JOINT DECLARATION AFTER THE 12th U.S.-ITALY JOINT COMMISSION MEETING ON SCIENCE AND TECHNOLOGY COOPERATION
Rome, January 14th, 2016

Pursuant to the Agreement on Scientific and Technological Cooperation between the Government of the Italian Republic and the Government of the United States of America, signed in Rome on April 1st, 1988, as amended and extended on October 4th, 1993, and the Joint Declaration of the 11th Joint Commission Meeting on Bilateral Cooperation, signed in Washington, D.C. on December 13th, 2013, the 12th Joint Commission Meeting was held in Rome on January 14th, 2016.

DELEGATIONS

The Italian delegation was headed by Min. Plen. Roberto Cantone, Head of the Bilateral and Multilateral Scientific and Technological Cooperation Unit, Directorate General for the Country Promotion, Ministry of Foreign Affairs and International Cooperation.

The U.S. delegation was headed by Ms. Kelly C. Degnan, Deputy Chief of Mission, United States Mission to Italy.

The composition of the two delegations is reported in Annex I.

AGENDA

The agenda of the joint review meeting was adopted as follows:

1. Review of the bilateral scientific activities carried out in the period 2014-2015
2. Areas of interest for both countries
3. Summary and outcomes from Institutional discussion
4. Announcement of projects funded by the Italian call for proposals
5. Meeting of the next Joint Commission.

1. Review of the bilateral scientific activities carried out in the period 2014-2015

The two delegations reviewed the cooperative activities accomplished to date and expressed their satisfaction with the implementation of the projects established at the 11th Session of the Italian - U.S. Joint Commission on Scientific and Technological Cooperation, held in Washington, D.C. on December 13th, 2013.

2. Areas of interest for both countries

The Parties recognized the growing importance of science and technology with respect to the economic, social and cultural relations of the two Countries. Both sides put particular emphasis on the role of the international cooperation for the further development of the S&T systems in the two Countries. The U.S. and Italy recognized innovation as essential to securing a more secure, peaceful, and prosperous world and discussed ways to continue the conversation about the importance of policies supporting research, education, and the exploitation of new ideas

The two delegations discussed the scientific subjects of the highest priority for the cooperation in S&T area between Italy and the United States:

1. Advanced Materials and Nanotechnologies
2. Agriculture technologies for crops, fruit trees and vineyards and Food Sciences
3. Earth Sciences, including Natural Hazards, Environment, Space Observations and Oceanography
4. ICT, including Robotics
5. Life Sciences, including Brain Studies and Rare Diseases
6. Physics and Astrophysics
7. Technologies Applied to Cultural and Natural Heritage.

3. Summary and outcomes from Institutional discussion

Working level discussions on the seven priority areas took place before the Joint Commission Meeting. The U.S. and Italian co-chairs of each group intend to provide a brief summary of the outcomes decided upon in an Action Plan, which should be completed by Feb 29th, 2016 and appended to this Joint Declaration as Annex IV.

Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

The United States and Italy consider university collaboration an important tool for joint scientific research, and encourage U.S. and Italian universities to facilitate researcher exchanges and joint programs between our countries.

The participating institutions for each discussion include:

1. Advanced Materials and Nanotechnologies: *MIUR, CNR, ENEA, IIT - AFOSR,NSF, DOE.*
2. Agriculture technologies for crops, fruit trees and vineyards and Food Sciences *MIUR, CREA, CNR, ENEA, FEM, - USDA.*
3. Earth Sciences, including Natural Hazards, Environment, Space Observations and Oceanography *MIUR, CNR, ENEA, OGS, INGV, ASI - USGS, NOAA, DOE*
4. Life Sciences, including Brain Studies and Rare Diseases *MIUR, ISS, CNR, ENEA, IIT, LENS, Telethon Foundation - HHS, USDA, NIH, NSF.*
5. Physics and Astrophysics *MIUR, CNR, INAF, INFN, ASI, ENEA - NSF, DOE, NIST.*
6. ICT, including Robotics *MIUR, CNR, ENEA, INRiM, CNIT, CREATE-NET - NIST, NSF, DOE*
7. Technologies Applied to Cultural and Natural Heritage *MIUR, CNR, INFN, ENEA, CSGI - Library of Congress, Smithsonian Institution, DOI, NSF, NEH, NPS.*

In all cases the Research Centers and the Universities are responsible for funding their scientific projects.

4. Announcement of projects funded by the Italian call for proposals

The Italian delegation announced that 15 projects were approved for funding from the Italian Ministry for Foreign Affairs and International Cooperation's recent call for proposals; the projects are listed in Annex II. In addition, the Italian Ministry selected eight more projects of common interest for both Parties, listed in Annex III, which are encouraged to seek different sources of funding.
The delegation decided that future calls may benefit from holding Joint Commission Meeting prior to call announcement in order to focus the topics on priorities identified by the Joint Commission.

5. Next Meeting of the Joint Commission

The two delegations agreed that the next U.S.-Italy Joint Commission Meeting on Science and Technology Cooperation will take place in Washington, D.C. in the later part of 2017.
Prior to the next meeting, the countries may explore new means to exchange information on national scientific priorities and areas of potential cooperation and exchange views on areas that might involve the broader scientific communities.
Any addition to the present document will be agreed on through diplomatic channels.

Signed in Rome on January 14th, 2016, in duplicate, in the English language.

For the Republic of Italy

Min. Plen. Roberto Cantone
Head of the Scientific and Technological Cooperation Unit, Directorate General for the Country Promotion, Ministry of Foreign Affairs and International Cooperation

For the United States of America

Ms. Kelly C. Degnan
Deputy Chief of Mission
United States Mission to Italy

ANNEX I

Composition of the two Delegations

Italian Delegation

Roberto Cantone, Head of the Bilateral and Multilateral Scientific and Technological Cooperation Unit, Directorate General for the Country Promotion, Italian Ministry of Foreign Affairs and International Cooperation

Alessandra Pastorelli, Deputy Head of the Bilateral and Multilateral Scientific and Technological Cooperation Unit, Directorate General for the Country Promotion, Italian Ministry of Foreign Affairs and International Cooperation

Giulio Busulini, Scientific Attaché at the Italian Embassy to the USA

Pietro Mortini, Scientific Attaché at the Italian Embassy to the USA (designated)

Anna Fiore, Unit for the Countries of North America, Directorate General for Political Affairs and Security, Italian Ministry of Foreign Affairs and International Cooperation

Gianluigi Consoli, Directorate General for Research Promotion, Ministry of Education, Universities and Research (MIUR)

Paola Manzioli, Directorate General for Research Promotion, Ministry of Education, Universities and Research (MIUR)

Lucio Lemme, Directorate General for Communication and European and International Relations, Ministry of Health

Co-Chairs of Working Groups

1. Advanced Materials and Nanotechnologies (NSAM): Luigi Ambrosio, National Research Council (CNR)

2. Agriculture technologies (AGR): Stefano Bisoffi, Council for Agricultural Research (CREA)

3. Earth Sciences (ES): Maria Fabrizia Buongiorno, National Institute of Geophysics and Volcanology (INGV)

4. Life Sciences (LS): Ranieri Guerra and Giselda Scalera, Ministry of Health

5. Physics and Astrophysics (PA): Antonio Masiero, National Institute of Nuclear Physics (INFN)

6. Information and communications technology (ICT): Mauro Annunziato, National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA)

7. Technologies Applied to Cultural and Natural Heritage (TACNH): Christian Carloni, University of Bologna

Observers

AREA Science Park
Steven Taylor, Director of Marketing, Communications and Business Development

Italian Space Agency (ASI)
Gabriella Arrigo, Head of the International Relations and Advanced Education
Sveva Iacovoni, International Relations and Advanced Education

National Research Council (CNR)
Virginia Coda Nunziante, Director of the International Relations Office
Ruggero Casacchia, International Relations Office
Francesco Loreto, Director of the Department of Bio-Food Sciences (DiSBA)
Tullio Pozzan, Director of the Department of Biomedical Sciences (DSB)
Riccardo Pozzo, Director of the Department of Human and Social Sciences, Cultural Heritage (DSU)
Marco Conti, Director of the Department of Engineering, ICT and Technologies for Energy and Transport (DIITET)
Guglielmo Fortunato, Director of the Institute for Microelectronics and Microsystems (IMM)
Lorenzo Avaldi, Director of the Institute of structure of matter (ISM)
Vania Virgili, Department of Human and Social Sciences, Cultural Heritage (DSU)
Gabriella Leo, Institute for the Study of Nanostructured Materials
Ilaria Bencini, Department of Engineering, ICT and Technologies for Energy and Transport (DIITET)
Lia Santoleri, Institute of atmospheric sciences and climate (ISAC)
Giorgio Matteucci, Institute for agricultural and forestry systems of the Mediterranean (ISAFOM)
Mauro Gamboni, Department of Bio-Food Sciences (DISBA)

Confindustria
Nicoletta Amodio, Innovation and Education Area
Angela Ciccarone, Innovation and Education Area
Cristina Pace, Innovation and Education Area

Council for Agricultural Research (CREA)
Marcello Donatelli, Director of the Research Centre for Industrial Crops
Corrado Costa, Research Unit for Agricultural Engineering

Conference of Italian University Rectors (CRUI)
Alberto Felice De Toni, Secretary-General
Marina Cavallini, Head of the International Relations

National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA)
Marina Leonardi, Head of the International Relations
Isabella Mazziotti di Celso, International Relations
Giovanna Zappa, Chief Scientist Division Biotechnologies and Agroindustry
Giovanni Giuliano, Division of Biotechnologies and Agroindustry
Claudia Zoani, Division Biotechnologies and Agroindustry
Paolo Deiana, Technical Unit for Advanced Technologies for Energy and Industry

Federalimentare
Maria Cristina Di Domizio, Head of Innovation Unit

Italian Institute of Technology (IIT)
Simone Avogadro di Collobiano, Research Organization Office

National Institute for Astrophysics (INAF)
Marco Tavani, Board of Directors

National Institute of Nuclear Physics (INFN)
Simone Dell'Agnello, Frascati National Laboratories

National Institute of Metrological Research (INRIM)
Massimo Inguscio, President
Maria Luisa Rastello, Scientific Director

National Institute for Environmental Protection and Research (ISPRA)
Bernardo De Bernardinis, President
Lorenzo Ciccarese, Head of the Unit of Forest Resources and Wildlife
Stefania Fusani
Francesco Lalli
Nico Bonora
Carlo Cipolloni
Patrizia Bonanni
Daniele Spizzichino
Andrea Taramelli
Luca Guerrieri

National Institute of Health (ISS)
Luca Rosi, Head of the International Relations Unit

Italian Scientists and Scholars in North America Foundation (ISSNAF)
Monica Veronesi, Executive Director

Polytechnic University of Turin
Marina De Maio, Department of Environment, Land and Infrastructure Engineering

University for Foreigners of Perugia

Fernando Nardi, Researcher

University of Bologna
Prof. Alessandra Scagliarini, Vice-Rector for International Relations
Prof. Beatrice Fraboni, Responsible for relations with North America
Mrs. Mara Longhini, Research and Technology Transfer Division

University of Rome "La Sapienza"
Prof. Luisa Mannina, Department Chemistry and Pharmaceutical Technologies
Prof. Maria Antonietta Marsella, Department of Civil, Constructional and Environmental Engineeering

U.S. Delegation

Kelly Degnan, Deputy Chief of U.S. Mission to Italy

Lisa Brodey, Director of the Office Science and Technology Cooperation, U.S. Department of State

Susanne C. Rose, Environment, Science, Technology & Health Counselor, U.S. Mission to Italy

Federica Signoretti, Environment, Science, Technology Office, U.S. Mission to Italy

Kira Migliorini, Office of Foreign Commercial Service, U.S. Mission to Italy

Co-Chairs of Working Groups

1. Advanced Materials and Nanotechnologies (NSAM): Sofi Bin-Salomon, Air Force Office of Science and Research (AFOSR)

2. Agriculture technologies (AGR): Kim A. Hoelmer, U.S. Department of Agriculture (USDA)

3. Earth Sciences (ES): Ingrid Verstraeten, U.S. Geological Survey (USGS)

4. Life Sciences (LS): Cole Donovan, Office for Science and Technology Cooperation, U.S. Department of State

5. Physics and Astrophysics (PA): Corey Cohn, Department of Energy (DOE)

6. Information and communications technology (ICT): Chris Greer, National Institute of Standards and Technology (NIST)

7. Technologies Applied to Cultural and Natural Heritage (TACNH): France Fenella, Library of Congress (LoC)

ANNEX II

Projects approved for funding by the Italian Ministry of Foreign Affairs and International Cooperation

SECTOR	PROJECT TITLE	ITALIAN PARTNER	U. S. PARTNER
Advanced Materials and Nanotechnologies	Development of porous magnetic Metallacrowns for sensing applications	TEGONI Matteo Università di Parma	PECORARO Vincent University of Michigan
Advanced Materials and Nanotechnologies	Ultrahigh Temperature Ceramic Matrix Composites by Additive Manufacturing Using Polymer Precursors	SCITI Diletta CNR Consiglio Nazionale delle Ricerche	RAJ Rishi University of Colorado at Boulder
Advanced Materials and Nanotechnologies	Design and Test of Micro-fabricated microwave probes for magnetic materials characterization	PROIETTI Emanuela CNR Consiglio Nazionale delle Ricerche	KABOS Pavel NIST National Institute of Standards and Technology
Agriculture Technologies for Crops, Fruit Trees and Vineyards and Food Sciences	Boosting an healthier agriculture: identification of resistance genes for durum wheat cultivars more resistant to rust diseases (RES-WHEAT)	MASTRANGELO Annamaria CREA – Consiglio per la Ricerca in Agricoltura e l'analisi dell'economica agraria	STEFFENSON Brian University of Minnesota, Department of Plant Pathology
Earth Sciences, including Natural Hazards, Environment, Space Observations and Oceanography	GSLAISS - Global Sea Level Rise & Antarctic Ice Sheet Stability predictions: guessing future by learning from past	DE SANTIS Laura OGS Istituto Nazionale di Oceanografia e di Geofisica Sperimentale	SORLIEN Christopher Earth Research Institute University of California, Santa Barbara
Earth Sciences, including Natural Hazards, Environment, Space Observations and Oceanography	Predictive methods for unsaturated zone preferential flow in porous and fractured rock	CAPUTO Maria Clementina CNR Consiglio Nazionale delle Ricerche	NIMMO John Robert US Geological Survey
ICT, including Robotics	Development of a Smart and Safe Wearable System for Hand Pattern Recognition coupled with a cloud-based Internet of Things (IoT) framework.	FABBRI Gianluca DINESTO S.r.l	SANTELLO Marco Ira A. Fulton Schools of Engineering, ASU Arizona State University

ICT, including Robotics	Image guided robot for precise prostate biopsy	FIORINI Paolo Università degli Studi di Verona	BURDICK Joel W. California Institute of Technology
Life Sciences, including Brain Studies and Rare Diseases	Biochemical changes in the rare genetic demyelinating and neurodegenerative disease AGC1 deficiency: a study on the different brain cells derived from human iPS	MONTI Barbara Università di Bologna	ANDERSON Stewart UPenn Perelman School of Medicine/Child and Adolescent Psychiatry,The Children's Hospital of Philadelphia.
Life Sciences, including Brain Studies and Rare Diseases	Undiagnosed Rare Diseases: a joint Italy - USA project	TARUSCIO Domenica ISS Istituto Superiore di Sanità	GAHL William A National Human Genome Research Institute, NIH
Life Sciences, including Brain Studies and Rare Diseases	Novel technological approaches for rewiring neural circuitry following brain injury	CHIAPPALONE Michela IIT Istituto Italiano di Tecnologia	NUDO Randolph University of Kansas Medical Center
Physics and Astrophysics	Development of integrated technologies for monolithic pixel trackers.	MUCCIFORA Valeria INFN Istituto Nazionale di Fisica Nucleare	JACOBS Peter M. Lawrence Berkeley National Laboratory
Physics and Astrophysics	Search for light dark matter with positron beams	VALENTE Paolo INFN Istituto Nazionale di Fisica Nucleare	ALEXANDER Jim Cornell University
Physics and Astrophysics	Maximizing the exploitation of current and future gravitational lensing experiments from space: from Hubble to JWST, Euclid and WFIRST.	MENEGHETTI Massimo INAF Istituto Nazionale di Astrofisica	RHODES Jason NASA - Jet Propulsion Laboratory
Technologies Applied to Cultural and Natural Heritage	Composites with inorganic matrix for sustainable strengthening of architectural heritage	DE FELICE Gianmarco Università degli Studi "Roma Tre"	NANNI Antonio University of Miami

ANNEX III

SECTOR	PROJECT TITLE	ITALIAN PARTNER	U. S. PARTNER
Advanced Materials and Nanotechnolgies	Deformable meta surfaces	WIERSMA Diederik Università di Firenze	BRONGERSMA Mark Stanford University
Advanced Materials and Nanotechnolgies	Nanostructured metamaterials for innovative visible and near-IR components	BILOTTI Filiberto Università degli Studi Roma Tre	ALU' Andrea University of Texas at Austin
Agriculture Technologies for Crops, Fruit Trees and Vineyards and Food Sciences	Optimizing grape berry quality by canopy and water management under different climate conditions	GUCCI Riccardo Università di Pisa	SABBATINI Paola Department of Horticulture, Michigan State University
Earth Sciences, including Natural Hazards, Environment, Space Observations and Oceanography	Italy-USA Collaboration: Deep Carbon cycling and fluid-mediated mass transfer in subduction zones. An international field institute and research experience	SCAMBELLURI Marco Università degli Studi di Genova	KOHN Matthew J. Department of Geosciences, Boise State University
ICT, including robotics	Quantum Memories for Free-Space Secure Communications	VILLORESI Paolo Università di Padova	FIGUEROA Eden State University of New York at Stony-Brook
Life Sciences, including Brain Studies and Rare Diseases	HCN2 subunit expression in VTA DA cells	DIANA Marco Università di Sassari	MILLER Mark University of Puerto Rico
Physics and Astrophysics	SPRINGLETS (Solar system Payloads and laser Retroreflectors of Infn and Nasa-sservi for GeneraL relativity, Exploration and gravitational asTrophysicS)	DELL'AGNELLO Simone INFN Istituto Nazionale di Fisica Nucleare	SCHMIDT Gregory NASA-SSERVI (Solar System Exploration Research Virtual Institute)
Physics and Astrophysics	DarkSide Italy-US Cooperation in the search for Dark Matter	DEVOTO Alberto INFN Istituto Nazionale di Fisica Nucleare	GALBIATI Cristiano Princeton University

ANNEX IV

Working Group – Action Plans

(Updated August 11, 2016)

Summary *1*

1. **Advanced Materials and Nanotechnologies (AMN)** *2*
   Additive manufacturing; Low-density materials; Materials modeling and computation; Directed Energy/Lasers; Human Performance; Critical materials; Biophysics; Research Infrastructure

2. **Agriculture technologies for crops, fruit trees and vineyards and Food Sciences (ATFS)** *4*
   Crop Science; New Invasive Species That Impact Agriculture & the Environment; Food Science; Modeling, Environment & Climate Change; Animal Science; Biological Studies to Improve Integrated Pest & Disease Management; Bio-based chemicals and materials; Invasive species biology and management. Focus on Xylella fastidiosa (olives), brown marmorated stink bug (BMSB); spotted wing drosophila (SWD)

3. **Earth Sciences, including Natural Hazards, Environment, Space Observations, and Oceanography (ES)** *6*
   Natural Hazard, including volcano and earthquake hazard; Space data for Earth Observation and Geodes; Environment Including Energy; Oceanography and Climatology

4. **Life Sciences, including Brain Studies and Rare Diseases (LS)** *8*
   Cancer; Brain Research; Rare Diseases; Genomics and Genetics; Vaccine Development; Anti-Microbial Resistance; Diabetes

5. **Physics and Astrophysics (PA)** *9*
   High Energy Physics; Nuclear Physics; Astrophysics; Quantum Communication and Information

6. **Quantum Communication & Information Information Communication Technologies, including Robotics (ICT)** *11*
   Iot-Enabled Smart Cities; Cyber Security Research; Advanced Manufacturing; Cloud, Big Data, e-Infrastructure, High Performance Computing; Robotics and Artificial Intelligence; Quantum Metrology for ICT

7. **Technologies Applied to Cultural and Natural Heritage (TACNH)** *13*
   Innovative Techniques and methods of cultural heritage; Advance Data Sharing and Coordination; Resilience of cultural heritage, including impact of climate change, outdoor conservation and natural/man-made disaster management; Advanced security and improved mobility of artefacts for research and industry

List of Participants *15*

Please note: this action plan is a preliminary statement of intent among the named parties and is not legally binding. Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

12th U.S.-Italy Joint Commission Meeting on Science and Technology Cooperation

1. WG on Advanced Materials and Nanotechnologies - AMN

Italy	Unites States of America
Co-chair ***Prof Luigi Ambrosio - Director*** ***Department of Chemical Sciences and Materials Technology*** ***National Research Council (CNR)***	***Co-chair*** ***Dr Sofi Bin-Salamon*** ***International Program Manager*** ***Air Force Office of Scientific Research (AFOSR)***
Participants	
Federal Agencies/Ministries/National Labs	
IIT, CNR(ICCOM, ISOF, ISMAC, IPCB, ISTEC, IMM, DSCTM), ENEA, AREA SCIENCE PARK(ASP)	AFOSR, AFRL, NRL, ARL, NSF, NIST
Universities (also University consortia, associations)	
UNIROMA1, UNIBO, UNIROMA2, UNIFI, UNITS, UNIUD	JHU, VT, TAMU
Other actors (Clusters, tech district, PPP, Industries)	

Priorities:	
1	Identify technical subjects areas to explore collaborative partnerships
2	Explore funding mechanisms from the US and Italy that can potentially be cooperatively leveraged in order to support possible joint collaborations
3	Leverage national research infrastructure investments to maximize collaborative opportunities
4	Leverage multilateral activities with other nations as part of building US-Italy partnerships
5	Identify and share STEM best practices under science programs managed by US and Italian organizations

Topic Areas:			
1	Additive manufacturing	**5**	Human Performance
2	Low-density materials	**6**	Critical materials
3	Materials modeling and computation	**7**	Biophysics
4	Directed Energy/Lasers	**8**	Research Infrastructure (transversal)

Action Items/Milestones

	Action/Milestones	**Lead**	**Deadline**	**Deliverable**
1	International Basic Research Infrastructure Meeting (in collaboration with Australia, South Africa) in preparation to the JCM in Rome – (Embassy of Italy - Washington DC)	AFOSR, Emb of It and CNR	12-13 Nov 2015	Explore and build collaborations between US, Italy, Australia and South Africa by leveraging national research infrastructure
2	Working Group - Kick off meeting (CNR – Rome IT)	CNR-AFOSR	Jan 2016	
3	US-Italy Collaboration between US Hypersonics Center and CNR	AFOSR, CNR, and MAECI	2016-2018	MAECI awarded CNR-ISTEC with two year grant to support collaboration with US Hypersonics Center at Univ. of Colorado - Boulder

4	US-Italy JCM Advanced Materials Meeting and Site Visit (Italy Rome, Capua, Bologna, Faenza, Firenze – Italy)	AFOSR, Emb of IT and CNR	11-15 Apr 2016	Interagency site visit to CNR, CIRA, and universities in Italy
5	International Forum on Multifunctional Material Systems in Extreme Environments – texas A&M (TX)	Texas A&M University	2-3 May 2016	Explore and build collaborations in materials for extreme environments
6	International Conference on Advanced Manufacturing 2016 – (Arlington VA)	Virginia Tech University	5-6 May 2016	Explore and build collaborations in additive manufacturing
7	Innovation Forum – Driving Change for the U.S. and Italian Innovation system – focus on advance materials organized by Friuli Venezia Region and Area Science Park (ASP)	Area science park / CNR/ AFOSR	28 -29 July 2016	Presentation of the WG activities – visit of ASP, SYRMEP (Synchrotron Radiation for Medical Physics) - Trieste
8	2016 Biophysics and Human Performance Program Review (Arlington VA)	AFOSR	31 Oct - 4 Nov 2016	Explore collaborative opportunities between AFOSR and Italian principal investigators in the area of biophysics and human performance
9	Future Opportunities Meeting in Smart Sensing for Biophysics *(Embassy of Italy – Washington DC)*	AFOSR, CNR, NIH and NASA	14-15 Nov 2016	Explore collaborative opportunities on Smart Sensing for Biophysics
10	2017 International Conference on Advanced Manufacturing (Arlington VA)	Virginia Tech University	Apr 2017	Explore and build collaborations in additive manufacturing
11	International Symposium on Biophysics (Uniroma2 – Villa Mondragone)	CNR / Uniroma2	June 2017	Tbc

This action plan is a preliminary statement of intent among the named parties and is not legally binding. Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

12th U.S.-Italy Joint Commission Meeting on Science and Technology Cooperation

2. WG on Agriculture Technologies - AGR

Italy	Unites States of America
Co-Chair ***Dr. Stefano Bisoffi*** ***Technical Director*** ***Council for Agricultural Research and Economics (CREA)***	***Co-Chair*** ***Dr. Kim A. Hoelmer*** ***Acting Director – Overseas Biological Control Laboratories*** ***U.S. Department of Agriculture, Agricultural Research Service (USDA/ARS)***
Participants	
Federal Agencies / Ministries/ National Labs	
CREA, CNR-DISBA, ENEA, ISPRA	USDA; USDA/ARS; USDA/NCAUR, ISU, NASA-GISS, DOS, NSF, OSTP
Universities (also University consortia, University associations)	
UNIRM1, UNIBO	Cornell University; Michigan State University; Ohio State University; University of Madison; University of California; New Mexico State University; Columbia University; University of Florida;
Other actors (Clusters, tech district, PPP, Industries, NPO, Associations)	
Federalimentare/CLAN	

Priorities:	
1	Identify and leverage common research initiatives and best practice exchange on new technologies in for Agriculture
2	Examine opportunities to support and enhance joint IT-US research and S&T Foresight activities
3	Explore funding mechanisms from Italy and the US according to specific research Joint interest
4	Short term staff mobility and exchange
5	Identify opportunities for future cooperation/ exchanges in priority areas (as Research infrastructure)

Topic Areas:			
1	Crop Science	**5**	Animal Science
2	New Invasive Species That Impact Agriculture & the Environment	**6**	Biological Studies to Improve Integrated Pest & Disease Management
3	Food Science	**7**	Bio-based chemicals and materials
4	Modeling, Environment & Climate Change	**8**	Invasive species biology and management. Focus on Xylella fastidiosa (olives), brown marmorated stink bug (BMSB); spotted wing drosophila (SWD)

Action Items/Milestones

ID	Action/Milestones	Lead	Time	Deliverable
1	Joint IT-US meeting on Solanaceae germplasm resources, Genetics and Genomics (*)	ENEA (G.Giuliano)	June 2017	Joint Workshop-Proceedings on web; external collaboration to H2020 project G2P-SOL
2	IT-US Working group for the implementation of the GEO-GEOGLAM initiative and link to the Italian project on Digital Agriculture (**)	CREA (M.Donatelli)	Jan 2017	Action plan for the geographical expansion of the GEOGLAM programme
3	Collaboration with the METROFOOD-RI initiative for a European Research Infrastructure on Food & Nutrition Research	ENEA (G.Zappa)	Start Jan 2017	MoUon shared R&I infrastructures on F&N Research

4	Joint project on genetic diversity of toxigenic Fusarium and Aspergillus species contaminating cereals (***)	CNR/DISBA (A.Logrieco)	Start 2017	Project funded and running
5	IT-US Workshop on Xylella fastidiosa pathovars, hosts and vectors	CREA/(M.Barba)/CNR (D.Boscia)	Nov. 2017	Joint Workshop-Proceedings on web
6	S&T Foresight on Smart grids for Food Systems Applying emerging technology to build resilient nutrition supply networks	CNR/ NSF	June 2016	Preliminary meeting for setting up a cycle of workshop
7	Workshop on Smart grids for Food Systems, Applying emerging technology to build resilient nutrition supply networks (S&T Foresight) organized in occasion of the' Italian cuisine week in collaboration with the Embassy of Italy in Washington DC	CNR - EMB IT / NSF	Nov 2016	Presentation and set up of the international conference to be organized in Italy in I SEM 2017
8	International Conference on Smart grids for Food Systems Applying emerging technology to build resilient nutrition supply networks (S&T Foresight) - Rome (IT)	CNR	I Sem 2017	Report
9	joint IT-US informal exchange workshop on Invasive species biology brown marmorated stink bug (BMSB); spotted wing drosophila (SWD	USDA-CREA/ CNR	I sem 2017	TBC
10	US Working Group on Invasive species biology: brown marmorated stink bug (BMSB); spotted wing drosophila (SWD)- annual / sem meetings	USDA	Fall 2016 /2017	Open invitation to Italian scientist – Best practice exchange
11	Study tour on US Labs lab specialized on Invasive species biology	USDA	2017 (Tbd)	brown marmorated stink bug (BMSB); spotted wing drosophila (SWD)

This action plan is a preliminary statement of intent among the named parties and is not legally binding. Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

(*) Prospective US interested parties: Cornell University (Boyce Thompson Institute; USDA; Michigan State University; Ohio State University; University of Madison; University of California at Davis (Tomato Genetics Research Cooperative); New Mexico State University (The Chili675 Pepper Institute

(**) With USDA-ARS; NASA-GISS; Columbia Univ.; University of Florida; Michigan State University

(***) IT: CNR/DISBA/ISPA; USA: USDA/NCAUR and ISU/Department of Plant Pathology & Microbiology

12th U.S.-Italy Joint Commission Meeting on Science and Technology Cooperation

3. WG on Earth Sciences - ES

Italy	Unites States of America
Co-Chair ***Dr. Maria Fabrizia Buongiorno,*** ***Head of Space Observation Infrastructures*** ***National Institute of Geophysics and Volcanology (INGV)***	***Co-Chair*** ***Dr. Ingrid Maria Verstraeten*** ***Chief Europe, Russia, Central Asia and Circum-Arctic,*** ***Office of International Programs*** ***U.S. Geological Survey (USGS)***
Participants	
Federal Agencies / Ministries/ National Labs	
INGV, ENEA, INFN, OGS, CNR, ISPRA, MINAMB, IIT, ASI,CMCC	U.S. Geological Survey, NOAA, DOE, NASA-JPL, NASA – Goddard Space Flight Center, MTU, RSMAS/MPO-MIAMI, DCO, US National Center Atmospheric Research, Boulder, Colorado.
Universities (also University consortia, University associations)	
UNIMIB,UNICA,POLITO, ROMA1, UNI PERUGIA	UCAR, University of Rhode Islands, University of Nevada, UC-DAVIS, OSU (Ohio State University), UNCA (University of North Carolina), University of California, Los Angeles (UCLA)
Other actors (Clusters, tech district, PPP, Industries, NPO, Associations)	

Priorities:	
1	Strengthening cooperation between National Research Institutes, Universities, implement bilateral arrangements, Letters confirming cooperation with detailed working programs to maximize collaborative opportunities and achievements.
2	Organizing joint field campaigns and share measurements for defined sites defined for the Earth Science Topic Areas.
3	Share best practice procedures, new technologies including satellite data to understand and monitor Earth processes.
4	Networking activities (organization of conference and symposia); d) Development of access and engagement tools, open a dialogue on science and risks communication
5	Education and Training: a) Exchange of personnel between US and Italian Research Institution; b) IT-U.S.A. PhD Programs; c) Bilateral agreements between universities and institutions
6	Explore funding mechanisms from the US and Italy that can potentially be cooperatively leveraged in order to support possible joint collaborations
7	Include multilateral engagements with third countries as part of building US-Italy partnerships

Topic Areas:	
1	Natural Hazard, including volcano and earthquake hazard
1.1	Seismological Processes & Hazards, Operational Earthquake Forecasting,
1.2	Tsunami Hazard Assessment Hazard analysis at regional scale for landslide-induced tsunami
1.3	Induced seismicity hazard,
1.4	Investigating the crystal structure of high pressure carbonates
1.5	Modeling tools and volcano hazard mapping
1.6	Science communication
1.7	Multi hazard/risk in coastal areas
2	Space data for Earth Observation and Geodesy

2.1	Study of innovative ground segment and space segment, laser and retroreflector-based devices, AUGUSTUS PROJECT (Lead INFN, NASA-GFSC)
2.2	LANDSAT and ASTER data exploitation for Earth Science application, joint CAL/VAL activities.
2.3	Collaboration to test technological development on UAVS,
2.4	Collaboration between to obtain specific user needs (scientific and final User) for next Optical missions
2.5	InSAR processing and modeling applications
2.6	Collaboration on remote data exploitation for hydrology: potentials of altimetry and SWOT data for water resources management and flood risk analysis
2.7	Multi-platform application to Earth science processes
3	Environment including Energy
3.1	Research activities for Carbon Capture and Storage,
3.2	Coastal Studies
3.3	Land subsidence
3.4	Water resources
3.5	Protection of cultural heritages from geological hazard
3.6	Environmental Pollution monitoring (heavy metal and pm10)
3.7	Selection of mine sites suitable for long term monitoring, all-scale investigation of contaminant transfer
4	Oceanography and Climatology
4.1	Diurnal Sea Surface Temperature Variation in the Mediterranean Sea: COSIMO Project (Lead ENEA, NOAA-NESDIS and CNR-ISAC)
4.2	Development of climate models and investigation of natural and anthropogenic climate variability

Action Items/Milestones

ID	**Action/Milestones**	**Lead**	**Time**	**Deliverable**
1	2016 USGS-INGV half yearly meeting in Rome	INGV	June 28	Review of USGS-INGV work plan
1	2016 USGS-INGV meeting on risk communication	USGS-INGV	June 29-July 1	Report on the meeting in risk communication
1	2016 Meeting on volcanology in Seattle USA, organized by USGS	USGS	November 15-19,2016	Report
1/3	2016 Meeting between ISPRA and USGS in Reston, USA	USGS-ISPRA	July 20	Report
3	ENEA-DOE Definition of for Joint research plan of activities in Carbon Capture & Storage (CCS)	ENEA-DOE	June 2016-June 2017	ENEA – DOE MOU
4	Meeting CNR/ENEA and US government institutions including NOAA & USGS	CNR/ENEA NOAA-USGS	Fall 2016	
2	USGS-INGV meeting in USA to discuss cal/val activities and visit USGS-EROS data Centre	USGS-INGV	July 2016	Report
3	Sub-group mining areas: UNICA-USGS Kick-off meeting	Unica/USGS	June – Nov 2016	Report
3	Selection of suitable sites, and planning of activities	Unica/ USGS	October 2016	Report with detailed description
3	Preliminary field work (depending on specific local conditions)	Unica/Unifi/ USGS	Fall 2016-Spring2017	Report with preliminary results

This action plan is a preliminary statement of intent among the named parties and is not legally binding. Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

12th U.S.-Italy Joint Commission Meeting on Science and Technology Cooperation

4. WG on Life Sciences - LS

Italy	Unites States of America
Co-chair ***Giovanni Leonardi*** ***Director General of Research and Innovation in Healthcare*** ***Ministry of Health***	***Co-chair*** ***Cole Donovan*** ***Science Policy Coordinator for Europe*** ***U.S. Department of State***
Participants	
Federal Agencies / Ministries/ National Labs	
Ministry of Health, National Institute of Health (ISS) Scientific Institute for Research and Care (IRCCS)	HHS, DOS
Universities (also University consortia, University associations)	
UNIROMA1	
Other actors (Clusters, tech district, PPP, Industries, NPO, Associations)	
Farmindustria, Assobiomedica, Assobiotec, Cluster ALISEI (advanced life sciences Italy)	

Priorities:	
1	Assess opportunities for future collaborations in priority areas
2	Assess collaborative opportunities related to Health and Life Sciences for Italy's Presidency of the G7 Agenda
3	Examine opportunities to support and enhance advancements in cancer research
4	Consider basic, translational and applied research needs for vaccine development, antibiotic development, and research to help combat the spread of antimicrobial resistance
5	Identify co-funding mechanisms based on specific research needs
6	Work together with third countries
Topic Areas:	
1	Cancer
2	Brain Research
3	Rare Diseases
4	Genomics and Genetics
5	Vaccine Development
6	Anti-Microbial Resistance
7	Diabetes

Actions/Milestones

ID	WBS	Action/Milestones	Lead	Time	Deliverable
1		Preliminary Conference Call with U.S. health policy representatives on opportunities on science objectives in the context of the Italian G7 Presidency and other higher-level frameworks	Ministry of Health, HHS	–Q4 2016	Conf calls – report on the common areas of interest, opportunities and needs
2		Explore creating specific team work for each topic area to identify needs, opportunities and challenges in the context of the Italian G7 Presidency and other higher-level frameworks	Ministry of Health, DOS	Q1 2017	Technical information exchange and discussions

This action plan is a preliminary statement of intent among the named parties and is not legally binding. Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

12th U.S.-Italy Joint Commission Meeting on Science and Technology Cooperation

5. WG on Physics and Astrophysics - PA

Italy	Unites States of America
Co-Chair ***Dr. Antonio Masiero*** ***Vice-president*** ***National Institute of Nuclear Physics (INFN)***	***Co-Chair*** ***Dr. Jim Siegrist*** ***Director*** ***Dept. of Energy - Office of High Energy Physics (DoE)***
Participants	
Federal Agencies / Ministries/ National Labs	
INFN, ENEA, INAF, ASI	DOE, NSF, NIST
Universities (also University consortia, University associations)	
UNIROMA1, UNIPD, POLIBA	
Other actors (Clusters, tech district, PPP, Industries, NPO, Associations)	

Priorities:	
1	Long Baseline Neutrino Program at Fermilab and SURF (Sanford Underground Research facility) – contributions to LBNF and DUNE
2	Short Baseline Neutrino Program at Fermilab – coordination of DOE, INFN and CERN resources for completion and operation of the two detectors T600 and NArD
3	Particle Accelerators R&D; PIP-II
4	Dark Matter searches – plans for XENON1T (NSF-INFN) and DarkSide (DOE-INFN-NSF) at the Gran Sasso INFN underground laboratory
5	JLab DOE/INFN activities
6	Neutrinoless double beta decay: collaboration in the CUORE exp. at the Gran Sasso lab and for fure generation experiments in underground labs in Italy and US
7	Gravitational Waves: LIGO-Virgo collaboration and R&D for future searches in underground interferometers (Einstein Telescope) and space interferometers (eLISA)
8	Ground and Space Telescopes: dark energy, galactic and extragalactic sources, solar and planetary physics, exoplanets; high-energy astrophysics (compact stars and black holes, active galactic nuclei, particle acceleration under extreme conditions); nucleosynthesis, anti-matter; comic rays and neutrino astrophysics perspectives
9	INRRI : laser microreflector for Mars&Solar System Exploration
10	Quantum Communications and Information
11	Student Exchange Program between the U.S. and Italy for research in high energy physics.

Topic Areas:	
1	High Energy Physics
2	Nuclear Physics
3	Astrophysics
4	Quantum Communication & Information

Action Items/Milestones

ID	WBS	Action/Milestones	Lead	Time	Deliverable
1	1.1	Transport, installation and commissioning of the T600 detector		2017-2019	T600 as far detector in the SBN program at FNAL
2	1.2	XENON1T commissioning and data taking		2016-2018	XENON 1T commissioning

3	1.3	DarkSide – TDR and argon depleted		2017	Darkside TDR
4	2.1	CUORE implementation and commissioning (continuation of a common DOE, INFN, NSF CUORE Review Committee)		2016-2017	CUORE commissioning
5	3.1	AMS continuation of the data taking		2016-2018	Data on positron and antiproton fluxes
6	3.2	LIGO and Virgo data taking and common analysis		2016-2018	Searches of other gravitational wave signals through a common LIGO and Virgo data analysis
7	4.1	Two joint workshops (one each year in 2016 and 2017) on joint research programs in Quantum Communications and Information		2016-2017	2 Workshops on joint programs in QC and Information.

This action plan is a preliminary statement of intent among the named parties and is not legally binding. Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

12th U.S.-Italy Joint Commission Meeting on Science and Technology Cooperation

6. WG on Information and communications technology - ICT

Italy	Unites States of America
Co-Chair ***Dr. Mauro Annunziato*** ***Director, Smart Energy*** ***Energy Technology Dept. of National Agency for New Technologies, Energy and Sustainable Economic Develop (ENEA)***	***Co-Chair*** ***Dr. Chris Greer*** ***Director, Smart Grid and Cyber Physical Systems Program Engineering Laboratory*** ***National Institute of Standards and Technology (NIST)***
Participants	
Federal Agencies / Ministries/ National Labs	
ENEA, (MISE) CNR, ISPRA, INFN, INRIM, Area Science Park,(MIUR) IIT (Treasure)	NIST (DoC), NSF, DOT, DHS S&T, Networking and Information Tech Research & Dev Program (NITRD)
Universities (also University consortia, University associations)	
UNIAQ, POLITO, UNIBO, UniBocconi, POLIBA, UNIROMA1, UNIROMA2, ASAS, National Laboratory on Cyber Security (NLCS)– National Laboratory on Smart Cities - Inter-University Consortium CINI	Virginia tech (VT), Texas AM, Mississippi State University (MSU), Columbia, Cornell, NYU, MIT
Other actors (Clusters, tech district, PPP, Industries, NPO, Associations)	
Confindustria SI, FIWARE , Fondazione Brodolini, FBK, Genova Smartcities, Nat.Cluster Factory 4.0	GMF

Priorities:	
1	Identify of each topic area (see below) a specific subgroup with a co-chair team leader – each team will develop its own set of priorities, sub topic areas and main actions and milestones
2	Identify and support existing initiative and programmatic long term opportunities
3	leveraging multi-agency, multidisciplinary efforts and foster multilayer interactions (National Gov / intramural and extramural research (PI) / Private sector/ Loc gov)
4	Leverage S&T Centre of excellence collaborations, research consortia (PPP and industries) supporting translational research and innovation. Facilitate a common knowledge platform
5	Examine the opportunities to work with 3rd countries (EU – not EU – emerging countries) on common areas of interest or focalized initiative
6	Support education and researcher exchange
Topic Areas:	
1	IoT-Enabled Smart Cities (ENEA – NIST)
2	Cyber Security research (LNCS – Uniroma1 – NIST/ NRCI)
3	Advanced Manufacturing (National Cluster Factory 4.0 / CNR / NSF)
4	Cloud, Big Data; e-Infrastructure; High Performance Computing (INFN – NIST / NSF)
5	Robotics and Artificial Intelligence (IIT -NSF)
6	Quantum Metrology for ICT (INRIM – NIST)

Action Items/Milestones

ID	WBS	Action/Milestones	Lead	Time	Deliverable
1	**1**	**Setting up and management activities**			
2	1.1	Setting up sub working groups (team creation in each of the 6 topic areas)	NIST –ENEA-EMB IT	Spring – Fall 2016	Identify Team leaders and teams
3	1.2	Mid-term meeting (reporting activities done in the first year and foreseen activities for 2017) – opportunities for cross collaboration among sub groups	All Co- chairs and sub co-chairs	Nov 2016 -Feb 17	General Report on the status of the different Sub groups

4	1.2	Final meeting (reporting activities for the last 2 years & preparation for the next JCM – Dec 2017)	All Co- chairs and sub co-chairs	Sept/ Oct 2017	Biannual Report (recommendation for JCM 2018-19)
5	**2**	**Sub Group: IoT-Enabled Smart Cities**	NIST, ENEA		
6	2.1	IOT-Enabled Smart Cities Framework – new architecture standard assessment	NIST	2016-2017	White paper on IoT-Enabled smart cities standards
7	2.1.1	Launch the 'IOT Enabled Smartcities Framework': International Technical Working Group setting up and roadmap	NIST, ENEA	Mar/Apr 2016	Kick off Meetings – US @ NIST HQ and EU@ENEA HQ
8	2.1.2	Technical exchange meeting in coordination with the Smart Cities Innovation Summit in Austin (TX)	NIST (hosts)	June 2016	Application Framework, Consensus PPI, Deployed PPI + Collaboration web site
9	2.1.3	First draft review process	NIST – ENEA	Fall 2016	Review documents
	2.1.4	Final Draft and presentation results	NIST – ENEA	IIIQ 2017	Finalize white paper
10	2.2	Participation to the Global City Teams Challenge (GCTC) 2016 organized by NIST	NIST – ENEA Genova SC	2016 – 6-2017	Smart City pilot and technological demonstration
11	2.2.1	GCTC Tech Jam @NIST campus	NIST (host)	Mar 22-23, 2016	set up of 3 action cluster lead by Italian Cities
12	2.2.2	Global City Teams Challenge (GCTC) 3 Action cluster: ppp represented by Genova, Turin, Milan, Florence, Bari	NIST – City of Austin	13-14 June 2016	Tech demonstrator on Resilience, IoT architecture, energy microgrid
13	2.2.3	GCTC Tech Jam @NIST campus	NIST	Fall 2016	Clustering activities – aggregation phase
14	2.2.4	GTCT – final expo (venue tbc)	NIST	June 20 17	Highlight successful clusters or super clusters
15	**3**	**Sub Group: Cyber Security**			
16	3.1	Cyber Security Framework (CSF) alignment	NLCS- NIST		
17	3.1.1	Cybersecurity Framework Workshop 2016	NIST	Apr 2016	Italian contribution for CSF v1
18	3.1.2	International contribution to the US Cyber Security Framework (v1)	NIST - NLSC	1st Quarter 2017	Conference (tbd) IT
19	3.2	Cyber security research alignment			
20	3.2.1	Kick off meeting - Co-organized and hosted at Embassy of Italy in Wash. DC	NRCI - NLCS	Mar 2016	Definition of major priority areas of common interest
21	3.2.2	U.S Labs visit and technical information exchange meeting	NLCS – Emb IT	Fall 2016	Study tour on U.S. Cyber Labs
22	3.2.2	NLCS Annual meeting – @venezia IT	NLCS	Gen 2017	Programmatic roadmap
23	**4**	**Sub Group: Advanced manufacturing**			
24	4.1	Preliminary introductions/ presentations (identification of common areas of joint interest)			Set up the co-chair and teams – common areas
25	4.2	Technical Information Exchange Meeting organized at Embassy of Italy	Cluster FI, CNR, NSF	Nov 2016	WG material, cross-cutting interaction meeting
26	**5**	**Other Sub Groups**			
27	5.1	Preliminary introductions/ presentations (identification of common areas of interest)	Co-chairs and sub chairs	By Fall 2016	Setting up team and common areas of interest

This action plan is a preliminary statement of intent among the named parties and is not legally binding. Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

12th U.S.-Italy Joint Commission Meeting on Science and Technology Cooperation

7. WG on Technologies Applied to Cultural and Natural Heritage (TACNH)

Italy Co-Chairs		United States of America Co-chairs	
Marco Ciatti *MiBACT-OPD*	**Riccardo Pozzo** *CNR*	**Fenella France** *Library of Congress*	**Barbara Berrie** *National Gallery of Art*
Christian Carloni *University of Bologna*	**Patrizia, Asproni** *IPOCH2/Confindustria SIT*	**Odile Madden** *Museum Conservation Institute – SI*	**Jong–on Hahm** *George Washington University*
IT Coordinator: Vania Virgili (INFN)		**US Coordinator: Fenella France (LC)**	

Participants	
Federal Agencies / Ministries/ National Labs	
CNR, ENEA, INFN, INGV, IIT, ISPRA, MiBACT-OPD, CSGI	NIST, NEH, LC, NPS, NSF, SI, DOS
Universities (also University consortia, associations)	
UNIBO, UNICAL, UNIFI, UNIROMA1, POLIBA, POLIMI, POLITO	GWU, Maryland, Northwest, Notre Dame, Missouri, Columbia, Mississippi University, Cornell University (NY), NYU, MIT
Other actors (Clusters, tech district, PPP, Industries, museums)	
APRE, Confcultura, Confindustria SIT, SISMEL, ICCROM (International Centre for the Study of the and Restoration of Cultural Property), Accademia dei Lincei, PIN scrl	Archeological Institute of America (AIA), Mellon Foundation, American Association of Museums (AAM), AAMGOV, American Institute for Art and Conversation (AIC), Kress Foundation, Chicago Institute of Art, CLIR, Metropolitan Museum of Art NYC (MMA)

Priorities	
1	Strengthening cooperation in the framework of scientific research (with a specific focus on accessible digital infrastructures). Assess key initiatives/programs/ projects ready to support joint collaborations
2	Fostering mobility and exchange programs to support multi-disciplinary endeavors (education and training)
3	Sharing education programs and training courses through bilateral agreements between universities and institutions (or example in the form of IT-U.S. PhD Programs that lead to dual degrees)
4	Best practices exchange in public private partnerships (PPP) for cultural and creative sector (museums / heritage institutions).
5	Development of a portfolio of competences facilitating and leverage expertise, exchange and partnerships
6	Leveraging IT-U.S. Science and Technology (S&T) cooperation through identifying the framework of national, European, and international funding opportunities, including cooperation with third world countries.
7	Joint outreach and promotions actives (protecting our heritage – EUNIC program. MoU IT-US 2016-2021 on archeological items – multidisciplinary interactions with other WG (Earth Science / Information and Communications Technology (ICT) for smart cities)

Sub-Groups (SGs):
1. Education and PhD programs (IT leader: Christian Carloni, US leader: Jong-on Hahm)
2. Training, staff exchanges and pilot projects (IT leader: Marco Ciatti, US leader: Barbara Berrie)
3. Research Infrastructures, social and cultural innovation, and funding opportunities (IT leader: Riccardo Pozzo, US leader: Fenella France)
4. Cultural and creative industries, and cultural heritage management and use of new technologies (IT leader:

Patrizia Asproni, US leader: Odile Madden *(Fenella France acting 2016)*

Topic areas:

1. Innovative techniques and methods of cultural heritage (see matrix of competence)
2. Advance data sharing and coordination
3. Resilience of cultural heritage, including impact of climate change, outdoor conservation and natural/man-made disaster management
4. Advanced security and improved mobility of artefacts for research and industry.

Each topic areas will be analyzed from the different points of view of education (SG1), training and pilot projects (SG2), research infrastructures, funding opportunities, and impact (SG3), and then public engagement, industries and economic growth (SG4). The expertise, skills and innovative technologies of the matrix of competence (see appendix 1) will allow scientific and cultural community to investigate the topic areas with a holistic and multidisciplinary approach.

Action Items/Milestones 2016

ID	Action	Leader	Time	Milestone
1	Kick off - Co-Chair Meeting (Rome IT)	CNR	14 Jan 2016	Identification of new topic areas,
2	Research infrastructure and Working group discussions	Embassy of Italy	28-29 Jan 2016	US-Italy meeting
3	2016 Activities Meeting	NGA / MIBACT	7 Apr 2016	Meeting to define key actions for 2016
6	Meet with US funders to create cohesive approach	LC	Aug 9 2016	Briefing for inclusion of new partners
7	US federal agencies	LC	Sep 2016	Meeting to discuss support for disaster management
8	USA Event in support of Florence Flood	Embassy of Italy	Oct 2016	Public engagement
11	Symposium with new JCM WG members	Embassy of Italy	7 Dec 2016 (am)	Presentation of Italy, USA
12	JCM Working group meeting – sub working group discussions	Embassy of Italy	7 Dec 2016 afternoon	Determine specific collaborative projects
13	One-day workshop – Resilience: Lessons learned	Embassy of Italy	8 Dec 2016	Dissemination of knowledge
9	Development of a coordinated platform for sharing (internal and external)	CNR-OVI / US partners	Ongoing	Knowledge, communication and dissemination platform
19	Complete matrix of competences for identifying joint pilot projects	All	Sep 2016	Matrix
16	Assessment of common education and training courses	UniBO / All	Ongoing	Report and MoU template
17	Survey on PPP models/best practices	Confindustria SIT	Ongoing	Report

Appendix 1 Matrix of competence

Starting from the classification of the elements of columns (technologies and methods) and of rows (typologies of cultural heritage), a matrix of competences will be designed. IT and US participants will be asked to fill an on-line form according to the identified items of the matrix. A tentative form is provided in Appendix 4. It will be made available in the internal (for filling the form) and external section of the platform that will be set up (see Action items/milestones). A final e-report will show the information collected in the matrix (databases) according to technologies & methods, typologies of cultural heritage, and value chain (e.g. diagnostic, conservation, use, etc.)

	Typologies of Cultural Heritage	Innovative Technologies and Methods
1	Movable cultural artifacts	Survey techniques
2	Immovable cultural heritage	Diagnostic and monitoring techniques
3	Natural landscape	Synergies with industries
4	Digital cultural heritage / digital humanities / cultural data	Repair, stabilization and preservation/conservation techniques
5	Museum and cultural heritage sites and institutions – exhibits and aggregate collections	
6	Tangible and social heritage	

This action plan is a preliminary statement of intent among the named parties and is not legally binding. Funding of scientific projects discussed during this meeting and the resulting scientific cooperation would be conducted without the exchange of funds. The ability of each country to undertake the scientific projects listed in the Action Plan is subject to the availability of funds and resources in each country.

12th U.S. - Italy Joint Commission Meeting on Science and Technology Cooperation

LIST OF PARTICIPANTS								
ACRONYM	FULL NAME DESCRIPTION	1. AMN	2.ATFS	3.ES	4. LS	5. PA	6.ICT	7. TACNH
ITALY - National Federal Agencies/ Ministries/National Labs								
MIUR	Ministero dell'Istruzione, dell'Universita' e della Ricerca *(Ministry of Instruction, University and Research)*							
ASP	Area Science Park						•	
ASI	Agenzia Spaziale Italiana *(Italian Space Agency)*			•		•		
CNR	Consiglio Nazionale delle Ricerche *(National Research Council)*	•		•			•	•
CNR - DIITET	Dipartimento Ingengeria, ICT e Tecnologie per l'Energia dei Trasporti *(Engineering, ICT and Technologies for Energy and Transportation)*						•	•
CNR - DISBA	Dipartimento di Scienze Bio-Agroalimentari *(Department of Bio-Food Sciences)*		•					
CNR - DSB	Dipartimento di Scienze Biomediche *(Department of Biomedical Sciences)*	•			•			
CNR -DSCTM	Dipartimento di Scienze Chimiche e Tecnologie dei Materiali *(Chemical Sciences and Materials Technology)*	•						
CNR- DSU	Dipartimento Scienze Umane e Sociali, Patrimonio Culturale *(Social Sciences and Humanities, cultural heritage)*							•
CNR - DTA	Dipartimento del Sistema Terra e Tecnologie per l'Ambiente *(Earth System Science and Environmental Technologies)*			•				
CNR - ICCOM	Istituto di Chimica dei Composti Organometallici *(Institute of chemistry of organometallic compounds)*	•						
CNR - IMM	Istituto per la Microelettronica e I Microsistemi (*Institute for microelectronics and microsystems)*	•						
CNR - IPCB	Istituto per I Polimeri Composti e Biomateriali *(Institute for Polymeric Materials, Composites and biomaterials)*	•						
CNR -ISAC	Istituto di Scienze dell'atmosfera e del clima *(Institute of atmospheric science and climate)*			•				
CNR - ISAFOM	Istituto per isistemi agrioli e forestali del Mediterraneo *(Institute for agricultural and forestry systems of the Mediterranean)*		•	•				
CNR - ISM	Istituto di Struttura della Materia *(Institute of Structure of Matter)*	•						
CNR - ISMAC	Istituto per lo studio delle Macromolecole *(Institute for macromolecular studies)*	•						

AMN: Advanced Materials
ATFS: Agriculture Technologies
ES: Earth Sciences

ICT: ICT Technologies
LS: Life Sciences

PA: Physics and Astrophysics
TACNH: Technologies applied to Cultural and Natural Heritage

12th U.S. - Italy Joint Commission Meeting on Science and Technology Cooperation

LIST OF PARTICIPANTS								
ACRONYM	**FULL NAME DESCRIPTION**	**1. AMN**	**2.ATFS**	**3.ES**	**4. LS**	**5. PA**	**6.ICT**	**7. TACNH**
CNR - ISOF	Istituto per la Sintesi Organica e la Fotoreattivita' (*Institute of Organic Synthesis and Photoreactivity)*	•						
CNR - ISTEC	Istitutio di Scienza e Tecnologia dei Materiali Ceramici (*Institute of Science and Technology for Ceramics)*	•						
INAF	Istituto Nazionale di Astrofisica (National Institute of Astrophysics)					•		
INFN	Istituto Nazionale di Fisica Nucleare (National Institute of Nuclear Physics)			•		•	•	•
INGV	Istituto Nazionale di Geofisica e Vulcanologia *(National Institute of Geophysics and Volcanology)*			•				•
INRIM	Istituto Nazionale di Ricerca Metrologica (*National Institute of Metrological research)*						•	
MISE	Ministero dello Sviluppo Economico *(Ministry of Economic Development)*							
ENEA	Agenzia Nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile *(Natioanal Science for New Technologies, Energy and Sustainable Economic Development)*	•	•	•		•	•	•
MINAMB	Ministero dell'Ambiente e della Tutela del Territorio e del Mare *(Italian Ministry of the Environment, Land and Sea)*			•				
ISPRA	Istituto Superiore per la Protezione e la Ricerca Ambientale *(National Institute for Environmental Protection and Research)*		•	•			•	•
MIBACT	Ministero dei Beni e delle Attivita' Culturali e del Turismo *(Italian Ministry of Cultural Heritage and Activities and Tourism)*							•
OPD	Opificio Pietre Dure *(Semi-precious stones workshop)*							•
MEF - DT	Ministero dell'Economia e della Finanza - Dipartimento del Tesoro *(Ministry of Economy and Finance, Treasure Department)*							
IIT	Istituto Italiano di Tecnologia *(Italian Institute of Technology)*	•		•			•	•
MIN. SALUTE	Ministero della Salute (Italian Ministry of Health)							
IRCCS	Istituto di Ricovero e Cura a Carattere Scientifico *(Scientific Institute for Research and Care)*				•			
ISS	Istituto Superiore di Sanita' *(National Institute for Health)*				•			
MIPAAF	Ministero delle Politiche Agricole Alimentari e Forestali *(Italian Ministry of Agricultural, Food and Forestry Policies)*							

AMN: Advanced Materials
ATFS: Agriculture Technologies
ES: Earth Sciences

ICT: ICT Technologies
LS: Life Sciences

PA: Physics and Astrophysics
TACNH: Technologies applied to Cultural and Natural Heritage

12th U.S. - Italy Joint Commission Meeting on Science and Technology Cooperation

LIST OF PARTICIPANTS								
ACRONYM	**FULL NAME DESCRIPTION**	**1. AMN**	**2.ATFS**	**3.ES**	**4. LS**	**5. PA**	**6.ICT**	**7. TACNH**
CREA	Consiglio per la Ricerca in Agricoltura e l'analisi dell'economia agraria (Council for Agricultural Research)		•					
OTHERS								
CMCC	Centro Euro-Mediterraneo sui Cambiamenti Climatici *(Euro-Mediterranean Center on Climate Change)*			•				
CSGI	Consorzio Interuniversitario per lo sviluppo dei Sistemi a Grande Interfase*(Research Center for Colloids and Nanoscience)*							•
USA - National Federal Agencies/ Ministries / National Labs								
OSTP	White House - Office of Science and Technology Policy		•				•	
DHS	U.S. Department of Homeland Security						•	
DOC	U.S. Department of Commerce						•	
NOAA	National Oceanic and Atmospheric Administration			•				
NIST	National Institute of Standards and Technology	•				•	•	•
DOE	U.S. Department of Energy			•		•		
DOS	U.S. Department of State		•		•			•
DOT	U.S. Department of Transportation						•	
HHS	Department of Health and Human Services				•			
LoC	Library of Congress							•
NASA-GISS	NASA - Goddard Institute for Space Studies		•					
NASA-JPL	NASA - Jet Propulsion Laboratory			•				
NEH	National Endowment For The Humanities							•
NPS	National Park Service							•
NSF	National Science Foundation	•	•			•	•	•
SI	The Smithsonian Institution							•
USDA	U.S. Department of Agriculture		•					
NCAUR	National Center for Agricultural Utilization Research		•					
ARS	U.S. Agricultural Research Services		•					
USGS	U.S. Geological Survey							
DOD	U.S. Department of Defence						•	
AFOSR	Airforce Office of Science and Research	•						
AFRL	Aiforce research laboratory	•						
ARL	Army Research Laboratory	•						
NRL	U.S. Naval Research Laboratory	•						
ITALY - Universities (also University Consortia, University Associations)								
CINI	Consorzio Interuniversitario nazionale per l'informatica *(National Interuniversity Consortium for Informatics)*						•	

AMN: Advanced Materials
ATFS: Agriculture Technologies
ES: Earth Sciences
ICT: ICT Technologies
LS: Life Sciences
PA: Physics and Astrophysics
TACNH: Technologies applied to Cultural and Natural Heritage

12th U.S. - Italy Joint Commission Meeting on Science and Technology Cooperation

LIST OF PARTICIPANTS								
ACRONYM	**FULL NAME DESCRIPTION**	**1. AMN**	**2.ATFS**	**3.ES**	**4. LS**	**5. PA**	**6.ICT**	**7. TACNH**
CSNL	Laboratorio Nazionale di Cyber Security *(Cyber Security National Laboratory)*						•	
SMART CITIES	Laboratorio Nazionale Smart Cities & Communities *(National Laboratory on Smart Cities & Communities)*						•	
PIN	Polo Universitario Citta' di Prato							•
PoliBA	Politechnic University of Bari					•	•	•
PoliMI	Politechnic University of Milan							•
PoliTO	Politechnic University of Turin			•			•	•
UNIAQ	University of Aquila						•	
UNIBO	University of Bologna	•	•				•	•
UNICA	University of Cagliari			•				
UNICAL	University of Calabria						•	•
UNIFI	University of Florence	•						•
UNIPD	University of Padova					•		
UNIPG	University for Foreigners of Perugia			•				
UNIMIB	University of Milan "Bicocca"			•				
UNITS	University of Trieste	•						
UNIUD	University of Udine	•						
UniBocconi	University of Milan "Bocconi"						•	
UniRoma1	University of Rome "La Sapienza"	•	•	•	•	•	•	•
UniRoma2	University of Rome "Torvergata"	•					•	
USA - Universities (also University Consortia, University Associations)								
COLUMBIA	University of Columbia		•				•	•
CORNELL	Cornell University		•				•	•
GWU	University of George Washington							•
JHU	Johns Hopkins University	•						
MIT	Massachussets Institute of Technology						•	•
MSU	Michigan State University		•					
MSU	Mississipi State University						•	•
MTU	Michigan Technolgical University			•				
MU	University of Missouri							•
ND	University of Notre Dame							•
NMSU	New Mexico State University		•					
Northwest	Northwest University							•
NYU	New York University						•	•
OSU	Ohio State University		•					

AMN: Advanced Materials
ATFS: Agriculture Technologies
ES: Earth Sciences
ICT: ICT Technologies
LS: Life Sciences
PA: Physics and Astrophysics
TACNH: Technologies applied to Cultural and Natural Heritage

12th U.S. - Italy Joint Commission Meeting on Science and Technology Cooperation

LIST OF PARTICIPANTS								
ACRONYM	FULL NAME DESCRIPTION	1. AMN	2.ATFS	3.ES	4. LS	5. PA	6.ICT	7. TACNH
UNI MIAMI - RSMAS/MPO	University of Miami - Rosentiel School of Marine and Atmospheric Science			•				
TAMU	Texas A&M University	•					•	
UCAR	University Corporation for Atmospheric Research			•				
UC-DAVIS	University of California, Davis			•				
UCLA	University of Los Angeles		•					
UFL	University of Florida		•					
UNCA	University of North Carolina Asheville			•				
UNV	University of Nevada			•				
URI	University of Rhode Island			•				
UMD	University of Maryland							•
VT	University of Virginia Tech	•					•	
WISC	University of Wisconsin - Madison		•					
ITALY - Other Actors (Clusters, tech districts, PPP, Industries, NPO, Associations)								
Accademia dei Lincei	Accademia dei Lincei - Universita' di Perugia *(Lincei Academy - University of Perugia)*							•
APRE	Agenzia per la Promozione della Ricerca Europea (Agency for the promotion of European Research)							•
Assobiomedica	Italian Association for Biomedical and Diagnostic Technology				•			
Fondazione Brodolini	Brodoloni Foundation						•	
Confcultura	Confcultura							
Confindustria	Confindustria						•	
Confindustria SIT	Confindustria Servizi Innovativi e Tecnologici							•
Farmindustria	Italian Association for pharmaceutical companies (member of Confindustria)				•			
FBK	Fondazione Bruno Kessler (Bruno Kessler Foundation)						•	
Federalimentare-CLAN	Italian food and drink association		•					
FIWARE Consortium	FIWARE Consortium						•	
Genova Smartcities	Genova Smartcities						•	
ICCROM	Centro Internazionale di studi per la conservazione ed il restauro dei beni culturali (Italian Center for the Study of the Preservation and Restoration of Cultural Property)							•
SISMEL	Societa' internazionale per lo studio del Medioevo Latino (Society for the Study of Medieval Latin Culture)							•
USA - Other Actors (Clusters, tech districts, PPP, Industries, NPO, Associations)								
Advance Manufacture	Advance Manufacture Coalition						•	
AIC	American Institute for Art and Conversation							•

AMN: Advanced Materials
ATFS: Agriculture Technologies
ES: Earth Sciences
ICT: ICT Technologies
LS: Life Sciences
PA: Physics and Astrophysics
TACNH: Technologies applied to Cultural and Natural Heritage

12th U.S. - Italy Joint Commission Meeting on Science and Technology Cooperation

LIST OF PARTICIPANTS								
ACRONYM	FULL NAME DESCRIPTION	1. AMN	2.ATFS	3.ES	4. LS	5. PA	6.ICT	7. TACNH
AAM	American Association of Museums							•
AIA	Archeological Institute of America							•
ARTIC	Art Institute Chicago							•
CLIR	Council on Library and Information Resources							•
GMF	German Marshall Fund						•	
Kress	Kress Foundation							•
Mellon	Mellon Foundation							•
Metro Lab Initiative	Metro Lab Initiative						•	
MMA	Metropolitan Museum of Art (NYC)							•
RB ASSOCIATES	RB Todd Consulting Engineers							•

AMN: Advanced Materials
ATFS: Agriculture Technologies
ES: Earth Sciences
ICT: ICT Technologies
LS: Life Sciences
PA: Physics and Astrophysics
TACNH: Technologies applied to Cultural and Natural Heritage