We envision that this collaborative activity would develop a framework for the federal agency-university partnership, informed by research and evidence and would engage a set of universities who have a track record of effectively enabling career-life balance policies and opportunities on their campuses.
- **Open Government Subcommittee.** The FDP has created a new group to examine the different transparency initiatives of the federal government and to analyze those activities that are designed to increase public transparency with regard to federally sponsored research and determine if there are best practices that institutions should follow, and find ways to streamline compliance with these initiatives.
- **Streamlining A-133 Audit Compliance.** The A-133 audit system is still being used to store audit information and streamline reporting.
- **Established the Joint Application Design (JAD) Team.** This working group assists Grants.gov staff in improving systems and processes associated with the submission of applications for federal assistance funding. The JAD team is testing forms and system changes before changes go into production. JAD is working directly with NIH on electronic submission of complex applications. The team has become quality assurance testers for Grants.gov forms products.
- **FDP FCOI Clearinghouse.** In response to the new PHS Financial Conflict of Interest (FCOI) policies, the FDP created an online clearinghouse system in which organizations self-certify that they are compliant with the new regulations. This establishes a single place for institutions to use for subaward monitoring in relation to FCOI compliance on PHS funded grants. Efforts are underway to expand the scope of the clearinghouse to house more types of data. Also, as part of this project the FDP developed a model conflict of interest policy as well as a model conflict of interest report form for institutions to adapt to their own specific environments.
- **Project Certification.** The FDP is working with the Office of Naval Research and the Department of Health and Human Services in exploring alternate mechanisms for certifying researcher's effort on federally funded research grants. Four FDP member universities are presently participating in the demonstration. The Inspectors General community has been briefed on the project and is generally supportive. Data collection is ongoing and the four schools will undergo audits of their new systems to determine if they provide the same level of oversight as the previous method.

- **IRB Exemption Wizard.** The IRB Wizard has been deployed for testing and the team is currently collecting data to determine the accuracy of the tool. Once testing is complete, a report will be written.
- **Troublesome Clauses.** The troublesome clauses system is still being used to identify clauses inserted into research awards that are problematic for institutions to accept.
- **NIH RPPR Pilot.** The NIH used the FDP in their initial implementation of the new Research Performance Progress Report (RPPR). FDP institutions were the first users allowed in the new system and provided feedback to the NIH before they fully opened up the system. NIH is currently inviting FDP institutions to perform the same role for Phase 2 of the rollout.

2012 Members of the GUIRR Council

Uma Chowdhry [NAE], Senior Vice President and Chief Science and Technology Officer, Emeritus, DuPont Company Experimental Station – **GUIRR Co-chair**
 C.D. (Dan) Mote, Jr. [NAE], Former President and the Glenn L. Martin Institute Professor of Engineering, University of Maryland at College Park – **GUIRR Co-chair**
 Waleed Abdalati, Chief Scientist, National Aeronautics and Space Administration (*ex officio*)
 Susan Butts, Senior Director of External Science and Technology Programs, Dow Chemical Company, retired
 Curtis Carlson, President and CEO, SRI International
 Ashton Carter, Under Secretary for Defense for Acquisition, Technology and Logistics (*ex officio*)
 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, Chair, Board of Regents, Smithsonian Institution
 Mikael Dolsten, President, Worldwide Research and Development, Pfizer
 Harvey V. Fineberg [IOM], President, Institute of Medicine (*ex officio*)
 Patrick Gallagher, Director, National Institute of Standards and Technology (*ex officio*)
 Jesse L. Goodman [IOM], Chief Scientist and Deputy Commissioner for Science and Public Health (*ex officio*)
 John Holdren [NAS/NAE], Director, White House Office of Science and Technology Policy (*ex officio*)
 Lisa Jackson, Administrator, Environmental Protection Agency (*ex officio*)
 Linda Katehi [NAE], Chancellor, University of California at Davis
 Ralph Kuncl, President, University of Redlands
 Jane Lubchenco [NAS], Under Secretary of Commerce for Oceans and Atmosphere, National Oceanic and Atmospheric Administration (*ex officio*)
 Tara O'Toole, Under Secretary for Science and Technology, U.S. Department of Homeland Security
 Steven M. Paul [IOM], Director, Appel Alzheimer Research Institute, Weill Cornell Medical College
 Luis M. Proenza, President, University of Akron
 David B. Spencer, Founder, Chairman and Chief Technology Officer, wTe Corporation
 Subra Suresh, Director, National Science Foundation (*ex officio*)
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