

**HUMANITARIAN TECHNOLOGY:  
SCIENCE, SYSTEMS AND GLOBAL IMPACT**  
12 – 14 May 2015 | Cambridge, MA USA  
[www.humanitariantechnology.org](http://www.humanitariantechnology.org)



**HUMTECH  
2015**

**CONFERENCE PROGRAM**



## Deloitte Humanitarian Innovation Program Prepared to act

[www.deloitte.com/humanitarian](http://www.deloitte.com/humanitarian)



Through the Deloitte Humanitarian Innovation Program, the professionals of Deloitte member firms and humanitarian organizations will co-create and implement solutions to the sector's most pressing challenges.

By collaborating with local, national and international humanitarian leaders – combining our diverse skills and expertise – we will enhance the ability of the sector to prepare for, and respond to, crises.

**Be prepared for new ways of thinking. Be prepared for new ways of collaboration and innovation.  
Be prepared for positive change.**

The Deloitte Humanitarian Innovation Program: ***Prepared to act.***

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Humanitarian Technology: Science, Systems and Global Impact 2015 was organized to bring together academics, policymakers, government, nonprofits, and the private sector to showcase recent research and field work accomplishments and to discuss how technology can help improve humanitarian efforts. Emphasis was placed on topics that have a broad global humanitarian impact and are a result of systematic and evidence-based research and field work. Given the technological advances revolutionizing humanitarian action and international development, it is an appropriate time for a conference dedicated to this topic.

HumTech2015, held in Boston/Cambridge, MA, takes advantage of a vibrant innovation district, home to high-tech firms and leading academic institutions. The program features technical sessions and technology and policy panels on all aspects of technology, from science to systems, in support of humanitarian action. These were carefully selected so that topics can be uniquely presented within an operationally-relevant context, drawing as much as possible from real-world experiences in humanitarian operations and logistics, disaster relief, emergency management, disease management and international development. We strived to achieve this through invited talks and panel sessions presented by leading researchers, field workers and government officials.

HumTech2015 is organized across six conference tracks:

- Track A: Humanitarian Assistance and Disaster Relief, focuses on technology-based solutions that help protect and provide relief to communities facing man-made and natural disasters.
- Track B: Health and Disease Management, focuses on topics of relevance to global health research.
- Track C: Public Safety and Emergency Management, focuses on technical challenges facing emergency responders and innovative technologies that enable more effective response.
- Track D: Emerging Technologies, focuses on advanced research and technology development that promises to create smart cities and resilient communities, and alleviate the difficulties faced by developing communities. Subject topics were sought to span sensors, networks and systems, optical and rf devices, ad-hoc networks, additive manufacturing, renewable energy, social media and big data analytics, unmanned platforms, autonomy and intelligent systems, and resilient systems.
- Track E: International Development, Poverty Alleviation and Food Security, focuses on ways that technology can improve living standards across the globe. Technological enhancements in infrastructure and transportation, as well as sustainable food production and distribution, can play a significant role in improving the quality of life of the impoverished and hungry.
- Track F: Open Track on Water, Energy, Agriculture, Policy, Security, Education, ...  
This track focuses on topics across technology, social and economic policy, public-private partnerships, and social entrepreneurship.

**Our hope is that the Humanitarian Technology: Science, Systems and Global Impact international conference series will promote social value creation through collaboration and technical exchange.**

We are deeply grateful to our sponsors, authors, speakers, poster and exhibit presenters, members of the organizing committee, reviewers, session chairs, and student volunteers for contributing to the success of HumTech2015.

**Monday, 11 May 2015**

7:00 pm – 9:00 pm Check-In and Cocktail Hour

**The Loft, 1st Floor****Tuesday, 12 May 2015**

8:00 am Registration Opens

8:45 am Opening Remarks

**Opening Plenary Session****Florence Luscomb Ballroom**

8:50 am The Hon. Richard A. Serino  
Distinguished Visiting Fellow at Harvard University School of Public Health  
Former Deputy Administrator of Federal Emergency Management Agency (FEMA)

9:30 am Vincenzo Bollettino  
Executive Director  
Harvard Humanitarian Initiative

10:10 am *break*

**Morning Keynote Session: Humanitarian Innovation****Florence Luscomb Ballroom**

10:30 am *"Creating the Environment for Humanitarian Innovation"*  
Tarun Sarwal  
Head of the Innovation Initiative  
International Committee of the Red Cross (ICRC)

11:00 am *"USAID: Development Innovation And You"*  
Alexander J. Moseson, Fellow (Panel Session Chair & Moderator)  
U.S. Global Development Lab at USAID

Panelists: Alexis Bonnell Director, Office of Engagement and Communications, USAID  
Eric King Innovation Specialist, USAID

12:00 pm *Lunch - on your own in Harvard, Central, or Kendall Square, Cambridge*



**Afternoon Special Panel Session:  
Civilian-Military Coordination During Humanitarian Disasters**

**Florence Luscomb Ballroom**

1:30 pm – 2:30 pm David Polatty (Panel Session Chair & Moderator)  
Professor  
U.S. Naval War College

Panelists:

Brittany Card	Program Coordinator, Harvard Humanitarian Initiative
CPT Robert T. Clark	Commanding Officer, U.S. Navy Navy Reserve, Chief of Naval Operations Operations and Plans (N3/N5)
Michael Lappi	Director of Field Operations, Harvard Humanitarian Initiative
Michael Marx	Senior Civil-Military Coordination Advisor, UN OCHA

2:30 pm *break*

**Contributed Talks Session**

2:45 pm – 4:15 pm Session B1. Health and Disease Management

**Robert B. Taylor Ballroom**

2:45 pm – 4:15 pm Session D1. Emerging Technologies

**Florence Luscomb Ballroom**

4:15 pm *break*

**Contributed Talks Session**

4:30 pm – 6:15 pm Session A1. Humanitarian Assistance  
and Disaster Relief

**Florence Luscomb Ballroom**

4:30 pm – 6:15 pm Session E1. International Development,  
Poverty Alleviation and Food Security

**Robert B. Taylor Ballroom**

**Session B1. Health and Disease Management**

**2:45 pm – 4:15 pm, Robert B. Taylor Ballroom**

A Mobile Platform for Participatory Assessment of Development Programs and a Case Study in Uganda	Brandie Nonnecke, Sanjay Krishnan, Amit Akula, Alison Cliff, Allen Huang, Angela Lin, Shir Nehama, Laura Byaruhanga, Dorothy Masinde, Camille Crittenden, and Ken Goldberg (University of California, Berkeley)
Understanding the Health Disaster: Research Design for the Response to the 2014 West African Ebola Outbreak	Tina Comes (University of Agder), Bartel Van de Walle (University of Tilburg), Laura Laguna Salvado, Matthieu Luras (University of Toulouse, Mines Albi)
Deployment of Caller Location Services within Sierra Leone's 117 Ebola Response Centre	Peter Eyres (Netfuse), Leo Brown (Netfuse Telecom), Hana Rohan (eHealth Africa)
Virtual Learning and Distributed Simulation to Transform Pedagogy Applied to Infection Control Training in West Africa	Thomas Gale (Plymouth University), Nicholas Mellor (Masanga Mentor Ebola Initiative), Richard Allan (Mentor Initiative), David Luke (The MENTOR Initiative), Jonathan Meadows, Geoff Eaton (Masanga Mentor Ebola Initiative), Martin Roberts, Arunangsu Chatterjee (Plymouth University), Simon Mardell (University of Manchester)
AREA: A Mobile Application for Rapid Epidemiology Assessment	Ewart De Visser, Amos Freedy, Elan Freedy, John Payne (Perceptronics Solutions, Inc.)
HackEbola With Data: On the Application of a Hackathon Format for Timely Data Analysis	Finale Doshi-Velez (Harvard University), Yael Marshall (Princeton University)
Pathways and Barriers to Diabetes Screening: Observations from Rural Kenya	Eran Brown, Nicholas Natoli, Richard McLaughlin, Khanjan Mehta (Pennsylvania State University)

**Session D1. Emerging Technologies**

**2:45 pm – 4:15 pm, Florence Luscomb Ballroom**

The Syria Airlift Project: Swarming Cargo Delivery in Conflict Zones	Mark Jacobsen, Jessie Mooberry (The Syria Airlift Project)
All the Protesters Fit to Count: Using Unmanned Aerial Vehicles to Estimate Protest Crowd Size	Austin Choi-Fitzpatrick (Central European University)
Mobile App Development for Crisis Data	Anubhav Jain, Julius Adebayo, Eduardo De Leon, Weihua Li, Lalana Kagal, (MIT CSAIL)
Using Analytics and Social Media for Monitoring and Mitigation of Social Disasters	Horia-Nicolai Teodorescu (Romanian Academy)
New Artificial Intelligence Tools for Deep Conflict Resolution and Humanitarian Response	Daniel Olsher (Integral Mind Technologies)
Tackling the Challenges of Situational Awareness Extraction in Twitter with an Adaptive Approach	Haji Mohammad Saleem, Faiyaz Al Zamil, Derek Ruths (McGill University)
Cyber-Physical Systems Can Make Emergency Response Smart	Justyna Zander (HumanoidWay), Pieter Mosterman (MathWorks)

**Session A1. Humanitarian Assistance and Disaster Relief**

**4:30 pm – 6:15 pm, Florence Luscomb Ballroom**

Kenya Inter Agency Rapid Assessment Mechanisms (KIRA) – Bottom Up Humanitarian Innovation from Africa	Minu Limbu (UNICEF, ERCIS), Leticia Wanyagi (RedR UK, Kenya), Kioko Kiilu (Kenya Red Cross Society), Berryl Ondiek (UNOCHA Kenya)
The Challenges of Real-Time Information Management During the Ebola Virus Epidemic – Experiences of the Red Cross Movement in Managing Safe and Dignified Burials in Guinea, Liberia and Sierra Leone	Amanda McClelland, Lauren Bateman, Vlad Sorin Cozma (International Federation of Red Cross and Red Crescent Societies), Colby Wilkason (American Red Cross)
One Size Fits All? Using Standard Global Tools in Humanitarian Logistics	Marianne Jahre (MIT), Ozlem Ergun (Northeastern University), Jarrod Goentzel (MIT)
Lessons Learned from the Older People in Case of Great East Japan Earthquake and Tsunami of 2011	Nahoko Okamoto (Japanese Red Cross), Chieko Greiner (Kobe University), Paul Godfred (Help Age International)
Reaction: Building Emergency Housing that Actually Arrives in Time for the Emergency	Graeme Waitzkin, Michael McDaniel (Reaction Housing)
Crowdsourcing Solutions for Disaster Response: Examples and Lessons for the US Government	Samuel Bendett, David Becker (National Defense University)
Refugee Situation Awareness: Camps and Beyond	Brian Tomaszewski (Rochester Institute of Technology), Fahed Alhaj Mohamad, Yusuf Hamad
Integrated OpenStreetMap & OpenDataKit Survey Assessment Tools	Jubal Harpster (Spatial Development International)

**Session E1. International Development, Poverty Alleviation and Food Security**

**4:30 pm – 6:15 pm, Robert B. Taylor Ballroom**

Technology Adoption under Fit Risk: What Should Development Project Donors and Managers Know?	Moon Parks (University of California, Berkeley), Sangeeta Bansal (Jawaharlal Nehru University), David Zilberman (University of California, Berkeley)
Harvesting Fresh Water From Fog in Rural Morocco: Research and Impact Dar Si Hmad's Fogwater Project in Aït Baamrane	Leslie Dodson, Jamila Bargach (Dar Si Hmad)
Piloting a Healthy Street Food Venture in Kenya: Lessons Learned	Yixin Sun, Krista Liguori, Paulina Moussavi, Khanjan Mehta (Pennsylvania State University)
Chang'aa Culture and Process: Detecting Contamination in a Killer Brew	Kelly Carey, Joanna Kinney, Molly Eckman, Abdalla Nassar, Khanjan Mehta (Pennsylvania State University)
The MAM'Out Project	Christophe Vergeron, Audrey Tonguet-Papucci (Action Contre la Faim)
Measuring Multidimensional Poverty in a Complex Environment; Identifying the Sensitive Links	Lee Voth-Gaeddert, Daniel Oerther (Missouri University of Science and Technology)
Engineering in Solidarity: Hybridizing Knowledge Systems in Humanitarian and International Development Work	Syed Imran Ali (University of California, Berkeley)
Distracted Driving among Teens: How Can We Educate and Protect Our Youth?	Lemuria Carter, Maranda McBride (North Carolina A&T State University)

**Wednesday, 13 May 2015**

8:00 am Registration Opens

**Featured Talks: Disaster Response Operations****Florence Luscomb Ballroom**

8:30 am *"Team Rubicon Technology Overview"*  
 Stephen Hunt  
 Chief Information Officer  
 Team Rubicon

8:45 am *"Human Agent Collaborations (HACs): The Future Force Multiplier"*  
 David Jones  
 Chief Executive Officer  
 Rescue Global

**Morning Plenary Talk****Florence Luscomb Ballroom**

9:05 am *"Humanitarians in the Sky: UAV Response to Nepal Earthquake"*  
 Patrick Meier  
 Director of Social Innovation  
 Qatar Computing Research Institute

9:45 am *break***Morning Keynote Session: Emerging Technologies  
Technology for the Billions****Florence Luscomb Ballroom**

10:00 am *"5 Trends to Watch in Data Collection Technology"*  
 Jake Kendall  
 Deputy Director of Research and Innovation, Financial Services for the Poor  
 Bill and Melinda Gates Foundation

10:20 am *"Tech for Next 5 Billion"*  
 Ramesh Raskar  
 Associate Professor  
 MIT Media Lab

**Geospatial Global Reach**

10:40 am *"Seeing a Better World: Enabling Humanitarian Assistance by Sharing Imagery, Information, and Insight Across the US Government and Humanitarian Organizations"*  
 Andre Kearns  
 Senior Director, US Government Product Management  
 DigitalGlobe



11:00 am *"Skybox + Google: Indexing the Earth for Social Impact"*

John Clark  
Skybox Partner Development  
Google

11:20 am *"Geoscientists Without Borders® - Why Geoscience Tools Rock for Humanitarian Goals"*

Rhonda L. Jacobs  
Geoscientists Without Borders Program Manager  
Society of Exploration Geophysicists

**Invited Lecture**

11:40 am *"Solar Energy Research: Past, Present and Future"*

Greg Wilson  
Director, National Center for Photovoltaics  
National Renewable Energy Laboratory (NREL)

12:00 pm *Lunch - on your own in Harvard, Central, or Kendall Square, Cambridge*

**Featured Talk**

**Florence Luscomb Ballroom**

1:30 pm *"Partnership for Transition: Supporting Local Peace Technology Initiatives"*

Safy Nurhussein  
Geographic Information Specialist, Office of Transition Initiatives  
USAID

**Special Session: Impact Investing and Social Entrepreneurship**

**Florence Luscomb Ballroom**

2:00 pm *"Financing Innovation for Humanitarian Intervention"*

Miguel Granier  
Founder and Managing Director  
Invested Development

**Invited Panel: Impact Investing in Humanitarian Technology: The Impact Investor Relationship**

2:20 pm – 3:00 pm Dr. Joseph Franceschi (Panel Session Chair & Moderator)  
iNGOvation, Inc.

Panelists:	Justin Desrosiers	Director of Investments, Investors' Circle & Principle, PCC Funds
	Janine Elliott	Venture Development Program Manager, VentureWell
	Christina Tamer	Program Officer, Venture Development and Investments, VentureWell

**continued on the next page**

**Poster, Exhibit and Networking Session**

3:00 pm – 6:00 pm Technical Posters and Technology Demonstrations

**Jerome C. Hunsaker Ballroom****Exhibit Session Keynotes on Corporate Citizenship****Florence Luscomb Ballroom**4:00 pm *“No Easy Answers: Supporting Humanitarian Efforts During Ebola and Beyond”*

Rebecca E. Curzon

Senior Program Manager

IBM Corporate Citizenship and Corporate Affairs

4:30 pm *“Mobilizing Information Technology needs for Ebola and Nepal”*

Lewis Curtis

Director, Microsoft Services Disaster Response

World Wide Public Sector Services

**The Human Element****Florence Luscomb Ballroom**

7:45 pm Screening and Meet The Filmmakers

*More information on page 13*

<b>Technical Posters</b>	
Medium Navy: A Trilateral Capability Building for HA/DR in Asia Pacific	Serkan Tezgel (Turkish Naval War College)
E-Governance: Silencing Vulnerable Populations	Wesley Hill (University of Cape Town)
Integrating and Applying Technology to Responses to Recent Major Natural Disasters in the Philippines	Michael Ross (The Louis Berger Group), Joy Santiago and Alfredo Mahar Lagmay (National Institute of Geological Science, University of the Philippines)
From Simple to Complex to Chaotic; What Level is Right for You?	Lee Voth-Gaeddert, Daniel Oerther (Missouri University of Science and Technology)
Problem Framing and Solving Methods in Humanitarian Engineering and Technology	Andrea Mazzurco (Purdue University)
Improved Source-separated Urine Management and Nutrient Recovery During Continuous Flow Applications	Jeanette Neethling, Tesfayohanes Yacob, Karl Linden (University of Colorado, Boulder)
Utilizing SMS Technology to Reduce Healthcare Commodity Shortages	Eunae Yoo (Arizona State University)
COLLEX: Solving Collective Action Problems in Development Contexts	Daniel Olsher (Integral Mind Technologies)

Technical Posters	
An Empirical Analysis of Disaster Operations Management and a Research Agenda	Niratcha Grace Tungtisanont, Aleda Roth, Yann Ferrand (Clemson University)
ShelterBox: A Decade of Disaster Relief	Jamie Rundle (Sheffield Business School)
Evaluation of the Impact of a Five-year Capacity Building Initiative on Mobile App Development in Senegal	Christelle Scharff (Pace University), Chun Hei Cheung (MobileSenegal), Jean-Marie Preira (ESMT)
Optimizing Software Tools for Search and Rescue Operations	April Anlage, Nirali Jantrania, Glenna Manns, Patrick Maribojoc (University of Virginia)
Semi-Automated Family Estimation (SAFE): A Graph-Based Approach for Leveraging Open Source and Social Media Data for Disaster Response	Danelle Shah, Christian Anderson, Paul Breimyer, Stephanie Foster, Kelly Geyer, J. Daniel Griffith, Andrew Heier, Arjun Majumdar, Olga Simek, Nicholas Stanisha, Frederick Waugh (MIT Lincoln Laboratory)
Du'anyam: Empowering Women in Indonesia through Wicker Weaving	Jiwon Park (MIT), Azalea Ayuningtyas (Harvard School of Public Health), Amanda Wu, Lauren Uhr, and Francisca Susan (MIT)
Hands-on Science Activities: An Inaugural Teacher Training Workshop in Greater Accra	Heather Beem (MIT)
Smart Environment Monitoring System by Employing Wireless Sensor Networks on Vehicles For Pollution Free Smart Cities	Anam Mazhar (Islamia University of Bahawalpur), Muhammad Saqib Jamil, Abdullah Ahmed, Ahsan Ikram, Hamza Tariq, Syed Adil Abrar (University of South Florida), Usman Munnawar, Sahar Atif (University of Engineering and Technology, Lahore)
Impact of Mass Customization of Information Technology Under Turbulent Environments	Abdo Shabah (Universite de Montreal)
Low Cost Wireless Sensor Network Based Intelligent Retina Controlled Computer	Muhammad Saqib Jamil (University of South Florida), Muhammad Atif Jamil (Huawei Technologies), Anam Mazhar (Islamia University of Bahawalpur), Abdullah Ahmed (University of South Florida), Usman Munnawar (University of Engineering and Technology, Lahore)
Factors Affecting UN Response to Natural Disasters: What Determines Allocation of the Central Emergency Response Fund?	Tyler Robinson, Thiago Oliveira (Harvard School of Public Health)
GEAR & SAHARA: Application of Spatial Decision Analysis Technology for Humanitarian Assistance and Disaster Relief	Matthew E. Bates, Richard W. Curran, Michelle C. Hamilton, and John A. Nedza (US Army Corps of Engineers), Patrick Doody (Reinventing Geospatial, Inc.), Heather M. Bell, Erin P. Hughey, and Paul Kailiponi (Pacific Disaster Center)

# ENGINEERING A WORLD OF ACTION

At Lockheed Martin, we believe that our nation's continuing prosperity hinges on a robust pipeline of engineering talent in systems engineering and emerging, multidisciplinary technology fields. Today, we face challenges: technical talent for future jobs, engineering workforce to address complex challenges, and technical leadership to drive solutions and remain competitive in the marketplace.

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## The Human Element: Screening and Meet The Filmmakers

Wednesday, May 13th

Doors open at 7:45 pm  
Florence Luscomb Ballroom

The people of the mountains of Thailand are filled with joy, pride, beauty...and pain. Well-meaning American experts try to fix planting and water problems, but are humbled and transformed by working alongside their Thai partners. Come discover the human element through this exciting, honest, professionally produced 45-minute short documentary. Editor and producer Jocelyn Motter applies her experience on Discovery Channel series and major motion picture trailers, Alex Moseson brings a decade of humanitarian engineering experience to bear, and Eric Teti lends his award-winning cinematography.

Watch the film, and engage the filmmakers in candid Q&A.  
Refreshments will be served, and the first 50 attendees will receive a gift from Thailand!





## Poster, Exhibit and Networking Session

Wednesday, May 13th 3pm – 6pm

### Technology Exhibits

#### DigitalGlobe

DigitalGlobe, a leading provider of commercial high-resolution imagery and advanced geospatial solutions, helps decision-makers better understand our changing planet to save time, resources, and lives. Sourced from the world's leading constellation, our imagery-based solutions aid humanitarian missions in Seeing a Better World.



#### Rescue Global

Rescue Global is a UK charity, US not-for-profit and International NGO. We champion a systematic and holistic approach to disaster risk reduction and response, throughout all phases of the disaster cycle: mitigation, preparedness, response and recovery. Our mission is to: Save Lives. We do this by empowering decision makers who work in the Disaster Risk Reduction and Response environment. We also conduct disaster reconnaissance, liaison and mentoring missions worldwide.



#### Ushahidi

Ushahidi is a global non-profit technology company with origins in Kenya. Ushahidi's mission is to change the way information flows in the world and empower people to make an impact with open source technologies, cross-sector partnerships, and ground-breaking ventures.



#### Signal Program | Harvard Humanitarian Initiative

The Harvard Humanitarian Initiative's Signal Program, which researches how information technologies can be used during humanitarian and human rights emergencies, is exhibiting two of their research projects. First, a machine learning algorithm, known as the Tukul Detector, which is currently being developed to detect and count the number of traditional African huts present in a satellite image. Second, the Signal Program is showcasing their recently released "Typing Guide: Interpreting Satellite Imagery of Displaced Population Camps." This publication aims to assist volunteers and new analysts working to "type," or identify, structures present in displaced persons camps.



HARVARD  
HUMANITARIAN  
INITIATIVE



### Aquagenx

The Aquagenx Compartment Bag Test (CBT) is a simple, portable water quality test kit that lets anyone, anywhere determine if drinking water contains E. coli bacteria and poses a health risk. It is ideal for on-site testing in disaster settings because it generates quantified test results without requiring electricity, labs or extra equipment such as incubators and UV lamps. In the wake of a disaster, sewage, septage and animal waste are E. coli sources that find their way into drinking water. With the CBT, disaster response providers and humanitarian organizations around the world quickly and easily test for water quality to ensure safe drinking water without having to send water samples to a lab.



### Lua

Lua is a secure mobile app, utilized by fast moving organizations, designed to provide a more accountable and efficient way for employees to coordinate and communicate with each other. The communication data provided by the Lua Insights analytics dashboard impacts the bottom line by identifying communication bottlenecks, broken processes, and communication hotspots. Lua is currently being used by the US Army, eBay, and Kaiser Permanente.



### Emergency Telecommunications Cluster

The Emergency Telecommunications Cluster (ETC) is a global network of organizations that work together to provide shared communications services in humanitarian emergencies. Within 48 hours of a disaster, the ETC provides vital security communications services and voice and internet connectivity to assist humanitarian workers in their life-saving operations. Within four weeks, ETC services are expanded for continued emergency relief.



### Uplift Aeronautics

Humanitarian drones to end the use of starvation and medical deprivation as weapons of war.

### **Dharma Humanitarian Solutions**

Dharma Humanitarian Solutions provides data collection and analysis tools for humanitarian organizations. Its mobile data collection tool has been successfully deployed in the Middle East and has drastically reduced the time it takes to get information back from the field. We believe that humanitarian organizations need better tools that help facilitate data collection and analysis. We bring our experience as data scientists, security experts, and front-line humanitarian workers to our products to ensure that they are powerful, secure, and ready to be deployed in any situation.



### **First Mile Geo**

First Mile Geo is a software company that enables organizations to collect, visualize, and monitor data in any language, through multiple methods, and on the fly. It links structured forms and surveys directly to dashboards and analytical tools designed for the non-techy.



### **Geographic Information Science and Technology (GIST) Group**

#### **Oak Ridge National Laboratory (ORNL)**

The Geographic Information Science and Technology (GIST) Group at the Oak Ridge National Laboratory has been a pioneer in the development, implementation, and application of systems, science, and technology for geographic information since 1969 – well before the advent of commercial GIS. In the DOE national laboratory system, it is the only computational research group focused on advancing the theory and applications of geospatial science and technology. Today, the GIST group is an internationally renowned R&D organization of over thirty diverse scientific professionals who bring together a wide range of expertise ranging from GIS and remote sensing technologies to key domain sciences.



### **Vecna Cares Charitable Trust**

Vecna Cares Charitable Trust provides technology and training to support and strengthen health systems in underserved areas for better health outcomes. We build systems that close the information gaps between patients, caregivers and decision makers.





#### **Federation for Internet Alerts**

Simply put, Federation for Internet Alerts' mission is to help its Partners in striving to get crucial alerts in front of the right people at the right time and in the right location. Our mission is to be a facilitator for Internet technology and services collaboration among companies, non-governmental organizations, and alerting authorities to promote standards-based, all-hazards, all-media, authoritative alerting to individuals in societies worldwide. For instance, some FIA Partners have established a precise, uniform notification system that dynamically renders emergency alert information and automatically disseminates it to the appropriate population via the Internet, anywhere in the world and in the user's preferred language.



#### **HUMANIT3D**

Built on public health evidence and guided by multiple years of field experience, HUMANIT3D was designed and developed to improve disaster response by allowing geo-located information capture and management, even in the most austere environments. HUMANIT3D collects, filters, processes and distributes information through the most advanced mobile technologies. Its integrated ecosystem allows on the fly data collection, real-time mapping with UAVs, direct annotations in 2D and 3D environments, and enhanced collaboration in a resilient and secure network.



#### **Skybox Imaging + Google**

In today's connected world, every organization is deeply impacted by events across the globe on a daily basis. Skybox Imaging was founded on the premise that an ability to better understand these phenomena could fundamentally change the way humanity makes decisions on a daily basis — increasing the profitability of businesses and improving the welfare of societies worldwide.



#### **DrivenData**

DrivenData brings the transformative power of data science to the social sector. We partner with impact organizations to run open, online competitions that engage our global community of data scientists in building algorithms for social good.

**Thursday, 14 May 2015**

8:00 am Registration Opens

**Morning Keynotes****Florence Luscomb Ballroom**

8:30 am *“Delivering Protective Equipment for the Liberia Ebola Response”*  
 Jarrod Goentzel  
 Founder and Director  
 MIT Humanitarian Response Lab

8:50 am *“On the Nature of Information Management in Complex and Natural Disasters”*  
 Tina Comes  
 Associate Professor  
 Centre for Integrated Emergency Management, University of Agder

**Special Panel Session: Information Technology for Humanitarian Operations****Florence Luscomb Ballroom**

9:10 am – 10:10 am Jarrod Goentzel (Panel Session Chair & Moderator)  
 Founder and Director  
 MIT Humanitarian Response Lab

Panelists: Martijn Blansjaar Head of Logistics and Supply, Oxfam Great Britain  
 Keith Chibafa Service Delivery Manager, World Vision International  
 Jonathan Jackson Founder & Chief Executive Officer, Dimagi

10:10 am *break - Sponsored by Deloitte*

**Special Panel Session: Scaling Innovations to Change Lives****Florence Luscomb Ballroom**

10:40 am – 11:40 am Kyra Kaszynski (Panel Session Chair & Moderator)  
 Client Relationship Executive  
 Deloitte Services Limited UN Relations

Panelists: Stephen Coller Senior Manager, Monitor Deloitte  
 Jay Corless Senior Director for Innovation, UN Foundation Innovation Lead, United Nations Foundation  
 Brooke Cutler Deputy Director, Mobile Alliance for Maternal Action



**Featured Talk**

**Florence Luscomb Ballroom**

11:40 am *“Bridging the Infrastructure Divide: Connecting mHealth to the Healthcare Continuum”*  
Deborah Theobold  
Co-Founder and Executive Director  
Vecna Technologies and Vecna Cares

12:00 pm *Lunch - Sponsored by Resolution Solar* **Jerome C. Hunsaker Ballroom**  
**Best Paper and Best Poster Awards**  
**Featured Lunch Speaker: Bill Lawton, Chief Operating Officer at Resolution Solar**

**Featured Talks**

1:30 pm *“Expanding Competency-based Credentialing in Health Care: Digital Badges for Global Health Delivery”* **Florence Luscomb Ballroom**  
Rebecca Weintraub  
Assistant Professor in Medicine and Faculty Director, Global Health Delivery Project  
Harvard University

1:30 pm *“Humanitarian Telemedicine. A Role For Technology And Space!”* **Robert B. Taylor Ballroom**  
Peter Hulsroj  
Director  
European Space Policy Institute (ESPI)

**Contributed Talks Session**

1:45 pm – 3:30 pm Session A2. Humanitarian Assistance and Disaster Relief **Robert B. Taylor Ballroom**

1:45 pm – 3:30 pm Session D2. Emerging Technologies **Florence Luscomb Ballroom**

3:30 pm *break*

**Contributed Talks Session**

3:45 pm – 5:00 pm Session C2. Public Safety and Emergency Management **Florence Luscomb Ballroom**

3:45 pm – 5:00 pm Session F2. Open Track:  
Water, Energy, Agriculture, Policy, Security, Education, ... **Robert B. Taylor Ballroom**

5:00 pm Closing Remarks

**Session A2. Humanitarian Assistance and Disaster Relief 1:45 pm – 3:30 pm, Robert B. Taylor Ballroom**

Digital Humanitarianism and the Emerging Risk Landscape	Jennie Phillips (University of Toronto)
A Decision-Support Tool for Post-Disaster Debris Operations	Ozlem Ergun (Northeastern University), Alvaro Lorca (Georgia Institute of Technology), Melih Celik (Middle East Technical University), Pinar Keskinocak (Georgia Institute of Technology)
Multi-Channel Mobile Crisis Response Platforms: Lessons From Leveraging Voice, Web and Text Services in Syria, Gaza & Libya	Jacob Korenblum, Maggie McDonough (Souktel Mobile Innovations)
Standardized Application for Emergency Response ‘SAFERchart’ Concept	Steven Purcell, Rachel Allen, Monica Onyango (Boston University School of Public Health), Lalana Kagal (MIT Computer Science & Artificial Intelligence Laboratory)
Conception of a Simulation Model for Business Continuity Management Against Food Supply Chain Disruptions	Frank Schätter, Ole Hansen, Maja Herrmannsdörfer, Marcus Wiens, Frank Schultmann (KIT-IIP)
Social Media and Humanitarian Logistics: The Impact of Task-Technology Fit on New Service Development	Lemuria Carter (North Carolina A&T State University), Jack Crumbly (Tuskegee University)
Leveraging Existing Tools to Help Social Enterprises	Nagasushma Devarapalli, Silvia Figueira (Santa Clara University)
Supply Chain Outsourcing in Response to Manmade and Natural Disasters in Colombia, a Humanitarian Logistics Perspective	Juan Sánchez Gil (University of Delaware)
3 Words to Address the World	Giles Rhys Jones (What3Words)

**Session D2. Emerging Technologies****1:45 pm – 3:30 pm, Florence Luscomb Ballroom**

Mobile Health Technology for Global Health: Lessons from the Field	Bobby Jefferson (Futures Group)
Adoption and Continued Use of Mobile Technology: An Analysis of CommCare Data	Rashmi Dayalu, Jeremy Wacksman, Mengji Chen, Melissa Loudon, Neal Lesh (Dimagi, Inc.)
A Raspberry in Sub-Saharan Africa? Chances and Challenges of Raspberry Pi and Sensor Networking in Humanitarian Logistics	Dorit Dr. Schumann-Bölsche, Anna-Mara Schön (University of Applied Sciences Fulda)
Empowering Community Health Workers with Inkjet-printed Diagnostic test strips	Allison Ranslow, Daniel Crompton, Khanjan Mehta, Peter Butler, Jim Adair (Pennsylvania State University)
Breath and Air Analysis: Applications in Resource-Poor Settings	Alison Riley, Sarah Krisher, Khanjan Mehta (Pennsylvania State University)
Promoting Food Security Through Improved Analytics	Colin Gounden (Via Science), John Irvine and Richard Wood (Draper Laboratory)
Data Science Competitions for Social Good	Peter Bull, Gregory Lipstein, Isaac Slavitt (DrivenData)
Drones for International Development: A Paradigm Shift Ahead for the Cyber-Physical Gap in International Humanitarian Aid	Mysha Sissine, Edward Robinson, Bobby Jefferson, Ali Juma, Mwenda Gitonga, Christopher Njoroge (Futures Group)
In situ and Remote Sensing Networks for Environmental Monitoring and Global Assessment of Leptospirosis Outbreaks	Andreas Skouloudis, David Rickerby (European Commission JRC)

**Session C2. Public Safety and Emergency Management**
**3:45 pm – 5:00 pm, Florence Luscomb Ballroom**

Social Media for Situational Awareness Joint-Interagency Field Experimentation	Darren Appling, Ann Carpenter, Leigh McCook, Erica Briscoe (Georgia Institute of Technology)
Emergency Relief Planning and Management Through Dynamic Agent-based Reallocation and Tasking (DART)	Athena Johnson, Joe Mola (Perceptronics Solutions)
Performance Assessment of Geo-triggering in Small Geo-fences: Accuracy, Reliability, and Battery Drain in Different Tracking Profiles and Trigger Directions	Mohammed Alsaqer, Brian Hilton, Tom Horan, Omar Aboulola (Claremont Graduate University)
Supporting First-Responders in Infrastructure-less Environments	Aurelio Monarrez, Gurminder Singh (Naval Postgraduate School)
Urban Search and Rescue Situational Awareness using DIORAMA Disaster Management System	Aura Ganz, James Schafer, Jingyan Tang, Zhuorui Yang, Jun Yi (University of Massachusetts), Gregory Ciottone (Harvard University)
A Framework for Cascading Innovation Upstream the Humanitarian Supply Chain Through Procurement Processes	Ira Haavisto, Gyöngyi Kovács (Hanken School of Economics)

**Session F2. Open Track: Water, Energy, Agriculture, Policy, Security, Education, ...**
**3:45 pm – 5:00 pm, Robert B. Taylor Ballroom**

Evaluation of Microbial Water Quality Tests for Humanitarian Emergency and Development Settings	Susan Murcott, (MIT), Meg Keegan, Allison Hanson, Akshay Jain (Texas A & M University), Jason Knutson (Wisconsin State Water Resources), Jenny Tanphanich, Teng Ke Wong (Singapore University of Technology and Design)
Modified Auger for Pit Latrine Desludging in Developing Countries	Tracey Sisco (North Carolina State University)
Preliminary Design of a Low-Cost Greenhouse with Open Source Control Systems	Brian Groener, Nile Knopp, Kent Korgan, Rowen Perry, Jonathan Romero, Kody Smith, Albert Stainback, Austin Strzelcyk, Justin Henriques (James Madison University)
Optimal Land Use at Developing Communities	Carla Palencia (Agregados De La Sabana Ltda)
Gender Data Gaps: Structural Equation Modeling Offers an Alternative to Collecting More Data	Sarah Oerther (St. Louis University)
Exploiting High Resolution Imagery to Estimate Population Distribution	Jeanette Weaver, Jacob McKee, Eric Weber, Eddie Bright, Brian Moore (Oak Ridge National Laboratory)
Water Risk Mapping in the Information Age	Jason Roncancio (Dirección Territorial de Salud)



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# DEVELOPMENT ENGINEERING

THE JOURNAL OF  
ENGINEERING IN ECONOMIC DEVELOPMENT

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*Development Engineering* (Dev Eng) is an open access, interdisciplinary journal applying engineering and economic research to the problems of poverty.

Published studies must present novel research motivated by a specific global development problem. The journal serves as a bridge between engineers, economists, and other scientists involved in research on human, social, and economic development.

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- Novel technologies or tools for measuring behavioral, economic, and social outcomes in low-resource settings.
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# DEVELOPMENT ENGINEERING Co-MENTORSHIP PROGRAM



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A key objective of Development Engineering is to promote high-quality research conducted by scholars from developing countries. To achieve this goal, we have created a co-mentorship program that pairs authors from low- and middle-income countries with peers in more established research groups.

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## Speaker Biographies

**Vincenzo Bollettino**  
**Executive Director**  
**Harvard Humanitarian Initiative**

Dr. Bollettino is Executive Director of the Harvard Humanitarian Initiative. Dr. Bollettino has twenty years of professional and academic experience in international politics, humanitarian action, human security and peacebuilding. He has spent that past ten years of his career at Harvard University in administration, teaching, and research. Prior to joining HHI in 2008, Dr. Bollettino worked with the Program on Humanitarian Policy and Conflict Research and taught courses on research design, peace building, and international politics at the Harvard Extension School.



Dr. Bollettino came to Harvard University on a post-doctoral fellowship with the Program on Non-violent Sanctions and Cultural Survival at the Weatherhead Center for International Affairs. He completed his Ph.D. at the Graduate School of International Studies at the University of Denver and has over fifteen years of experience on human security, the security of humanitarian aid workers, conflict research, and humanitarian studies. He has managed several large training and policy development initiatives related to international humanitarian law, responsibility to protect, and peace building operations and has designed several reporting systems and program evaluations for field security measures in complex emergencies.

Dr. Bollettino has authored several publications related to disaster management and humanitarian assistance, and has consulted with numerous international nongovernmental organization and UN agencies. His most recent research focuses on civil-military engagement in response to natural disasters.

**John Clark**  
**Skybox Partner Development**  
**Google**

John Clark is on the Partner Development team at Skybox, an emerging business unit within Google. At Skybox, John is focused on connecting partners and end-users with imagery-based analytics for both humanitarian and commercial applications using Skybox technology.



**Tina Comes**  
**Associate Professor**  
**Centre for Integrated Emergency Management**  
**University of Agder**

Tina Comes is Associate Professor at the Department of ICT, University of Agder, Norway and Deputy Director of the Centre for Integrated Emergency Management. She studied Mathematics, literature and philosophy. After receiving her Ph.D. on the topic of distributed scenario-based multi-criteria decision support from the Karlsruhe Institute of Technology (KIT), she was head of a research group on Risk Management (2011-2013). She was heading the group on socio-economic impact assessment of the Centre for Disaster Management and Risk Reduction Technology (CEDIM), a joint initiative by the German Research Centre for Geosciences and KIT and lead the Risk Management Team at the KSRI Supply Chain Lab, to which she is still affiliated.



Tina's research aims at supporting decision-making and risk management in complex, dynamic and uncertain situations, when experts and decision-makers with different backgrounds and skills need to build a consensus that must be acceptable for various actors across organizations. To this end, she develops methods and tools designed to bridge the gap between formal models, expert systems and simulations and transparent, understandable and ready-to-use evaluations and presentations of results. Particularly, she focuses on the development of collaborative and distributed decision support tools, which are designed to enhance understanding, communication and compliance. Tina's main research areas include modeling of supply chains and logistics networks, critical infrastructures and the impact of their disruption, crisis management, policy-making and design of viable strategies in a dynamic context as well as multi-criteria decision analysis. To cover this domain, she combines her formal and analytic background in mathematics with programming skills, knowledge in economics, decision theory and cognition.

Tina is author of various papers that are published in international journals and conferences. She has organized tracks at different international conferences such as HICSS or AMCIS, was Programme Chair of the ISCRAM2013 Conference, Program Director of the 2014 ISCRAM Summer School, Conference Chair of ISCRAM2015 and is Chair of the ISCRAM Events Committee.

**Lewis Curtis**  
**Director, Microsoft Services Disaster Response**  
**Microsoft**

As the Director of Microsoft Services Disaster Response, Lewis is accountable for the safety and success of all Microsoft services teams and ground operations for disaster response worldwide. Lewis has been a long time technology architect and program manager for many years at Microsoft leading initiatives in datacenter design, cyber security and disaster recovery and resiliency operations. Before Microsoft, Lewis worked for Sun Microsystems and Digital Equipment Corporation.



Outside of work, He and his wife Linda have been married for over 15 years and reside on their 12 acre farm in Duvall WA raising dairy goats, chickens, honey bees and hogs.

**Rebecca E. Curzon**  
**Senior Program Manager**  
**IBM Corporate Citizenship and Corporate Affairs**

Rebecca E. Curzon is Senior Program Manager with IBM Corporate Citizenship and Corporate Affairs, with leadership roles in business integration, philanthropy, and volunteer enablement. Ms. Curzon manages IBM's global strategy in humanitarian disaster response, applying IBM technology, solutions, expertise and innovation to critical needs in the aftermath of disaster; and developing strategic partnerships around mitigation of the effects of disaster using technology for smarter and more resilient cities. She represents IBM on the US Chamber of Commerce Foundation's Disaster Assistance and Recovery Working Group. She is on the board of directors of the American Red Cross of Massachusetts.



Ms. Curzon also leads IBM's global citizenship Grant-making Center of Excellence, providing IBM's worldwide citizenship team with training, tools, resources, and best practices for awarding strategic grants from IBM's growing portfolio of Impact Grant offerings, all in support of local nonprofit and education partners as they address societal issues and achieve results.

Ms. Curzon has been part of global teams to integrate IBM's strategies in corporate citizenship into the business and to leverage business offerings for community benefit. In 2003 she helped launch the On Demand Community, IBM's flagship

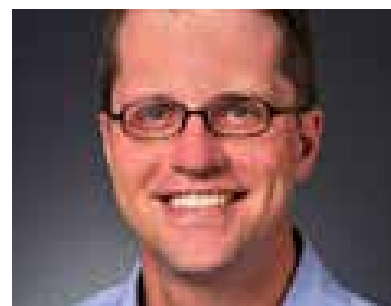
global initiative and website to support IBMers as they volunteer in their communities. For nine years she led creation of all content for the site, including dozens of activity kits for use in volunteering in schools and nonprofits, which were made available to the public ([ibm.com/volunteer](http://ibm.com/volunteer)) in honor of IBM's Centennial Celebration of Service in 2011. These free kits focus on topics ranging from STEM and "Watson" (the gameshow-winning computer) to mentoring and nonprofit capacity building. Ms. Curzon came to IBM from Lotus Development Corporation where she managed volunteerism and philanthropic programs focusing on nonprofit use of Lotus software. Previously she was with the Smithsonian Institution. She is a certified Project Management Professional through the Project Management Institute. She has volunteered actively for decades at schools, nonprofits, and in her faith community.

### **Jarrold Goentzel**

#### **Director**

#### **MIT Humanitarian Response Lab**

Jarrold Goentzel is founder and director of the MIT Humanitarian Response Lab, which strives to make supply chains more responsive to human needs. His research focuses on supply chain design and management, transportation procurement and planning, humanitarian needs assessments, information management and the use of technology to facilitate decision-making. Based in the MIT Center for Transportation and Logistics, Dr. Goentzel has developed graduate-level courses in supply chain finance, international operations and humanitarian logistics and has extensive experience using simulation games to develop intuition and leadership skills. He also directs the MIT Renewable Energy Delivery project.



Previously, Dr. Goentzel was Executive Director of the MIT Supply Chain Management Program, where he was responsible for design and management of the nine-month professional master's degree program. He joined MIT in 2003 to establish the MIT-Zaragoza International Logistics Program, which developed novel education, research, and outreach programs with the Zaragoza Logistics Center in Spain. Dr. Goentzel has also led supply chain consulting and product development teams with a large ERP company and technology startups.

Dr. Goentzel received a Ph.D. from the School of Industrial and Systems Engineering at the Georgia Institute of Technology, a M.S. in applied mathematics from Colorado State University, and a B.A. in mathematics from Tabor College with studies at the Technical University of Budapest (Hungary).

### **Miguel Granier**

#### **Founder and Managing Director**

#### **Invested Development**

Miguel is the Founder and Managing Director of Invested Development, which launched in July 2009. Before founding Invested Development, he was the founding Investment Manager for First Light Ventures, a seed-stage social impact investment fund affiliated with Gray Ghost Ventures in Atlanta, Georgia.

Miguel began his career in social enterprise as a loan officer for ACCION New York in 2003 and continued that work as an independent consultant specializing in economic development and microfinance. In addition to his work in microfinance and social enterprise, Miguel has worked for the insurance giant Fidelity National Financial in New York and Delter Business Institute in Beijing, China.



He holds a Master's Degree in City and Regional Planning from the Georgia Institute of Technology with a specialization in Entrepreneurship and Economic Development.

**Peter Hulsroj**  
**Director**  
**European Space Policy Institute (ESPI)**

Peter Hulsroj obtained law degrees from the University of Copenhagen and Harvard Law School. Mr. Hulsroj then qualified as a practising attorney with the large Danish law firm Bech-Bruun. After this he served as a contracts officer in ESA and, for 14 years, as the Head of Contracts and Legal Affairs of the international organisation Eumetsat. This was followed by a stay in Vienna as the Legal Adviser of the Comprehensive Nuclear-Test-Ban Treaty Organization. In 2008 Mr. Hulsroj was appointed the Director of the Legal Affairs and External Relations Directorate of the European Space Agency, where he was until taking up the post as the Director of ESPI in 2011. Mr. Hulsroj has published a significant number of articles on public international law, space law and international governance in peer-reviewed journals and recently published a book, *The Principle of Proportionality*, on ethical, legal and governance issues.



**Stephen Hunt**  
**Chief Information Officer**  
**Team Rubicon**

Steve Hunt is a scientist, engineer, infantryman, manager, and construction worker. He holds a few degrees including a PhD in Electrical Engineering. Steve was a paratrooper with the 82nd Airborne and a reservist. Before joining TR, he spent 25 years at MIT Lincoln Laboratory working in support of US national interests and has extensive experience in operations and technical R&D. For about 10 years Steve has supported humanitarian work inside and outside the US. Prior to being CIO, Steve was the Director of Field Operations for Region I.



**Rhonda Jacobs**  
**Program Manager, Geoscientists Without Borders**  
**Society of Exploration Geophysicists**

Rhonda Jacobs serves as Program Manager of the Geoscientists Without Borders® (GWB) humanitarian program. She works to promote project best practices, HSSE standards and sustainable outcomes from every project. In addition, her role is to expand the young but very successful program through multiple methods of outreach.

Prior to joining the SEG to create the GWB program in 2008, Rhonda worked as a research program manager for the U.S. Department of Energy – Office of Fossil Energy National Energy Technology Laboratory in Tulsa. She also worked for the Department of Interior, Office of Surface Mining and Reclamation and Enforcement as regulatory specialist. Before government employment, she worked in several US Regions as a geoscientist with a major oil exploration and development company.



**David Jones**  
**CEO**  
**Rescue Global**

David Jones is the Chief Executive of Rescue Global, an international NGO specialising in Disaster Risk Reduction and Response, based in London and New York. David has spent his career in the private, uniformed and civilian emergency services sectors, specialising in operational command, control and instruction. He is a multi-disciplinarian and qualified instructor in strategic emergency and disaster risk reduction and response, incident command, multi-





agency command support, search and rescue operations and contingency planning. He leads operations and training teams all over the world, for which he has received awards from the British Royal Family and numerous heads of state. David is on the Leadership Council of the United Nations (UN) Foundation, Humanitarian Awards, and the Editorial Panel of the Crisis Response Journal. He is an advisor in the fields of Disaster Risk Reduction and Response at nation state level, as well as project lead on disaster management development projects for the governments of the USA, India and the Philippines. He is a guest speaker at the Emergency Planning College (Cabinet Office, United Kingdom) and the United States National Search and Rescue Academy, Federal Agencies (NSARA). David co-supervises PhD Candidates at the University College London (UCL), in the fields of Disaster Management and Response.

He is one of the co-founders of Rescue Global.

**Andre Kearns**  
**Senior Director, US Government Product Management**  
**DigitalGlobe**

Andre Kearns is currently Senior Director, US Government Product Management for DigitalGlobe and leads the effort to identify, incubate and scale new value added products that support US Government mission areas. In this role, he is focused on helping organizations better leverage DigitalGlobe's portfolio of imagery, information, and insight products and capabilities to anticipate and respond to global threats and humanitarian crises and disaster events. An accomplished executive, Andre has focused his career in technology, primarily serving in product marketing and strategy roles.



Andre holds an MBA from Harvard University and a BA in Business Administration from Morehouse College. He lives in Washington, DC with his wife and two children and offices out of the DigitalGlobe Herndon office.

**Jake Kendall**  
**Deputy Director of Research and Innovation, Financial Services for the Poor**  
**Bill and Melinda Gates Foundation**

Jake Kendall is a Deputy Director of Research and Innovation on the Financial Services for the Poor team working with the Policy and Research initiative. His work focuses on managing and coordinating the research activities of FSP including managing FSP's major research grants and engaging with the researcher community. Previous to joining the Foundation, he spent time as a researcher with the Consultative Group to Assist the Poor (CGAP) housed in the World Bank. Jake holds a PhD in Economics from UC Santa Cruz and a BS in Physics from MIT. Just after graduating from MIT he volunteered for two years in Zambia as a fisheries extension agent with the US Peace Corps. Jake has also worked as a Brand Analyst for a major advertising firm, a technical salesperson for two high tech start ups, and, throughout his youth, a salmon fisherman in Alaska.



**Patrick Philippe Meier**  
**Director of Social Innovation**  
**Qatar Computing Research Institute**

Patrick Meier (PhD) is an internationally recognized thought leader on the application of new technologies for crisis early warning, humanitarian response and resilience. He presently serves as Director of Social Innovation at the Qatar Computing Research Institute (QCRI) where he develops and prototypes Next Generation Humanitarian Technologies using Social Computing, Big Data Analytics, Artificial Intelligence and Machine Learning. Patrick is also a UNICEF Humanitarian Innovations Fellow, a





Rockefeller Foundation and PopTech Fellow, a Harvard Humanitarian Initiative (HHI) Fellow, a National Geographic Emerging Explorer and a member of the Academy of Achievement (AoA). His influential blog iRevolution has received over 1.2 million hits and his LinkedIn profile is in the top 1% of most-viewed profiles.

Prior to QCRI, Patrick co-founded and co-directed the Harvard Humanitarian Initiative's (HHI) Program on Crisis Mapping & Early Warning and served as Director of Crisis Mapping at Ushahidi. He has consulted extensively for several international organizations including the United Nations and the World Bank. He co-founded CrisisMappers, MicroMappers, Digital Humanitarians, the award-winning Standby Task Force and sits on the Board of iLab Liberia. Patrick is an accomplished speaker, having given talks at the White House, UN, Google, Harvard, Stanford and MIT. He has also presented at major international conferences including the Skoll World Forum, Club de Madrid, Mobile World Congress, PopTech, Where 2.0, TTI/Vanguard, SXSW and several TEDx's. In 2010, he was publicly praised by President Bill Clinton for his digital humanitarian efforts. Given his unique expertise, Patrick is often interviewed by the media, which has included the New York Times, Washington Post, BBC, The Economist, Wall Street Journal, UK Guardian, CNN, NPR and Wired. He is also a distinguished scholar, holding a PhD from The Fletcher School, a Pre-Doctoral Fellowship from Stanford University, an MA from Columbia University and EAP from UC Berkeley. In addition, he was a Research Fellow at the Peace Research Institute, Oslo (PRIO) and holds an advanced certificate in complexity science from the Santa Fe Institute (SFI). Patrick has given numerous guest lectures and has taught several professional, graduate and undergraduate courses. He writes the widely respected iRevolution blog and tweets at @patrickmeier.

**Safy Nurhussein**  
**Geographic Information Specialist**  
**Office of Transition Initiatives**  
**U.S. Agency for International Development (USAID)**

Safy Nurhussein is a Geographic Information Specialist at the Office of Transition Initiatives (OTI), a USAID office supporting U.S. foreign policy goals by advancing peace and democracy in countries experiencing crisis, conflict & political transition. His work focuses on helping fellow OTI staff and partners to collect, analyze and visualize information for decision-making in the field.



**Ramesh Raskar**  
**Associate Professor**  
**MIT Media Lab**

Ramesh Raskar is an Associate Professor at MIT Media Lab. Ramesh Raskar joined the Media Lab from Mitsubishi Electric Research Laboratories in 2008 as head of the Lab's Camera Culture research group. His research interests span the fields of computational photography, inverse problems in imaging and human-computer interaction. Recent projects and inventions include transient imaging to look around a corner, a next generation CAT-Scan machine, imperceptible markers for motion capture (Prakash), long distance barcodes (Bokode), touch+hover 3D interaction displays (BiDi screen), low-cost eye care devices (Netra,Catra), new theoretical models to augment light fields (ALF) to represent wave phenomena and algebraic rank constraints for 3D displays(HR3D).



In 2004, Raskar received the TR100 Award from Technology Review, which recognizes top young innovators under the age of 35, and in 2003, the Global Indus Technovator Award, instituted at MIT to recognize the top 20 Indian technology innovators worldwide. In 2009, he was awarded a Sloan Research Fellowship. In 2010, he received the Darpa Young Faculty award. Other awards include Marr Prize honorable mention 2009, LAUNCH Health Innovation Award, presented by NASA, USAID, US State Dept and NIKE, 2010, Vodafone Wireless Innovation Project Award (first place), 2011. He holds over 50 US patents and has received four Mitsubishi Electric Invention Awards. He is currently co-authoring a book on Computational Photography.

**Tarun Sarwal**

**Head of the Innovation Initiative  
International Committee of the Red Cross (ICRC)**

Prior to working with ICRC, Tarun worked in the UK NGO sector and with the BRCS. At ICRC Tarun's previous posting was with the Economic Security Unit where he was responsible for promoting cash based approaches and overseeing the design of programmes in Africa, Asia and the Caucasus. Tarun Sarwal is currently leading the Innovation Initiative at the ICRC. The purpose of the post is to facilitate innovation in support of humanitarian action throughout the ICRC. The main work streams include building a positive narrative around innovation, managing an internal fund to support innovation pilots, making external links to stimulate innovation, and supporting internal systems to enable innovation.



**The Hon. Richard Serino**

**Former Deputy Administrator of FEMA  
Distinguished Visiting Fellow at Harvard University School of Public Health**

The Hon. Richard Serino spent more than forty years in public service. During that time he provided extensive leadership on emergency management, emergency medical and homeland security at local, state, federal and international levels. Mr. Serino is currently a Distinguished Visiting Fellow at Harvard University's School of Public Health, National Preparedness Leadership Initiative.



- He was appointed by President Obama and confirmed by the Senate as the Federal Emergency Management Agency's 8th Deputy Administrator in October 2009 and served until 2014.
- In this role, he also served as the Chief Operating Officer (COO) of the agency with more than \$25 billion budget.
- Prior to his appointment as Deputy Administrator, he spent 36 years at Boston EMS where he rose through the ranks to become Chief. He also served as the Assistant Director of the Boston Public Health Commission.

Mr. Serino responded to over 60 national disasters while at FEMA and during Super Storm Sandy, he was the lead federal area commander for New York and New Jersey. Mr. Serino was also on scene at the Boston Marathon bombings as the Department of Homeland Security senior official. A sampling of Federally declared disasters Mr. Serino responded to include: flooding in North Dakota, New England, Georgia and Colorado; the wildfires in Colorado and Texas; the tornadoes in Mississippi, Alabama, Georgia, Joplin, Missouri; tsunami destruction in the American Samoa; and the Hurricane stricken areas from hurricanes Isaac, Irene, and Earl. Mr. Serino briefed the President of the United States on a number of disasters and briefed and traveled with Vice President Biden to a number of affected communities to survey the destruction.

As the Agency's COO, Mr. Serino fundamentally changed how FEMA operates. He helped FEMA reorient its activities and improve its programs to be "survivor centric," ensuring that the agency supports the delivery of services focused on easing the recovery experience of survivors – as individuals, neighborhoods, and communities. As Deputy Administrator, he also led administrative improvements that were focused on emphasizing financial accountability, created FEMA Stat, which improved the use of analytics to drive decisions, advanced the workforce training and engagement and fostered a culture of innovation.

Under His leadership, FEMA launched initiatives such as FEMA Corps, a dedicated unit of 1,600 service corps members within AmeriCorps National Civilian Community Corps (NCCC) solely devoted to disaster preparedness, response, and recovery. His leadership took FEMA Corps from idea to implementation in nine months. FEMA Corps is a Presidentially recognized model program of national service that provides eighteen to twenty-four year olds with an opportunity to serve their country during disasters. When the program is at full operational capability, and in an average disaster year,

there will be an expected savings of approximately \$60 million in a year.

Mr. Serino was also instrumental in developing the FEMA Think Tank, a program that provides a transparent way for citizens to speak directly to government leadership and offer their input and ideas. The monthly calls portion of the Think Tank have not just trended globally on Twitter, but have also given the “Whole of Community” a voice directly to leadership.

During his tenure at Boston EMS he transformed it to one of the best and nationally recognized EMS systems in the country. He bolstered the city’s response plans for major emergencies, including chemical, biological, and radiological attacks. He also led citywide planning for the first influenza pandemic in more than 40 years.

Mr. Serino served as an Incident Commander for over thirty-five mass casualty incidents and for all of Boston’s major planned events, including the Boston Marathon, Boston’s Fourth of July celebration, First Night, and the 2004 Democratic National Convention, a National Special Security Event.

He has received more than thirty-five local, national and international awards for public service and innovation; including Harvard University National Public Leadership Institute’s “Leader of the Year”; nationally recognized as an Innovator in EMS with the “Innovators in EMS Award” and Boston’s highest Public Service award, “Henry L Shattuck Public Service Award”.

Mr. Serino published more than ten articles, including: “Emergency Medical Consequence Planning and Management for National Special Security Events After September 11: Boston: 2004,” Disaster Medicine and Public Health Preparedness, August 2008; and “In a Moment’s Notice: Surge Capacity for Terrorist Bombings,” U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, April 2007.

Mr. Serino attended Harvard University’s Kennedy School of Government Senior Executives in State and Local Government program in 2000, completed the Kennedy School’s National Preparedness Leadership Initiative in 2005, and graduated the Executive Leadership Program, Center for Homeland Defense and Security at the Naval Postgraduate School.

**Deborah Theobald**  
**Co-Founder and Executive Director**  
**Vecna Technologies and Vecna Cares**

Deborah has spent 15 years developing and deploying automation solutions to the health care sector both domestically and internationally. As the Co-Founder of Vecna, a leader in health care information technology and robotics, Deborah has positively impacted millions of peoples’ lives through innovative new technologies that improve access to and quality of care. Deborah has brought to market QC PathFinder for electronic outbreak surveillance of hospital acquired infections and Patient Self Service Kiosk, Portal and Mobile solutions. Vecna’s Department of Defense funded BEAR (Battlefield Extraction and Recovery) and the QC Bot Hospital Logistics Robots.



In 2009, Deborah established the Vecna Cares Charitable Trust to extend Vecna resources in IP, engineering capacity and programmatic expertise to developing countries and under-served areas. Vecna Cares supports ongoing initiatives in East Africa, Nigeria and Haiti as well as Massachusetts urban communities. Deborah is actively engaged in forging new community partnerships around the world with the goal of improving quality and access to health care through the establishment of local, point-of-care patient data tools to regional information technology infrastructures.

Deborah obtained her SB in Aerospace Engineering from MIT and her Masters from University of Maryland’s Space Systems. She is a certified SCUBA Diver Instructor and the proud mother of 5 very active children.

**Rebecca Weintraub**  
**Assistant Professor in Medicine**  
**Harvard University**

Rebecca Weintraub, MD, is an assistant professor at Harvard Medical School and faculty director of the Global Health Delivery Project (GHD) at Harvard University. She is an associate physician at Brigham and Women's Hospital in the Division of Global Health Equity and practices medicine within the Department of Medicine. GHD has published a global health delivery curriculum of over 30 Harvard Business School case studies with Harvard Business Publishing, available online at no cost to the public. Weintraub is a co-faculty lead for the Global Health Delivery Intensive at Harvard, a joint Harvard Medical School and Harvard School of Public Health training to introduce key principles in global health delivery to providers and implementers. In 2008, GHD launched GHDonline.org, a network of virtual professional communities that today connects more than 13,500 global health implementers from 182 countries and 4,000 organizations. Her research projects, funded by the Agency for Healthcare Research and Quality, World Health Organization, the Global Fund and the Bill & Melinda Gates Foundation, focus on strategies to generate value-based delivery in global health.



Weintraub co-founded Jumpstart, the national AmeriCorps program, and is a technical advisor to Ashoka Living Goods and non-profits promoting the work of health entrepreneurs. She graduated from Yale University and Stanford Medical School and completed her medical training at Brigham and Women's Hospital.

**Greg Wilson**  
**Director, National Center for Photovoltaics**  
**National Renewable Energy Laboratory (NREL)**

Greg Wilson is the Director of the National Center for Photovoltaics (NCPV) at the National Renewable Energy Laboratory. Greg is responsible for NREL's PV and PV reliability R&D portfolio and for continued development of the NCPV's many interfaces and partnerships with the global PV community. The National Center for Photovoltaics (NCPV) at NREL focuses on technology innovations that drive industry growth in U.S. photovoltaic (PV) manufacturing. The NCPV is a central resource for US capabilities in PV research, development, deployment, and outreach.



Prior to joining NREL in 2011 he spent nearly 17 years at SunEdison (previously MEMC) where he directed the Epitaxial Silicon and New Materials R&D groups between 1997 and 2009. In 2009 he joined the merger and acquisition team that acquired SunEdison and Solaicx. He has over 25 years of research and development experience and holds a D.Sc. in Chemical Engineering from Washington University.

**Guest Speaker: Bill Lawton, COO of Resolution Solar**

Bill Lawton is currently the COO of Resolution Solar, a Manhattan based solar provider servicing Massachusetts. Bill volunteered as part of FEMA's post-Katrina security detail. There, Bill rebuilt impoverished areas devastated by hurricane Katrina as the construction superintendent at Brad Pitt's Make It Right Foundation. During the tenure at Make It Right, Bill led rebuilding efforts with the construction of more than 75 LEED platinum certified homes. Bill has more than 20 years experience in tactical business development, major fund raising for start up projects, contract review and negotiations, logistics management, and process development.





## Special Panels

### USAID: Development Innovation And You

This session highlights development innovation's past, the incredible opportunities for its future, and how you can be part of its present. Hear from an Innovation Specialist just returned from the front lines of the U.S. Agency for International Development's efforts to tackle the West African Ebola crisis by harnessing technology, real-time data and crowdsourcing. Learn from the U.S. Global Development Lab's Innovation Evangelist how the development industry is being "hacked," and how HumTech attendees can be a part of this revolution.

**Moderator: Alexander J. Moseson**  
**Fellow at the US Global Development Lab**  
**U.S. Global Development Lab at USAID**

**Alexis Bonnell**  
**Director**  
**Office of Engagement and Communications**  
**U.S. Global Development Lab at USAID**

Alexis Bonnell is the Director of the Office of Engagement and Communications in the U.S. Global Development Lab (The Lab). Over her career, Alexis has developed and delivered over a billion dollars of humanitarian and development programming in over 25 conflict, post-conflict, and emergency countries, in almost every sector from education to stabilization, for more than 30 International Bi-lateral donors, 10 UN agencies, the military, and the private sector. Prior to her career in development, Ms. Bonnell worked as director of marketing for the Internet Trade Association, where she helped Wall Street and the corporate world understand the impact that the Internet, innovation and technology would have on business, customers and society. She is co-author of the book "Get your Dream Job."



**Eric King**  
**Innovation Specialist**  
**U.S. Global Development Lab at USAID**

Dr. Eric King is an Innovation Specialist with the Mobile Data Team, where he focuses on turning data into action to accelerate international development and amplify humanitarian assistance. In general, his work seeks

to harness the power of emerging technologies for social good, from encouraging digital hardware development for poor communities, to crowdsourcing solutions to gun violence in the US. Prior to joining USAID, Dr. King was a Miller Fellow at the University of California, Berkeley, and earned his Ph.D. in Planetary Physics from the University of California in Los Angeles.



### Civilian-Military Coordination During Humanitarian Disasters

United States and international militaries, while not considered first responders for most humanitarian assistance efforts, are called upon to assist the humanitarian sector in responding to major sudden onset disasters when there is an acknowledged gap between the disaster needs that the relief community is being asked to satisfy and the resources available to meet them. While coordination between humanitarian and military actors has improved over the past decade, there is still a need for more effective coordination and collaboration to provide more efficacious responses. This panel will explore strategies, concepts, education/training programs, or organizational changes that militaries should consider to improve the civilian-military humanitarian responses.

**Moderator: David Polatty**  
**Professor**  
**U.S. Naval War College (NWC)**

Professor Dave Polatty has served as a civilian faculty at the U.S. Naval War College since 2008 and teaches a number of courses on strategic and operational planning. He specializes in military planning, humanitarian assistance/disaster relief, command and control, and maritime security. Professor Polatty is co-founder and co-director of the NWC College of Operational & Strategic Leadership – Harvard School of Public Health “Joint Civilian-Military Humanitarian Working Group,” which was established in May 2014 to explore academic and research collaboration areas that can improve coordination, synchronization, and integration of humanitarian responses during disaster.

Professor Polatty is a fourth generation Naval Officer and in addition to his civilian faculty position, continues to serve as a Commander in the U.S. Navy Reserve. He has commanded reserve units supporting U.S. Forces Korea, U.S. Naval Forces Southern Command/U.S. Fourth Fleet, U.S. Strategic Command Center for Combating WMD, and is currently commanding officer of Navy Reserve U.S. European Command J3. While on active duty from 1992 to 2003, he served as both a Surface Warfare Officer on board USS TARAWA (LHA-1) and Naval Flight Officer in the P-3 Orion community.

He graduated from the U.S. Naval Academy in 1992, earning a BS in History. He graduated with highest distinction from the U.S. Naval War College in 2006, earning a MA in National Security Strategic Studies and receiving the Navy League William S. Sims Award. He is also a graduate of U.S. Joint Forces Staff College.

**Brittany Card**  
**Program Coordinator**  
**Harvard Humanitarian Initiative**

Brittany Card is the Program Coordinator for the Signal Program on Human Security and Technology at the Harvard Humanitarian Initiative (HHI). She previously worked as a consultant for the United Nations Office for the Coordination of Humanitarian Affairs and as a research assistant for the Qatar Computing Research Institute. Ms. Card joined HHI to work as the Data Analysis Coordinator for the Satellite Sentinel Project (SSP) in 2011.

She is a co-recipient of the 2012 United States Geospatial Intelligence Foundation’s Industry Intelligence Achievement Award for the work of the SSP and a co-winner of the 2013 Humanity United/USAID Mass Atrocity Prevention Tech Challenge. Prior to joining HHI, Ms. Card worked as the communications intern at the Harvard Kennedy School’s Belfer Center for Science and International Affairs.

She earned an Honors BA in International Relations and a minor in Spanish Language from Saint Anselm College in 2010.

**Captain Robert T. Clark**  
**Commanding Officer**  
**U.S. Navy – Navy Reserve, Chief of Naval Operations, Operations and Plans (N3/N5)**

Captain Clark has served in the Navy since 1990. A Naval Flight Officer, his experience includes patrol aviation, aircraft carrier operations, operational planning, and information operations. He has served in every geographic combatant command region. In 2010, he helped stand up then led as a Battle Staff Captain the SOUTHCOM Crisis Action Center for Operation UNIFIED RESPONSE Foreign Humanitarian Assistance/ Disaster Relief in Haiti. In his civilian career, he is employed by General Dynamics in the Navy shipbuilding industry.





Captain Clark is the son of a WWII Navy Veteran and the grandson of a WWI Army Veteran. On active duty he was a P-3 Orion Mission Commander, Flag Lieutenant in Italy, and Assistant Navigator aboard the aircraft carrier USS CARL VINSON. A member of the Navy Reserve since 1999, he has served as Executive Officer of an aviation squadron as well as commanded reserve component units supporting U.S. FORCES KOREA, U.S. SOUTHERN COMMAND, U.S. CYBER COMMAND and the Chief of Naval Operations. Captain Clark is currently the Commanding Officer of Navy Reserve CNO Operations and Plans (OPNAV N3/N5). He is also serving as the Chief of Staff for the Secretary of the Navy's National Navy Reserve Policy Board.

Captain Clark is a graduate of the University of Rhode Island where he earned undergraduate and graduate degrees in Business Administration. He later graduated from the U.S. Naval War College and the U.S. Joint Forces Staff College. In 2004, he was selected as the Association of Naval Aviation Reserve Naval Flight Officer of the Year. He is a member of the Navy Strategic Discussion Group.

**Michael Marx****Senior Civil-Military Coordination Advisor****United Nations Office for the Coordination of Humanitarian Affairs (UN/OCHA)**

Michael Marx is currently the Senior Civil-Military Coordination Advisor for the United Nations' Office for the Coordination of Humanitarian Affairs (UN/OCHA) at the UN Headquarters in New York. Prior to this position, he was based in Geneva, Switzerland where he served as the Chief of the Civil-Military Coordination Section (CMCS) in UN/OCHA in Geneva. OCHA's Civil-Military Coordination Section is mandated to facilitate and coordinate the access to and use of international Military and Civil Defence Assets (MCDA) in countries hit by humanitarian emergencies. For this purpose, it serves as the UN focal point for governments, international organizations and military and civil defence establishments for the employment of these assets in humanitarian situations.



Michael joined the UN after more than two decades working within the US Government, including serving as the Division Director for the Disaster Response and Mitigation Division in the Office of US Foreign Disaster Assistance at the US Agency for International Development (USAID/OFDA). While in OFDA he served in various disaster response assignments, including Disaster Response Team Leader; Africa Team Leader; DART Team Leader (Disaster Assistance and Response Team) in Iraq, Afghanistan, Ethiopia, and Mozambique; as well as the Response Manager for the US Government's assistance to numerous crises, including the Asia Tsunami in 2004 and the Pakistan Earthquake in 2005.

Mr. Marx is also a former US Army Officer, whose tours included Asia, Europe, and Africa. While in the Army, he participated in several support operations to international disaster responses, including operations in Asia, Africa, and Latin America and the Caribbean.

**Michael Lappi****Director of Field Operations****Harvard Humanitarian Initiative**

Dr. Michael Lappi is the Director of Field Operations and the program lead for Civilian-Military Affairs at the Harvard Humanitarian Initiative in Cambridge, MA. Dr. Lappi has extensive national and international experience in the fields of humanitarian assistance and disaster response having served in Africa, the Caribbean, Latin America, the Middle East, Southeast Asia, and the United States. Most notably, he provided critical leadership to the American Red Cross during Hurricane Katrina and Rita relief efforts, as well as to Partners In Health, the Clinton Health Access Initiative, and the US Department of Defense following the earthquake in Haiti.



As a Naval Medical Officer, Dr. Lappi has served in several senior leadership positions during his over 16 years of active and reserve duty, including tours as the Joint Special Operations Task Force Surgeon, Afghanistan, and the Naval Special Warfare Task Unit Surgeon, Horn of Africa. He currently serves as the Reserve Specialty Leader for Undersea Medicine, and was recently selected for promotion to the rank of Captain in the United States Navy.

Dr. Lappi has degrees from the University of Miami (BS), The Ohio State University (MS, PhD), Ohio University (DO), and the Harvard School of Public Health (MPH), as well as a diploma from the United States Naval War College (Command and Staff Program). He is Board Certified in Occupational and Environmental Medicine, a Fellow of the American College of Occupational and Environmental Medicine, and holds appointments at the Harvard Medical School, Harvard School of Public Health, Boston Children's Hospital, and Cambridge Health Alliance.

### Impact Investing in Humanitarian Technology: The Impact Investor Relationship

The session will concentrate on explaining the roles and activities of the impact investor and the management of early stage humanitarian technology companies during and after an investment transaction. The panel, comprised of professionals from Impact Investment firms, will discuss:

- the benefits of Impact Investing to HumTech companies;
- the necessary requirements that HumTech companies must satisfy to become an attractive investment;
- the due diligence that makes a successful investment transaction;
- the ongoing post-close management/investor operating and reporting relationship.

The intent of the coverage areas is to give early stage HumTech company management a clear picture of the conditions that Impact Investors are looking for in early stage companies that make them attractive investments.

**Moderator: Dr. Joseph Franceschi**  
iNGOvation, Inc.

**Schuyler "Sky" G. Lance**  
Managing Principal, SustainVC, LLC  
GP of The Patient Capital Collaborative Series of Impact Investment Funds  
Senior Portfolio Consultant to Serious Change, LP

Sky is Founder and Managing Principal of SustainVC, LLC, the General Partner of the Patient Capital Collaborative Series of funds that invest in for-profit early-stage companies that are looking to provide meaningful social and/or environmental benefit to the world. Deal flow for the PCC funds come primarily through the oldest national impact investment angel network in the U.S., Investors' Circle. Sky began his career in 1983 with the Bank of Boston in its High Technology Division, making equity-oriented loans and direct equity investments in early-stage high tech companies. In 1989, he joined the investment staff of Pacific Life Insurance Company and made direct investments in private debt and equity, as well as in investment limited partnerships (LBO, Mezzanine and Venture funds), both on a primary and secondary basis. In 1990, Sky co-founded the private equity firm today known as Windjammer Capital Investors with \$2 billion under management. Sky founded SustainVC in 2007, and since then has devoted his time entirely to investing for-profit dollars into companies that are making a positive difference. Sky has served on over a dozen company boards, is a regular speaker on the topic of Impact Investing, and is a consultant to other social investment venture funds.



**Janine Elliott**  
**Venture Development Program Manager**  
**VentureWell**

Janine is the Program Officer for Venture Development at VentureWell. VentureWell began in 1995 as the National Collegiate Inventors & Innovators Alliance (NCIIA) and serves inventors & innovators with grants, investment, and training so that they can bring their technologies to market. Previously, she has taught science and leadership skills for students of all ages from diverse backgrounds, and was most recently was a co-founder of a cleantech materials startup. She brings strategic insight, financial acumen, and a plethora of stories on best (and worst) practices for startups. Janine holds a BA in Environmental Policy from Colby College and an MBA from Dominican University of California.



**Christina Tamer**  
**Program Officer for Venture Development and Investments**  
**VentureWell**

Christina Tamer recently joined VentureWell, a non-profit higher education network helping young scientists launch ventures that improve life for people and the planet. There, she is the Program Officer for Venture Development and Investments. Previously, she was an Investment Analyst at Invested Development, an impact investor that provides risk capital investments to alleviate poverty. She holds a BS in Marketing and an MBA from the University of Massachusetts Boston. Her academic research included a Masters Thesis on the impact of foreign direct investment and foreign aid on development in Africa.



**Information Technology for Humanitarian Operations**

This session will focus on developing supply chain management, information systems and decision support technology to meet the demands of rapidly-evolving Humanitarian Operations.

**Moderator: Jarrod Goentzel**  
**Founder and Director**  
**MIT Humanitarian Response Lab**

**Martijn Blansjaar**  
**Head of Logistics and Supply, International Division**  
**Oxfam Great Britain**

Martijn Blansjaar started in humanitarian assistance with Medecins Sans Frontieres – Holland as all-round technician/logistician in their Uganda program in 1987. From there on he spent a good five years in the field, predominantly in East Africa working for MSF-Holland and others in logistics, various technical and project co-ordination positions and as Head of Mission. In 1994 he joined MSF-Holland HQ at Logistics Department for special assignments on pharmaceutical distribution programs, major emergencies and a review of food aid programs, which he combined with a study of integrated logistics management, continued in the late 1990s by undertaking an MBA. In 1997 Martijn became Coordinator for Technical Support and from March 2001 Director of Logistics in MSF-Holland. In November 2006, he joined the International Division of Oxfam GB as Head of Logistics and Supply in their headquarters in Oxford. Outside his regular jobs he has been active since 2003 in various aid-sector initiatives on the promotion and development of Humanitarian Logistics. He is a Board member of the HELIOS Foundation for supply chain, on the Executive Committee of the Humanitarian Logistics Association and sits on



the Advisory Committee that works with Fritz Institute and the Chartered Institute of Logistics & Transport to develop and maintain a professional Certification for Humanitarian Logistics. Martijn has collaborated in research, curriculum development and as guest lecturer with various Universities including MIT (Zaragoza), Cranfield, USI Lugano, INSEAD and Hanken.

**Keith Chibafa**  
**Service Delivery Manager**  
**World Vision International**

Keith Chibafa brings over 15 years of international management experience combined with an IT and business background in both the private and humanitarian sectors. Keith is responsible for overseeing World Vision International's (WVI) efforts to collaborate with key local and international external entities interested in the implementation and execution of WVI's Last Mile Mobile Solutions (LMMS) technology. As the Business Development lead for LMMS, Keith has overseen the deployment footprint of LMMS grow to over 25 countries and has seen LMMS adoption by at least 10 humanitarian agencies which, in addition to World Vision, include Oxfam GB, Medair, UNICEF, International Committee of the Red Cross (ICRC) and the Norwegian Refugee Council. He has a keen interest in electronic payments and has served as an internal advisor to several World Vision country offices on e-payments in Cash programming. Keith has a Masters in Business Leadership as well as a Bachelors in Computer Science.



**Jonathan Jackson**  
**Founder & Chief Executive Officer**  
**Dimagi**

Jonathan Jackson is the CEO and cofounder of Dimagi, a socially conscious technology company that develops scalable ICT solutions for low-resource settings in over 40 countries. Jonathan is a social entrepreneur and innovator with extensive mobile technology expertise in both low-income and high-income settings. He has co-founded multiple organizations focused on improved healthcare delivery and poverty alleviation globally. As cofounder and CEO of Dimagi, Jonathan has overseen the growth of the company from the founding team to over 100 world-wide employees that operate programs in over 40 countries. He made an uncompromising commitment to open source software and developed a highly interactive, collaborative culture that fosters partnerships across academics, philanthropists, and implementers. He earned bachelors and masters degrees in Electrical Engineering and Computer Science from MIT.



**Scaling Innovations to Change Lives**

This panel will present the latest thinking and approaches to scaling complex social solutions and discuss the challenges, opportunities and potential of digital technologies to achieve greater impact.

**Moderator: Kyra Kaszynski**  
**Client Relationship Executive**  
**Deloitte Services Limited**

As a Strategic Relationship Executive, Kyra manages relationships across the United Nations system around social impact, sustainable development and humanitarian innovation among traditional financial services. Prior to her current role she helped to develop and manage Deloitte's first global innovation program and joined the organization as a Marketing Manager in Life Sciences more than 10 years ago.

Previously, Kyra worked at communications agencies where she developed and executed strategies for civil, corporate, educational and non-profit clients. Prior to her agency work, Kyra was the Marketing Manager at Cosmic Software Inc. a French-owned small high-tech software company, where she contributed to 70% growth in annual revenues. Kyra began her career in the music industry managing record stores. She simultaneously co-founded Eye Music, an independent record label for avant-garde music where she leveraged low cost “guerilla” marketing to generate income for previously unknown and unpaid musicians.

Kyra holds a bachelor’s degree in economics from the University of Vermont and a master’s degree from Columbia University’s School of International Affairs. Her passion for humanitarian and development issues began in graduate school when she volunteered with Rencontre Africaine pour la Défense des Droits de l’Homme (African Meeting for the Defense of Human Rights) in Dakar, Senegal. Later she became a founding board member of YouthAssets, a non-profit dedicated to serving orphans and vulnerable children in Southern Africa by leveraging mobile technology.

**Stephen Coller**  
**Senior Manager**  
**Monitor Deloitte**

Stephen is a technologist, solutions architect, and product designer. He brings together strategic, creative and technical skills to help leaders in the Public and Private sector understand how innovation and digital capabilities can help transform their businesses for the better. Stephen has worked with a diverse range of companies over the past 20 years, cultivating deep experience in R&D, lean start-up, digital transformation, and people-centric design. In 2007, Stephen co-founded the Advanced Technology Incubation Group at Microsoft where he facilitated rapid incubations in Education, Healthcare, Energy Services and Cognitive Analytics, taking them from ideation, through prototype to commercial development and launch. Stephen joined Deloitte after launching a personalized services start-up for Bill Gates. Stephen is a member of Edge.org and an advisor on developer ecosystems and distributed innovation to the Bill & Melinda Gates Foundation, the World Bank and the LongNow Foundation.



**Jay Corless**  
**Senior Director for Innovation**  
**UN Foundation**

Jay Corless is Senior Director for Innovation at the UN Foundation. In this position he seeks to identify, showcase and scale social innovations that deliver impact on international development goals. His professional work spans two decades within the UN System and the private sector. He has broad work experience in communication, online technologies, cultural diplomacy, design innovations, policy development and project management.



At UNESCO, in 1995, he launched the Organization’s first generation website, oversaw the deployment of the agency’s first content management system, and developed both the internal and external communication strategies for the Specialized Agency. In 2002 he devised the Organization’s U.S. re-entry public information campaign. The successful campaign contributed to the U.S. Government’s decision to rejoin UNESCO after an 18-year absence. On U.S. re-entry he became the English Spokesperson to then Director-General Koïchiro Matsuura. He also coordinated two United Nations Pavilions at the World Expos of 1998 and 2005.

After a thirteen-year career with UNESCO, Jay decided to leave the Organization determined to find new ways to address global development challenges. His research led to an M.A. from London’s University of the Arts where he authored a study, supervised by the U.K. Secretary of State for Media, Youth and Sport, on the policy impacts of international treaties on local creative, cultural and design organizations. After his studies he held management roles with the London



Design Festival, Design Miami and Design Philadelphia where he promoted novel thinking on networking, partnerships and fundraising. He also filmed, edited and authored an online documentary on the role of design in shaping the future of American cities entitled Cities x Design. More recently he has contributed to UN publications on policy design, project design and the Creative Economy.

**Brooke Cutler****Deputy Director****Mobile Alliance for Maternal Action**

Brooke Cutler is the Deputy Director for MAMA, the Mobile Alliance for Maternal Action. Brooke leads MAMA's work in global learning and is responsible for developing and deploying strategic support to organizations around the world that are using mobile technology to improve maternal, newborn and child health. Additionally, Brooke works with the MAMA country teams in Bangladesh, South Africa and India to develop evidence based tools and resources and is leading the launch of MAMA's newest country program in Nigeria. Prior to joining MAMA, Brooke worked on a maternal health program in Mexico developed in collaboration with the Carlos Slim Health Institute. Specifically, Brooke managed the deployment of a wireless fetal monitoring system designed to serve women with high risk pregnancies in rural or remote locations. Brooke has more than 10 years of experience in both the government and NGO worlds, having previously worked for the Office of New York City Mayor Michael Bloomberg. She has a Masters in Public Administration from the School of International and Public Affairs at Columbia University and a BA in Ethics History and Public Policy and in International Relations from Carnegie Mellon University.

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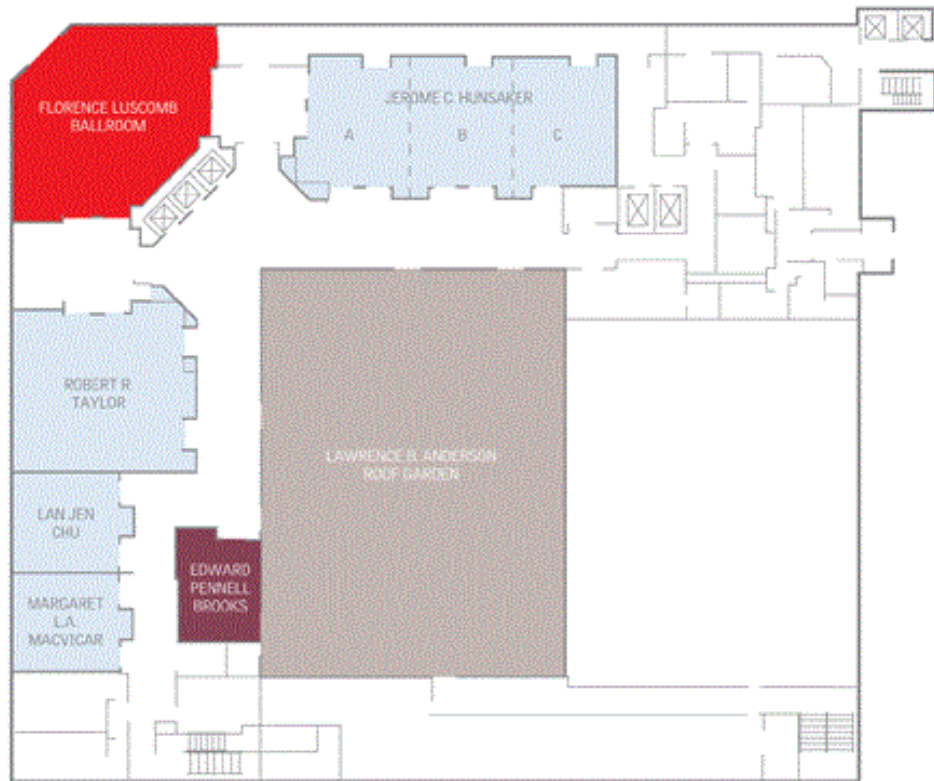
*HumTech2015 is an ISCRAM affiliated event. The International Association for Information Systems for Crisis Response and Management (ISCRAM) primary mission is to foster a community dedicated to promoting research and development, exchange of knowledge and deployment of information systems for crisis management. ISCRAM 2015 will be held at the end of May in Kristiansand, Norway. We encourage all HumTech2015 participants to attend ISCRAM 2015 and other ISCRAM Workshops, Conferences and Summer Schools.*



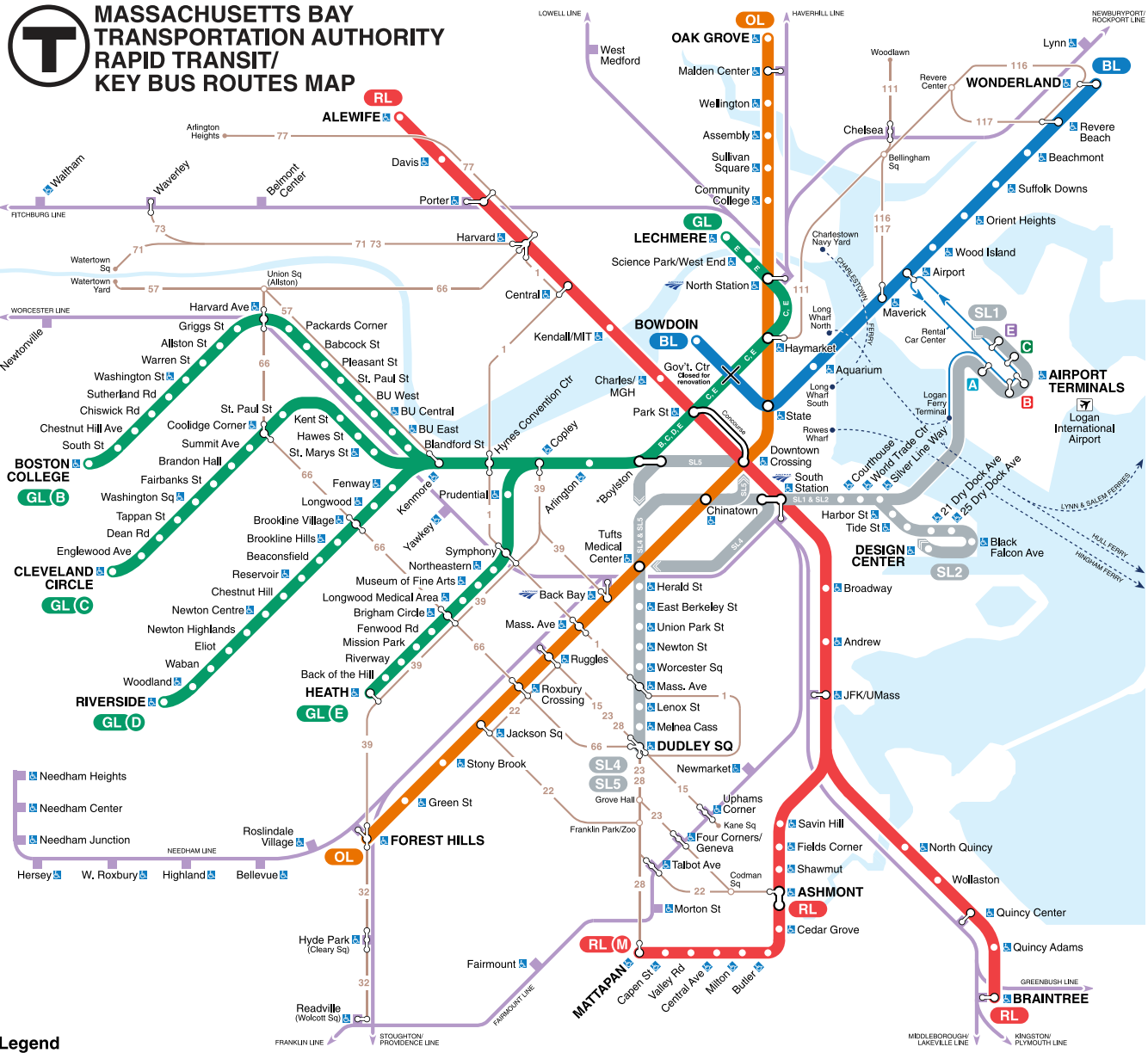
Cover Image: Cyclone Pam nears Vanuatu. Image by Harrison Tran.

On March 13, a dangerous, Category 5 Cyclone Pam tracked perilously close to Vanuatu. Despite forecasts that continued to show Pam recurving out to sea, Pam appeared to instead move towards the Vanuatu capital of Port Vila.

This infrared satellite image captured by the MTSAT satellite captures Pam near its peak intensity as a Category 5 tropical cyclone. Its intense thunderstorms show up as brilliant oranges, reds, and maroons, which stand for cold cloud tops and thus strong storms. Vanuatu's visage can be seen underneath the canopy already covered by Pam's vast expanse.



# MBTA MAP



## Legend

- RL** RED LINE
- M** MATTAPAN LINE
- OL** ORANGE LINE
- GL** GREEN LINE and branches
- BL** BLUE LINE
- SL** SILVER LINE and branches
- COMMUTER RAIL**
- 000** KEY BUS ROUTE
- FERRY**
- Accessible station** All MBTA and Massport bus and ferry services are accessible
- Rapid transit transfer station**
- Commuter rail transfer station**
- Free Logan Airport shuttle bus**
- Amtrak service** Back Bay, North & South Stations
- Customer Communications & Travel Info** 617-222-3200, 1-800-392-6100, TTY 617-222-5146 Web site: www.mbta.com
- MBTA Transit Police** 617-222-1212 TTY 617-222-1200
- Elevator/escalator/lift updates:** 800-392-6100

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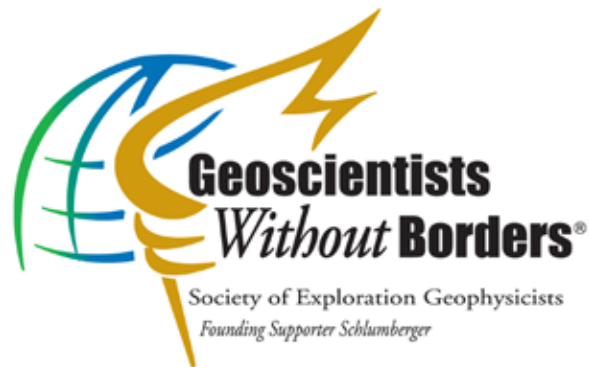
Not to scale

## Fares & Passes

The MBTA offers a reusable “Charlie Card” on which riders can store value by using cash or a debit/credit card through kiosks available in all MBTA stations. A Charlie Card, which presently can only be used on the Subway and Bus lines, offers a discounted fare. Riders may also purchase single-ride Charlie Tickets and Day/Week Link Passes at these same kiosks.

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**The UPS Store**





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**Monday, 11 May 2015**

7:00 pm – 9:00 pm Check-In and Cocktail Hour

**The Loft, 1st Floor**

Tuesday, 12 May 2015		Wednesday, 13 May 2015		Thursday, 14 May 2015	
Time	Speaker	Time	Speaker	Time	Speaker
8:00 AM	Registration Opens	8:00 AM	Registration Opens	8:00 AM	Registration Opens
8:45 AM	Opening Remarks	8:25 AM	Opening Remarks	8:25 AM	Opening Remarks
8:50 AM	R. Serino	8:30 AM	S. Hunt	8:30 AM	J. Geontzel
9:30 AM	V. Bollettino	8:45 AM	D. Jones	8:50 AM	T. Comes
10:10 AM	Break	9:05 AM	P. Meier	9:10 AM	Information Technology for Humanitarian Operations
10:30 AM	T. Sarwal	9:45 AM	Break	10:10 AM	Break sponsored by Deloitte
11:00 AM	USAID: Development Innovation And You	10:00 AM	J. Kendall	10:40 AM	Scaling Innovations to Change Lives
12:00 PM	<i>lunch on your own</i>	10:20 AM	R. Raskar	11:40 AM	D. Theobold
1:30 PM	Civilian-Military Coordination During Humanitarian Disasters	10:40 AM	A. Kearns	12:00 PM	Lunch Sponsored by Resolution Solar Best Paper and Best Poster Awards
2:30 PM	Break	11:00 AM	J. Clark	1:30 PM	R. Weintraub
2:45 PM	B1. Health and Disease Management	11:20 AM	R. Jacobs	1:45 PM	D2. Emerging Technologies
4:15 PM	Break	11:40 AM	G. Wilson	3:30 PM	Break
4:30 PM	E1. International Development, Poverty Alleviation and Food Security	12:00 PM	<i>lunch on your own</i>	3:45 PM	C2. Public Safety and Emergency Management
6:15 PM	Adjourn	1:30 PM	S. Nurhussein	5:00 PM	Closing Remarks
		2:00 PM	M. Granier	5:15 PM	Adjourn
		2:20 PM	Impact Investing in Humanitarian Technology: The Impact Investor Relationship		
		3:00 PM	Poster, Exhibit and Networking Session		
		4:00 PM	R. Curzon		
		4:30 PM	L. Curtis		
		7:45 PM	The Human Element Film Screening		

WiFi Lounge Reserved for all HumTech2015 Attendees in The Loft, 1st Floor



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prepare for disasters

assist with humanitarian response

provide timely ground truth

map features with crowdsourcing

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