



RESEARCH TRIANGLE
CLEANTECH CLUSTER™

» Transformation Through Collaboration

Briefing on the White House Smart Cities Initiative

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Briefing on the White House's Smart Cities Initiative

I. The White House Smart Cities Initiative

II. Global Cities Team Challenge

III. MetroLab Network

IV. Other Opportunities

V. DOE Funding Opportunity Announcement

I. THE WHITE HOUSE “SMART CITIES” INITIATIVE



“Every community is different, with different needs and different approaches. But communities that are making the most progress on these issues have some things in common. They don't look for a single silver bullet; instead they bring together local government and nonprofits and businesses and teachers and parents around a shared goal.” – Pres. Barack Obama



Smart Cities Initiative

- What is it?
 - *A collection of strategies to foster new technology collaborations that help local communities tackle key challenges such as reducing traffic congestion, fighting crime, fostering economic growth, managing the effects of a changing climate, and improving the delivery of city services.*
- Goals:
 - Create test beds for Internet of Things
 - Foster collaboration between / among civic tech movement and cities
 - Leverage existing federal activity (research & investment)
 - Pursue international collaboration

Smart Cities Initiative

- Agencies involved
 - DOE, DHS, DOT, NSF, NIST, USDA, NASA, EPA, DoC, GSA
- Elements of Initiative
 - Grants and proposed investments
 - However:
 - Primarily *not* about providing new grant funding
 - Most grants for FY 2016 have already been awarded
 - Public-private partnerships
 - Multi-city collaborations
 - New framework for coordinating federal agency investments

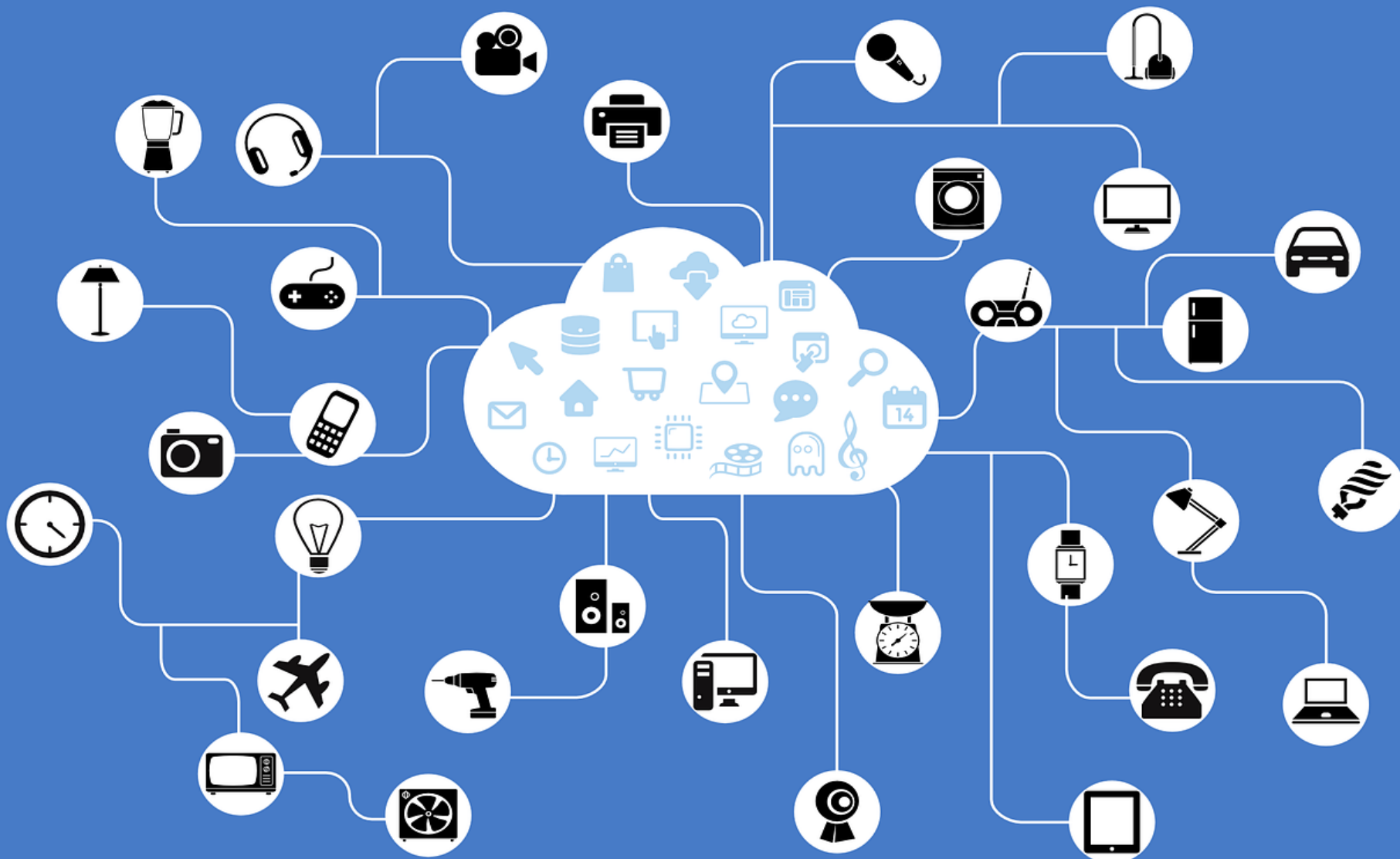
II. GLOBAL CITY TEAMS CHALLENGE

NIST

 GLOBAL CITY
TEAMS CHALLENGE

 **USignite**

The Internet of Things



Global City Teams Challenge

- Goal: Foster partnerships between communities with challenges and innovators with the technology to overcome those challenges.
 - Technology = Internet of Things
 - Teams = “Action clusters”
- Areas of concern include:
 - Homeland security
 - Disaster response
 - Economic development
 - Energy & energy efficiency
 - Healthcare
 - Environment
 - Transportation

Global City Teams Challenge

- North Carolina Action Clusters
 - *Envision Charlotte* – Energy & water monitoring and conservation
 - *#connecthome* – Broadband deployment and digital literacy in underserved communities (Durham)
 - *Storm Surge* - Hurricane impact modeling in real time (Renaissance Computing Institute, UNC)
 - *Secure-WAMS* - Cyber-security mechanisms for wide-area monitoring and control of next-generation power grids (NCSU, RECNI, U.So.Cal.)
- First Round: 2014-15
- Second Round: 2015-17
 - Phase I (Nov 2015-June 2016) – R&D
 - Phase II (June 2016-June 2017) – Deployment

Global City Teams Challenge

- Partners: IBM, AT&T, Intel, NSF, DoT, State Department, GSA, Kingdom of the Netherlands, ROK
- Benefits of participation
 - Find a partner
 - Leverage existing investments
 - Show off your solutions
- Opportunities for Involvement
 - Kick-off in Gaithersburg, MD – Nov. 12-13
 - Local event @ IBM – Nov. 12
 - Join a cluster – “looking for partners”
 - <https://www.us-ignite.org/globalcityteams/actioncluster/needs-partner/>
 - Submit a cluster
 - Complete worksheet describing issues, tasks, milestones & targets
 - <https://www.us-ignite.org/globalcityteams/actioncluster/add/>

III. METRO LAB NETWORK

MetroLab Network

- *A network of city/university partnerships, to enable sharing and collaboration in research and development of solutions to cities.*
- Sept. 2015 Letter of Commitment to Pres. Obama
- **Issues:**
 - Public & private infrastructure
 - Public and Private Services, with an emphasis on under-served populations
 - Democratic Governance
 - Public Policy and Management
- **Benefits of involvement**
 - Information / data sharing
 - Access to platform allowing competition for grants



MetroLab Network - Members

- Atlanta – Georgia Tech.
- Atlanta – Georgia State Univ.
- Boston – Boston Area Research Initiative
- Boulder – U.C. Boulder
- Chicago – U. Chicago
- Cuyahoga County, OH – Case Western Reserve Univ.
- Dallas – Texas Research Alliance
- Detroit – Wayne State Univ.
- Houston – Rice Univ.
- Madison – Univ. of Wisconsin-Madison
- Memphis – Univ. of Memphis
- Montgomery County, MD – Universities at Shady Grove
- Montgomery County, MD – Univ. of Maryland
- New York – New York Univ.
- Philadelphia – U. Penn.
- Philadelphia – Drexel Univ.
- Pittsburgh – Carnegie Mellon Univ.
- Portland – Portland State Univ.
- Providence – Brown Univ.
- Providence – College Unbound
- Providence – Rhode Island School of Design
- San Diego – Univ. of California San Diego
- San Jose – San Jose State Univ.
- Seattle – Univ. of Washington
- South Bend – Notre Dame
- Minneapolis – Univ. of Minnesota
- Saint Paul – Univ. of Minnesota
- Washington, D.C. – Georgetown Univ.
- Washington, D.C.– Howard Univ.
- Washington, D.C. -George Washington Univ.

MetroLab Network

- How to get involved
 - As a member:
 - (1) Form a city / university partnership supported by top city / university leadership, memorialized in an MOU
 - (2) Appoint a representative from each partner to maintain the collaboration; and
 - (3) Identify and undertake at least three RD&D (research development and deployment) projects in the first year of membership
 - Partner involvement open to foundations, corporations, associations, or cities & universities without a partner
 - <http://metrolab.heinz.cmu.edu/>

IV. OTHER OPPORTUNITIES

Other Opportunities

NSF “Dear Colleague” Letter: Smart and Connected Communities

- Invitation to apply for grant funding from various NSF directorates
 - Supplements to existing grants
 - New EARly-concept Grants for Exploratory Research (EAGER) proposals
 - Exploratory work in early stages on untested, but potentially transformative, research ideas or approaches - “high risk, high-payoff”
- Research relevant to IoT – networking, sensing & communication, data sources, physical infrastructure
- “Living Lab” approach
- Deadlines and money available vary by directorate
- <http://www.nsf.gov/pubs/2015/nsf15120/nsf15120.jsp>



Other Opportunities

Smart and Connected Health Research Awards

- *...to develop next generation health care solutions and encourage existing and new research communities to focus on breakthrough ideas in a variety of areas of value to health, such as sensor technology, networking, information and machine learning technology, decision support systems, modeling of behavioral and cognitive processes, as well as system and process modeling.*
- \$2M available this year for projects focused on Smart & Connected Communities
- Academic / non-profit institutions may partner with for-profits, with partial award to fund non-profit activity
- UNCC, NC State, NCA&T have won grants in previous years
- Deadline: Dec. 10, 2015
- http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504739



V. DEPARTMENT OF ENERGY FUNDING OPPORTUNITY ANNOUNCEMENT

DOE Funding Opportunity Announcement

- Through Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs
- Topics released on Nov. 2, including:
 - Convergent Smart Grid Communications & Application Architecture
 - Next-gen Connectors for Cables and Conductors
 - Energy Efficient Solid-State Lighting Luminaires, Products, and Systems
 - Technologies for Sensing and Managing Indoor Air Quality in Buildings
 - Subsurface Environmental Monitoring
 - Controls and Systems for the On-Site Consumption of Solar Energy
 - Shared Solar Energy Development Tools
 - Bioenergy
 - Advancing Technology for Offshore Wind Resource Characterization
 - Vehicle Battery Technology & Efficiency Technologies for Electric and Conventionally-fueled Vehicles
 - Fuel Cell Technology
 - Very Low-head and Instream Current Water Power Turbine-Generator Technologies
 - Clean Coal & Carbon Management; Oil & Gas Technologies



DOE Funding Opportunity Announcement

- Webinar the week of November 09, 2015
- Letters of Intent due Dec. 21, 2015
- Applications due Feb. 9, 2016
- Award notification expected May 2016
- FOA: <http://science.energy.gov/sbir/funding-opportunities/>



THANK YOU

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