INTERNET OF THINGS AND SMART CITIES

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Internet of Things (IoT) and Smart Cities

Service
Data Analytics
Communications
Hardware

Information Flow
Applications
Infrastructure
Public Sector IoT: Smart Cities and Communities

- Smart City: Use smart technologies such as IoT and CPS to improve the quality of life in cities and communities
- Many smart community efforts are one-off projects with heavy emphasis on customization and inadequate consideration for future upgradability and extensibility
- Lack of clear measurability of success impedes broader adoption of the solutions
- As a result, many Smart Cities/Communities deployments are isolated and do not enjoy the economy of scale.
Global City Teams Challenge (GCTC)

Establish and demonstrate replicable, scalable and sustainable models for incubation and deployment of interoperable, standard-based IoT solutions and demonstrate their measurable benefits in Smart Communities/Cities.
Over 120 Cities in GCTC 2015 & 2016 (Partial list shown):

- Portland, OR
- Newport News, VA
- Greenville, SC
- Raleigh, NC
- Montgomery County, MD
- Winooski, VT
- Santa Rosa, CA
- New York, NY
- Washington, DC
- Kansas City, MO
- Nashville, TN
- Austin, TX
- Amsterdam (Netherlands)
- Genova, Perugia (Italy)
- Coruna, Valencia (Spain)
- Saint-Quentin (France)
- Abuja City, Obia-Akpor City (Nigeria)
- Busan, Seoul, Daegu (Korea)
- Chikuma (Japan)
StormSense Project
Forecasting Flooding from Storm Surge, Rain, and Tide

LinkNYC by City Bridge
First-of-its-kind communications network that will bring the fastest available municipal Wi-Fi to millions of New Yorkers and visitors

Greenville Smart City Vision
Everything connected via AT&T and telematics

Public Sector Apps built on the IoT.
- Identify existing open standards and protocols that will allow varying devices to interoperate.
- A diverse ecosystem of partners makes up a real world test bed. Many use cases will be demonstrated.

Diverse forms of connectivity

At&t
On-demand Curbside & Taxis servicing downtown

Duke Energy
Smart Grid tech to energize the whole system

Inductive charging & power management by Momentum Dynamics

Managed fleets with Enterprise CarShare

Automated Proterra EV buses connecting campuses

Press
Automated BMW i3 connecting campuses

Duke Energy Smart Grid

 Automated shuttles servicing campuses and airport

Proterra EV buses connecting communities

i3 car-sharing connecting communities
Current Partners of GCTC 2016

• Partners
  ◦ US-Ignite
  ◦ US Government Agencies: NSF, ITA, DoT, State Department, GSA, NCO/NITRD, Census, NTIA
  ◦ Non-US Central Governments: Netherlands, Italy, South Korea, Japan
  ◦ Corporations: IBM, AT&T, Intel, GE
  ◦ Non-profits: FIWARE, World e-Governments (WeGO), Industrial Internet Consortium (IIC), MetroLab Network, R20, ICMA, USGBC, PTI

• Participating Members (partial list)
  ◦ Qualcomm, Bosch, Siemens, Microsoft, CH2HL, Mueller Water, PEPCO, Hitachi, Sensity Systems, Big Belly, Senseware, Link Labs, Vizias, Pecan Street, Inc., Interlnnov, TeamDev, Hostabeem, MIT, Vanderbilt, Carnegie Mellon University, Georgia Institute of Technology, University of North Texas, George Washington University, Wireless Research Center NC, Downtown DC BID, IoT Dev Labs, Inc, National Capital Planning Commission (NCPC) and more

• More than 60 cities and 200+ organizations/companies around the world are currently participating.
GCTC Expo, June 13-14, 2016

- GCTC 2016 Phase I Expo: **June 13-14, 2016, Austin Convention Center, Austin, TX, United States**
  - Featuring exhibitions and project presentations from 90+ Action Clusters with 300 organizations, 80+ cities and communities, and opportunities to engage with other teams and Smart City leaders
  - Visit Expo website [www.gctcexpo.org](http://www.gctcexpo.org) for more details and registration.
  - A short project plan needs to be submitted by April 29, 2016 to be considered for 2016 Expo presentation and exhibition - See the instructions at: [https://www.us-ignite.org/globalcityteams/participation-guide](https://www.us-ignite.org/globalcityteams/participation-guide)
  - We expect this will be the largest smart city event in the US this year.
For More Information

- **Contact**
  - Sokwoo Rhee (**sokwoo.rhee@nist.gov**)

- **Challenge web site: Meet the action clusters**
  - [www.globalcityteams.org](http://www.globalcityteams.org)

- **GCTC 2016 Expo (Austin, TX, USA, June 13-14, 2016)**

- **GCTC 2016 Tech Jam Webcast**

- **Social Media**
  - Twitter **#globalcityteams**
  - Linkedin Group [https://www.linkedin.com/groups/8285610](https://www.linkedin.com/groups/8285610)