| 7:30 – 8:30 | Registration and Coffee |
|-----------------------------|--|
| 8:30 – 8:35 | INTRODUCTIONS Igor Linkov, Risk and Decision Science Focus Area Lead, US Army Engineer Research and Development Center, Department of Defense Treye Thomas, Toxicologist Office of Hazard Identification and Reduction, Consumer Product Safety Commission Jeff Steevens, Senior Scientist, US Army Engineer Research and Development Center, Department of Defense |
| 8:35 – 8:50 | WELCOME, NNI OVERVIEW, and CHARGE TO PARTICIPANTS Altaf Carim, Assistant Director for Nanotechnology, Office of Science and Technology Policy, Executive Office of the President |
| 8:50 – 9:00 | ACTIVITIES SINCE THE 2010 NNI CAPSTONE MEETING and EXPECTATIONS Treye Thomas, Toxicologist Office of Hazard Identification and Reduction, Consumer Product Safety Commission |
| SESSION 1: | A Snapshot on the Perception, Assessment, and Management of the Potential Risks of Nanotechnology Moderator: Mark Wiesner, James L. Meriam Professor, Duke University |
| | |
| 9:00 – 9:20 | The Next Steps in Risk Management of Nanomaterials: A Perspective from Industry Stephen Gibbons, Director of Technology, Brewer Science, Inc. |
| 9:00 - 9:20 9:20 - 9:40 | Industry |
| | Industry Stephen Gibbons, Director of Technology, Brewer Science, Inc. A Perspective from the Consumer Community |
| 9:20 – 9:40 9:40 – 10:00 | Industry Stephen Gibbons, Director of Technology, Brewer Science, Inc. A Perspective from the Consumer Community Michael Hansen, Senior Staff Scientist, Consumers Union A Labor Perspective on the Assessment and Management of the Potential Risks of Nanotechnology Darius Sivin, International Representative at the International Union, United Automobile, |
| 9:20 – 9:40 9:40 – 10:00 | Industry Stephen Gibbons, Director of Technology, Brewer Science, Inc. A Perspective from the Consumer Community Michael Hansen, Senior Staff Scientist, Consumers Union A Labor Perspective on the Assessment and Management of the Potential Risks of Nanotechnology Darius Sivin, International Representative at the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America |



11:00 – 11:20 A Greenscreen™ Hazard Assessment Approach for Nanomaterials – Case Study of Nanosilver

Jennifer Sass, Senior Scientist in the Health and Environment program of the Natural Resources Defense Council

11:20 – 11:50 DISCUSSION WITH PANEL OF MORNING SPEAKERS

11:50 – 12:00 CHARGE TO BREAKOUT PARTICIPANTS

Jeff Steevens, Senior Scientist, US Army Engineer Research and Development Center, Department of Defense

12:00 – 13:00 Lunch (on your own)

SESSION 2: Breakout Session, PART 1

(Allow for Coffee Break from 14:30-15:00)

13:00 – 16:00 PARALLEL BREAKOUT SESSIONS BY TYPE OF DECISION

Group 1: Occupational Risk Analysis and Decision Making

Chairs: **Paul A. Schulte**, Director, Education and Information Division, The National Institute for Occupational Safety and Health

Bruce Lippy, Director of Safety Research, CPWR, The Center for Construction Research and Training

Group 2: Commercial Product Life Cycle Stage

Chairs: **Rick Canady**, Director, Center for Human Health Risk Assessment Research Foundation, International Life Sciences Institute

Todd Kuiken, Senior Research Associate with the Science and Technology Innovation Program at the Woodrow Wilson International Centre for Scholars

Group 3: Environmental Life Cycle Implications

Chairs: **Tom Seager**, Associate Professor of in the School of Sustainable Engineering, Director of Sustainable Engineering and Environmental Decision Sciences (SEEDS) at Arizona State University

Matthew Hull, Program Manager for the Nanoscale Science and Engineering and Nano-Bio Interface Research Thrusts, Institute for Critical Technology and Applied Science (ICTAS), Virginia Polytechnic Institute and State University

16:00 – 16:30 Coffee Break

SESSION 3: Report Back and Synthesis Conversation

Moderators: **Treye Thomas**, Toxicologist Office of Hazard Identification and Reduction, Consumer Product Safety Commission, **Christine Hendren**, Executive Director of the Center for the Environmental Implications of NanoTechnology, Duke University

16:30 – 17:00 SUMMARY OF BREAKOUT SESSIONS

Breakout Session Co-Chairs

17:00 – 17:15 **DISCUSSION and PUBLIC COMMENTS**

8:00 - 8:30 Coffee

8:30 – 8:45 RECAP OF DAY 1 and INSTRUCTIONS FOR DAY 2

Igor Linkov, Risk and Decision Science Focus Area Lead, US Army Engineer Research and Development Center, Department of Defense

SESSION 4: Keynote Perspectives on Risk Analysis

Moderator: **Igor Linkov**, Risk and Decision Science Focus Area Lead, US Army Engineer Research and Development Center, Department of Defense

8:45 – 9:15 **Risk Analysis**

Baruch Fischhoff, Howard Heinz University Professor, Social and Decision Sciences and Engineering and Public Policy Head, Decision Sciences Major, Carnegie Mellon University

9:15 – 9:45 Nanotechnology Multi-Stakeholder Risk Perception: Implications for Risk

Analysis, Management, and Communication

Barbara Herr Harthorn, Principal Investigator and Director of the Center for Nanotechnology in Society, Professor of Anthropology, University of California Santa Barbara

9:45 – 10:15 Coffee Break

SESSION 5: Breakout Session, PART 2

10:15 – 12:15 PARALLEL BREAKOUT SESSIONS BY TYPE OF DECISION MAKER

Group 1: The Research Community

Chairs: **Christie Sayes**, Program Manager, Research Triangle Institute **Jackie Isaacs**, Professor of Mechanical and Industrial Engineering, Northeastern University

Group 2: The Regulatory Community

Assistance

Chairs: **Janet Carter**, Health Scientist and Acting Director, Office of Biological Hazards, Occupational Safety and Health Administration **Rick Reibstein,** Environmental Analyst, Outreach and Policy Manager,

Massachusetts Office of Technical

Group 3: The Nanomanufacturing Community

Chairs: **Ahmed Busnaina**, William Lincoln Smith Chair Professor and Director, Northeastern University **Craig Bandes**, President and CEO,

Pixelligent Technologies

Group 4: The Small Business Community

Chairs: **Doyle Edwards**, Director of Business Development, Brewer Science, Inc., **Rick Pleus**, Managing Director and Toxicologist at Toxicologist, Intertox, Inc. SESSION 5: Breakout Session, PART 2 (Cont.)

10:15 – 12:15 PARALLEL BREAKOUT SESSIONS BY TYPE OF DECISION MAKER (Cont.)

Group 5: The Financial Risk Community

Chairs: **Martha Marrapese**, Partner at Keller and Heckman LLP

Clayton Shoup, Workers' Compensation Line of Business Director, Zurich North America Risk Engineering

Group 6: Other Public Communities

Chairs: **Charles Geraci**, Senior Scientist and Coordinator of the Nanotechnology Research Center, the National Institute for

Occupational Safety and Health **David M. Berube**, Professor of Communications and Director, North Carolina State University

Group 7: The NGO Community

Chairs: **Terry Gordon**, Professor of Environmental Medicine at New York University, Chair of the American Conference of Governmental Industrial Hygienists

Carolyn Cairns, Independent Consultant

SESSION 7: Report Back and Synthesis Conversation

Moderators: **Jeff Steevens**, Senior Scientist, US Army Engineer Research and Development Center, Department of Defense **Carolyn Cairns**, Independent Consultant

12:15 – 13:00 SUMMARY OF BREAKOUT SESSIONS

Breakout Session Co-Chairs

13:00 – 14:00 Lunch (on your own)

SESSION 8: Parallel Roundtable Sessions & Concluding Remarks

14:00 – 16:00 Roundtable Discussion Groups:

Group 1: Needs and Perspectives of Emerging Businesses

Moderator: **Jay West**, Senior Director, Chemical Products and Technology, American Chemical Council

14:00 – 16:00 Roundtable Discussion Groups (Cont.):

Group 2: A Sector-Based Approach: Perspectives from the Pharmaceutical Industry

Moderators: **Frank Malinoski**, Chief Medical Officer, Liquidia Technologies, Inc. **Lawrence Tamarkin**, President and CEO, Cytimmune Sciences, Inc.

Group 3: Public Risk Perception and Communication

Moderator: **Barbara Herr Harthorn**, Principal Investigator and Director of the Center for Nanotechnology in Society, Professor of Anthropology, University of California Santa Barbara

16:00 - 16:30 Coffee Break

16:30 – 17:00 **Summary and Discussion of Roundtable Sessions**

Moderator: **Jeff Steevens**, Senior Scientist, US Army Engineer Research and Development Center, Department of Defense

17:00 – 17:15 **Discussion and Public Comments**

17:15 – 17:30 Concluding Remarks

Igor Linkov, Risk and Decision Science Focus Area Lead, US Army Engineer Research and Development Center, Department of Defense

Treye Thomas, Toxicologist Office of Hazard Identification and Reduction, Consumer Product Safety Commission

Jeff Steevens, Senior Scientist, US Army Engineer Research and Development Center, Department of Defense