

**NATIONAL ACADEMIES – U.S. INSTITUTE OF PEACE  
ROUNDTABLE ON TECHNOLOGY, SCIENCE, AND PEACEBUILDING**

Third Meeting  
June 25, 2012

USIP Headquarters Building  
Washington, DC

**SUMMARY REPORT**

**OVERVIEW**

The third meeting of the National Academies – U.S. Institute of Peace (NA-USIP) Roundtable on Technology, Science, and Peacebuilding took place on June 25, 2012 at the USIP headquarters building in Washington, DC. It began at 8 a.m. and concluded at 2 p.m. An optional presentation and tour related to the proposed “PeaceTech Laboratory” followed the meeting. A total of 25 Roundtable representatives attended: 11 from U.S. government agencies, 8 from the NGO community, 4 from the corporate sector, and 2 from academia. (A list of participants is at Appendix A.)

The agenda (Appendix B) comprised four 45-minute sessions, each reviewing the status of one of four ongoing Roundtable projects: 1) Adapting Agricultural Extension to Peacebuilding, 2) Sensing Emerging Conflicts, 3) Using Data Sharing to Improve Coordination in Peacebuilding, and 4) Harnessing Systems Methods for Delivery of Peacebuilding Services.

**ROUNDTABLE OBJECTIVES**

Roundtable Co-chairs Richard Solomon, USIP, and Charles M. Vest, National Academy of Engineering (NAE), opened the meeting by welcoming Roundtable members and invited guests. Amb. Solomon gave a brief overview of the progress on each of the four projects agreed to at the second Roundtable meeting on December 12, 2011. Dr. Vest emphasized the importance of continuing this progress into concrete field initiatives and thanked the members and other participants for their work and dedication.

Both Co-chairs highlighted the importance of building effective, innovative partnerships among corporate, government, and academic players working on peacebuilding issues. Amb. Solomon described the PeaceTech Laboratory concept as an especially promising opportunity to build such relationships centered in the unique location and environment of the Institute. Dr. Vest echoed this point and encouraged Roundtable members and attendees to stay for a tour of the proposed location for the PeaceTech Lab at the conclusion of the meeting.

**INTRODUCTORY REMARKS: DAVID A. HAMBURG**

David A. Hamburg, a visiting scholar at the American Association for the Advancement of Science and recipient of the Presidential Medal of Freedom, delivered the meeting’s keynote

address on conflict prevention. Borrowing from his background in medicine, Dr. Hamburg outlined the responsibilities of the international science and technology community related to the prevention of violence, especially of mass atrocities and genocide. He described six pillars for such activity: 1) Educating people, especially senior leaders, on the potential of science and technology to resolve crucial problems, 2) Proactively intervening – the earlier the better – in countries facing serious conflicts, 3) Fostering indigenous democracies through better cooperation with local civil society, 4) Promoting equitable socio-economic development that builds human capital and human security, 5) Protecting and promoting human rights by building appropriate norms and institutions, and 6) Negotiating restraints, both military and non-military, on highly lethal weaponry.

Dr. Hamburg linked these pillars of conflict prevention to his hopes for the Roundtable. He said that new technologies, such as those being discussed in Roundtable initiatives, offer a basis for preventing mass violence. He also suggested that international centers can be a way to integrate knowledge and skills from many disciplines and countries for the purpose of containing violence, and that fostering international cooperative networks is crucial for the whole-of-government approach required for successful peacebuilding. Dr. Hamburg concluded urging Roundtable members to emphasize the innovative potential of scientific thinking in framing in their approach to peacebuilding.

Following Dr. Hamburg's talk, Graham Archer, Principal Consultant, OSD/AT&L, Department of Defense (DoD), asked how one can prove that an intervention to prevent conflict was needed when many preventive actions, by their very success, remove the evidence that intervention was necessary in the first place. Dr. Hamburg responded that such proof is often difficult because so many factors affect the outcome of a conflict. But irrefutable proof should not be the standard in any social context, where judgments about complex matters have to be exercised. What is certain, however, is that without preventive efforts, many more conflicts would occur. Melanie Greenberg, President and CEO, Alliance for Peacebuilding, asked what can be done to encourage leaders of newly established democracies to engage in the prevention of violence. Dr. Hamburg responded that the community of nations promoting the prevention of violence must expand to include these new actors. We must foster democracy as the basis for a more peaceful world, he said, but in ways that are non-threatening and respect the history and culture of these nations.

## **PERSPECTIVES FROM STATE AND DoD**

Dr. Vest introduced Karen von Hippel, Deputy Assistant Secretary for Operations, Bureau for Conflict and Stabilization Operations (CSO), Department of State, to offer State's perspectives on conflict prevention. Dr. von Hippel explained that the mandate of CSO, established in November 2011, is to break cycles of violent conflict and mitigate crises in priority countries, such as Burma, Kenya, and Syria. Rather than using preventive diplomacy alone, CSO relies on a toolkit of best practices designed to identify cycles of violent conflict and develop strategies to disrupt them. She pointed to their efforts at working with new technologies as a particular challenge, and indicated that the PeaceTech Lab might offer some assistance here. Dr. Von Hippel described the core principles for developing their strategies including 1) conducting fast, rigorous conflict analyses, 2) developing a focused response with a limited number of priorities and messages designed to foster systemic change, 3) mobilizing resources to address those

priorities, and 4) defining quantitative goals and measuring progress towards those goals. Above all, Dr. Von Hippel emphasized the need to be flexible and to respond quickly to changes in the situations on the ground.

Dr. Vest introduced Daniel “Kaz” Kasmierski, Science and Technology Advisor, AFRICOM, to provide a Department of Defense (DoD) perspective on conflict prevention. Mr. Kasmierski highlighted the importance of inter-organizational cooperation within the US government, between international governments, and with non-governmental organizations. Although the Science and Technology office in AFRICOM has less than three full-time personnel, in the past two years by intensive partnering, it has worked on wide range of projects – from improving preventive education for malaria using 4G communications to social media applications that detect social and track political change. Mr. Kasmierski also emphasized the importance of using guidance from local partners as a basis for selecting research topics. Science and technology provide powerful tools to create security and stability in the developing world, he emphasized. Cooperation on mutually-valuable activities creates, in the short term, solutions to pressing social problems and, in the long term, builds capacity and trust.

Following the presentations, Dr. Mark Epstein, Senior Vice President, Qualcomm, asked the presenters to clarify the type of aid their agencies offer to partner nations and in operations on the ground. Dr. von Hippel replied that State does not use a cookie-cutter approach to programming; rather, it analyzes problems to either undertake action internally or provide resources to organizations that will “do it better.” AFRICOM takes a more hands-on approach, Mr. Kasmierski responded. He pointed to examples in sharing maritime security technology and training on avian influenza detection where the AFRICOM command directly provided technology and training to partner nations. Amb. Solomon asked Dr. von Hippel about the often-noted tension at State between functional bureaus such as CSO and regional bureaus. Dr. von Hippel responded that CSO intends only to supplement the tools of the regional bureaus and embassies by providing manpower and resources to assist in addressing their priorities more efficiently and effectively.

#### **INITIATIVE I: ADAPTING AGRICULTURAL EXTENSION TO PEACEBUILDING:**

Dr. Vest introduced the two co-chairs of the Adapting Agricultural Extension to Peacebuilding initiative: Ann Bartuska, Deputy Under Secretary, Research, Education, and Economics (REE), U.S. Department of Agriculture (USDA); and Pamela Aall, Provost, Academy for International Conflict Management and Peacebuilding, USIP.

Dr. Bartuska provided an overview of the workshop held on May 1, 2012, which brought together experts in the fields of peacebuilding, agricultural extension, and information technology. Dr. Bartuska outlined the history of USDA involvement in the Roundtable, expressing REE’s enthusiasm and commitment to seeing the initiative through to potential pilot programs. These pilot opportunities, she explained, include collaboration with the University of California, Davis for training extension agents from Afghanistan and Pakistan. A larger program including broader training, reorganization, and technological support is also being planned for the Jonglei region of South Sudan through a partnership with the National Institute of Food and Agriculture.

Ms. Aall described the challenges such programs may face. She noted that workshop participants were concerned about the inherent risks of bringing new responsibilities, such as conflict mitigation, to the world of extension. As a general rule, she said, any future programming in this arena should include a “first, do no harm” proviso. In response to a question from Dr. Vest on how such a program would handle political sensitivities on the ground, Ms. Aall said that extension agents would not directly involve themselves in the conflict issues. Instead they would act as neutral brokers of information, a role that extension agents have long held as the ideal in their agricultural work in farming communities.

Linton Wells, Director, Center for Technology and National Security Policy, National Defense University, echoed comments made at the workshop concerning the need for extension agents to be trained in conflict analysis or otherwise be provided such information through information and communications technology. Ms. Aall suggested there might be an opportunity for USIP to do this, given its extensive experience in education and training. Andrew Reynolds, Senior Advisor, Office of Space and Advanced Technologies, Department of State, brought up the potential for involving universities and public-private partnerships, an idea which Dr. Bartuska pledged to pursue.

At the conclusion of the session, Roundtable staffer Andrew Robertson reminded members that a training workshop is scheduled for November at which the Roundtable will test a conflict analysis curriculum in the field. This workshop is an opportunity to understand the on-the-ground needs of extension agents in Afghanistan and Pakistan which could result in additional project work in Afghanistan in 2013.

## **INITIATIVE II: SENSING EMERGING CONFLICTS**

Amb. Solomon introduced the co-chairs of the Sensing Emerging Conflicts initiative: Dr. Prabhakar Raghavan, Vice President of Engineering, Google, and Mr. Lawrence Woocher, Research Director, SAIC. Dr. Raghavan, speaking via telephone from Palo Alto, outlined the focus areas identified by the project steering group. He noted initially that while sensing technologies have the capacity to build civil society and social cohesion, there is also a potential for malicious use of the technology by repressive governments or destructive elements, which the group would seek to highlight and avoid. From a technical perspective, he continued, there are a broad range of methods to identify when something unusual is occurring in a social media data set. The steering committee is only beginning to catalog these approaches as a basis for the workshop. Dr. Raghavan observed that for these technologies to work in a post-conflict environment, they will require unusual performance characteristics (low cost, low maintenance requirements, etc.) His sense, however, was that, given the widespread evolution of ICT technologies, developing tools with the appropriate performance attributes will probably not be the problem. The primary issue will be to identify those functional requirements that will enable a sensing technology to address a pressing peacebuilding problem in a timely and effective way in particular settings.

Mr. Woocher described the steering group’s working assumptions from a peacebuilder’s perspective. He described peacebuilding as a very broad process with multiple actors (international organizations, NGOs, government agencies, and grassroots groups), each with varying goals. Peacebuilding activities occur over a range of time scales, from long term efforts

to promote understanding and resolve conflict to much shorter term projects designed to address immediate challenges. Where, he asked, should the sensing project fit in this complex terrain? As a preliminary hypothesis, the working group has chosen to address the information needs at a local or grassroots level to mobilize and influence their societies in non-violent directions. In considering these needs, Mr. Woocher outlined two broad roles for sensing: 1) early warning to assist prioritization of actions and management of resources, and 2) conflict analysis to allow better understanding of the causes, mitigating factors, and dynamic interactions and trends among potentially-conflicting actors. If properly designed, Mr. Woocher observed, conflict analysis itself can serve a peacebuilding role. Mr. Woocher concluded by noting that the initiative's workshop is scheduled to be held on October 3.

Dr. Wells reminded the Roundtable that for network initiatives to work, they must always “give back” information in a better, more valuable state than when received. As an example, he pointed to the Humanitarian Assistance Response, Monitoring & Operations Network – Internet Enterprise (HARMONIEWeb), a site designed to enable military forces to share information and to conduct collaborative efforts with non-traditional, non-military partners in operations that are (largely) other than war fighting. Responding to a question from Reynolds concerning what types of data might be used to study this problem, Mr. Woocher responded that the steering committee had discussed the idea of using case studies to illustrate how conflict sensing has played out in various conflicts around the world. Mr. Woocher noted that the very significant issue of “false positives” in prediction made case selection a challenge. What are more interesting and relevant cases—the successful or the unsuccessful predictions? He also pointed out that analysis of conflict risk is often done at the “meta” or state level, leaving large gaps in understanding at the level of specific regions or local communities.

### **INITIATIVE III: USING DATA SHARING TO IMPROVE COORDINATION IN PEACEBUILDING**

Amb. Solomon introduced Melanie Greenberg, President and CEO, Alliance for Peacebuilding, one of the co-chairs of the Data Sharing to Improve Coordination in Peacebuilding initiative. (The other co-chair, Elmer Roman, Oversight Executive, JCTD Program, Office of the Secretary of Defense, was unable to attend the meeting.) Ms. Greenberg described the group's workshop, held May 23, where participants assessed the information needs of non-governmental organizations (NGOs), federal agencies, and other actors in supporting wider adoption of collaboration and data sharing technologies.

The view of many workshop participants, she noted, was that consideration of cultural and ethical issues, as well as those of trust building and credibility, are vital for such tools to be effective. Indeed, without strong trust-based relationships between stakeholders in a peacebuilding intervention, Ms. Greenberg reported, the workshop participants – especially those from the NGO community – would be reluctant to share any data. Given the often fatal consequences of poorly managed information in conflict zones, trust must exist prior to, and not as a result of, data sharing. Ms. Greenberg said, and Dr. Solomon agreed, that competition for funding within the NGO community can also limit the willingness of these organizations to share information. According to Ms. Greenberg, workshop participants suggested that donors need to play a crucial role in alleviating these tensions and supporting collaborative processes.

Several roundtable members noted cases in which successful information sharing and coordination has occurred. For example, Amb. Solomon described a compromise between the Navy and humanitarian relief NGOs in sharing information for disaster relief activities. The Navy has massive resources to deliver food, water and shelter to disaster areas. Humanitarian NGOs have the understanding of local conditions necessary to make delivery efficient and effective. To enable sharing of this information, guidelines were developed to protect NGO independence and freedom of action.

Mr. Kasmierski noted that effective data sharing can bring structure to highly unstructured environments, such as UN/OCHA's management of humanitarian disasters. Ms. Greenberg responded by questioning whether the political consensus more typical of a humanitarian relief effort was ever possible in a peacebuilding situation. Mr. Woocher queried a different aspect of Mr. Kasmierski's remark by asking "What is the appropriate level of formality in a data sharing system?" He observed that in some cases, less formal data sharing systems may be preferable. Ms. Greenberg agreed, noting the success of crowd-sourced applications like Ushahidi. She emphasized, however, that there are limits to this approach because while informal systems are more flexible, they are also less secure. Mr. Archer noted that system flexibility would enable better adoption by a broader range of partners. Cora Marrett, Deputy Director, National Science Foundation, summarized the discussion by observing that because peacebuilding is such a complex phenomenon, a one size fits all approach to data sharing (and indeed any activity) would appear ill-advised. Bernard Amadei, Founder, Engineers Without Borders, agreed and advocated more adaptive and reflective frameworks to serve in this environment.

#### **INITIATIVE IV: HARNESSING SYSTEMS METHODS FOR DELIVERY OF PEACEBUILDING SERVICES**

Dr. Vest introduced two project steering committee members who led discussion of the Harnessing Systems Methods for Delivery of Peacebuilding Services initiative: Rob Ricigliano, Chairman of the Board, Alliance for Peacebuilding, and Bernard Amadei, Founder, Engineers Without Borders. Dr. Ricigliano outlined some of the issues the steering committee is considering as it plans its workshop, tentatively slated for mid-October. These include technical issues, such as tool design; knowledge issues, such as the transformation of raw data into information; and cultural issues, such as the divide between engineers/scientists and peacebuilders/humanitarians. He also raised the question of program and systemic metrics: how does one measure the effectiveness of conflict prevention?

Dr. Ricigliano said the preliminary goal for the workshop is to facilitate robust dialogue about how systems engineering can be utilized in peacebuilding environments. The workshop will solicit perspectives from both peacebuilding and systems methods experts regarding the kinds of tools that might have this potential. Ideally, he added, the workshop will identify promising and interesting tools and applications that can be matched to the needs of peacebuilders in the field.

Dr. Amadei expanded on Dr. Ricigliano's comments by providing a brief overview of the systems engineering field. He said the systems approach provides tools to help improve decision making in complex and uncertain environments. Indeed, given the complexity and uncertainty of the problems being addressed within the other Roundtable projects, Dr. Amadei saw the systems approach as an integral part in better understanding the nature of the problems faced and the

impact of the solutions proposed across the entirety of the Roundtable's project portfolio. Developing frameworks that support such analyses would be invaluable in enabling the peacebuilding community to test other ways to improve practice. To develop such frameworks requires collaboration between the engineering and peacebuilding communities. As such, Dr. Amadei saw the forthcoming workshop as a major opportunity to support the exchanges necessary for successful collaboration.

During the discussion that followed, Dr. Wells asked about how to train peacebuilders in the field to use systems tools. Dr. Ricigliano indicated that systems tools do not necessarily require high levels of technical or mathematical skill. Certainly some differential equation-based approaches do, but there is a broad set of tools used to visualize complexity that are easily accessible with comparatively low levels of training. Dr. Amadei offered the example of STELLA, a graphics-based modeling software used to teach systems methods to high school students. Proctor Reid, Director of Programs, NAE, provided examples of how adaptive systems modeling techniques have been used in the healthcare field. Dr. Vest noted that there are potential risks involved in systems engineering approaches in which the users do not fully understand the technical limitations of the tools they are using. He gave the example of Wall Street bankers using powerful but poorly understood models to guide investment decisions. Dr. Amadei responded that the initiative seeks to understand the skill levels appropriate to particular uses in extremely complex, time-constrained situations.

#### **WRAP-UP OF PRIORITIES AND NEXT STEPS**

Dr. Vest began the wrap-up session by noting that, despite their thematic differences, all four Roundtable initiatives share characteristics related to data transfer and knowledge sharing. Both he and Dr. Himelfarb, Director, Center of Innovation for Science, Technology and Peacebuilding, USIP, stressed the need to broaden the engagement of relevant organizations in Roundtable initiatives, as well as to strategically grow the Roundtable membership, particularly by adding representatives from the private sector. Fred Tipson, Special Advisor for Science, Technology and Peacebuilding, USIP, noted that the Roundtable is in a stronger position to market itself now that it has a set of active and focused projects. Dr. Vest stressed the importance of member commitment to these activities as well as the balance between government, NGO, and private actors seated around the table. He emphasized that it is probably better for the Roundtable to do a few things very well rather than many things poorly, a perspective echoed by several other members.

#### **PEACETECH LABORATORY PRESENTATION AND TOUR**

Following lunch, Dr. Himelfarb gave an overview of the proposed PeaceTech Laboratory. He noted that peacebuilding and conflict management are undergoing dramatic changes due to scientific and technological change. Thanks to the pervasive presence of mobile phones and the Internet, almost anyone can create and send information around the world with the push of a button. The speed at which information travels has accelerated the pace of scientific and technological innovation, encouraging revolutions in information technology, biotechnology and nanotechnology that accelerate each other.

These changes have major implications for addressing conflicts over food security, water, and other issues. Creation of a PeaceTech Laboratory could be a powerful vehicle for adapting science and technology to the problems of peacebuilding, enabling peacebuilders to grow their capabilities and extend their impact. Such a laboratory would extend the work of the Roundtable by adding concrete capacity to sustain the development of particularly promising technologies relevant to peacebuilding.

Based on other innovation laboratories in both the private and public sectors, the PeaceTech Laboratory will operate according to the following principles: 1) CONVENE: Breaking down disciplinary boundaries to attack problems from multiple perspectives, 2) CONNECT: Using IT to eliminate geographical distance between researchers and those in the field, 3) BUILD: Creating impact through doing; not just analysis. 4) EVALUATE: Defining goals and tracking results, and 5) INSPIRE: Sparking engagement and discourse in the public domain.

Following the presentation, Dr. Himelfarb guided members of the Roundtable on a tour of one of the proposed sites for the laboratory in the Institute's basement level.



**APPENDIX A: PARTICIPANT LIST****National Academy of Engineering and the U.S. Institute of Peace  
Roundtable on Technology, Science, and Peacebuilding****Third Meeting  
June 25, 2012**USIP Headquarters Building  
Washington, DC**PARTICIPANTS**Roundtable Co-Chairs**Richard Solomon**  
President  
U.S. Institute of Peace**Charles M. Vest**  
President  
National Academy of EngineeringRoundtable Participants**Pamela Aall**  
Provost, Academy for International Conflict  
Management and Peacebuilding  
U.S. Institute of Peace**Cathleen Campbell**  
President and CEO  
CRDF Global**Salah Abdelhamid**  
Vice President, Enterprise Technology  
CH2M HILL**Alex Dehgan**  
Science and Technology Adviser to the  
Administrator  
U.S. Agency for International Development**Peter Ackerman**  
Founding Chair  
International Center on Nonviolent Conflict**Mark Epstein**  
Senior Vice President  
Qualcomm, Inc.**Bernard Amadei**  
Founder  
Engineers Without Borders**Deborah Estrin**  
Director, Center for Embedded Network  
Sensing  
University of California, Los Angeles**Graham Archer**  
Principal Consultant, OSD/AT&L  
Department of Defense**Loren Flossman**  
Director, Border Patrol Facilities & Tactical  
Infrastructure  
Department of Homeland Security**The Honorable Ann Bartuska**  
Deputy Under Secretary for Research,  
Education, and Economics  
U.S. Department of Agriculture**Melanie Greenberg**  
President and CEO  
Alliance for Peacebuilding**Eric Bone**  
Senior Scientist and Policy Adviser  
U.S. Department of State**David Hamburg**  
Visiting Scholar  
American Association for the Advancement  
of Science

**Daniel “Kaz” Kasmierski**  
Science and Technology Advisor  
AFRICOM

**Jennifer Leonard**  
Washington Advocacy Director  
International Crisis Group

**Cora Marrett**  
Deputy Director  
National Science Foundation

**Dawn McCall**  
Coordinator, Bureau of International  
Information Programs  
U.S. Department of State

**Sandra Melone**  
Executive Vice President  
Search for Common Ground

**Prabhakar Raghavan**  
Vice President of Engineering  
Google

**Andy Reynolds**  
Senior Advisor, Office of Space and  
Advanced Technologies  
U.S. Department of State

**Rob Ricigliano**  
Chairman of the Board  
Alliance for Peacebuilding

**Dylan Schmorow**  
Acting Director, Human Performance,  
Training and BioSystems Research  
Directorate  
Department of Defense

**Kathryn Sullivan**  
Senior Advisor, office of Integrative  
Activities  
National Science Foundation

**The Honorable Karin von Hippel**  
Deputy Assistant Secretary for Operations,  
Bureau for Conflict & Stabilization  
Operations  
U.S. Department of State

**Linton Wells II**  
Director, Center for Technology and  
National Security Policy  
National Defense University

**Lawrence Woocher**  
Research Director  
SAIC, Inc.

#### Expert Attendees

**Thom Feroah**  
Observer  
Alliance for Peacebuilding

**John Seel**  
Director of Emerging Capabilities Division,  
ODASD/RF  
Department of Defense

#### Roundtable Secretariat and Staff Attendees

**Geneve Bergeron**  
Program Assistant  
U.S. Institute of Peace

**Greg Pearson**  
Senior Program Officer  
National Academy of Engineering

**Sheldon Himelfarb**  
Director, Center of Innovation for Science,  
Technology and Peacebuilding  
U.S. Institute of Peace

**Proctor Reid**  
Director of Programs  
National Academy of Engineering

**Subhash Kuvelker**  
Study Director and Senior Program Officer  
National Academy of Sciences

**Andrew Robertson**  
Senior Program Officer  
U.S. Institute of Peace

**Frederick S. Tipson**

Special Advisor, Center of Innovation for  
Science, Technology and Peacebuilding  
U.S. Institute of Peace

**Anand Varghese**

Program Specialist  
U.S. Institute of Peace



**APPENDIX B: AGENDA**

**National Academy of Engineering and the U.S. Institute of Peace  
Roundtable on Technology, Science, and Peacebuilding**

**Third Meeting  
June 25, 2012**

USIP Headquarters Building  
Washington, DC

**AGENDA**

This third meeting of the Roundtable is to solicit the views of members on the direction of each of the four initiatives launched by the Roundtable in December 2011: using data-sharing to improve coordination, sensing emerging conflicts, adapting agricultural extension to peacebuilding, and harnessing systems engineering approaches. Co-chairs or members of each group will describe the approaches underway and the most promising directions they foresee.

After lunch, Roundtable members will be shown the prospective location and vision for what we hope will become a PeaceTech Laboratory—an incubator for innovative technologies and applications that support the work of peacebuilders in the field. Drawing from the experience of various labs in private industry, as well as MIT’s Media Lab and CMU’s Collaborative Innovation Center, the PeaceTech Lab would be a problem-solving link between the science and technology communities embodied in the National Academies and the needs of diplomats, mediators and development workers in challenging environments around the world. Ideally, the most promising ideas from the four Roundtable initiatives could be developed further in the Lab.

**8:00 a.m. Breakfast**

**8:30 a.m. Roundtable Objectives**

*Co-Chairs: Richard Solomon, USIP  
Charles M. Vest, NAE*

**8:45 a.m. Science, Technology and Conflict Prevention**

*Presenter: David Hamburg, American Association for the Advancement of Science*

**9:15 a.m. Perspectives from State and DOD**

*Presenter: Karin von Hippel, Department of State  
Presenter: Daniel “Kaz” Kasmierski, Department of Defense*

**9:45 a.m. Adapting Agricultural Extension Systems to Peacebuilding**

*Moderator: Charles M. Vest, NAE  
Co-Chairs: Ann Bartuska, Department of Agriculture  
Pamela Aall, USIP*

**10:30 a.m. Sensing Emerging Conflicts**

*Moderator: Richard Solomon, USIP  
Co-Chairs: Prabhakar Raghavan, Google (by phone)  
Lawrence Woocher, SAIC*

- 11:15 a.m. Break**
- 11:30 a.m. Using Data Sharing to Improve Coordination in Peacebuilding**  
*Moderator: Richard Solomon, USIP*  
*Co-Chair: Melanie Greenberg, Alliance for Peacebuilding*
- 12:15 p.m. Harnessing Systems Methods for Delivery of Peacebuilding Services**  
*Moderator: Charles M. Vest, NAE*  
*Members: Bernard Amadei, Engineers Without Borders*  
*Robert Ricigliano, Alliance for Peacebuilding*
- 1:00 p.m. Working Lunch: Wrap-up of Priorities and Next Steps**  
*Moderators: Richard Solomon, USIP*  
*Charles M. Vest, NAE*
- 1:55 p.m. Adjourn Roundtable Meeting**
- 2:00 p.m. PeaceTech Laboratory – Presentation and Tour (60 minutes)**  
*Presentation: Sheldon Himelfarb, USIP*  
*Followed by a tour of the proposed site for the laboratory*