Global City Teams Challenge

SmartAmerica Round Two

The Goal

- Accelerate the emergence of interoperable, adaptable, configurable Internet of Things ("IoT") technologies and solutions in Smart Communities/Cities to improve efficiency and security, create new business opportunities, promote affordable and sustainable living environments, and enhance the quality of life.

The Issue/Opportunity

- Smart Cities/Communities are increasingly turning to advanced technologies to improve services, promote economic growth, and enhance the quality of life.

- Many IoT innovators already have technologies (i.e., building blocks) and their impact can be maximized by fostering collaboration among the innovators to create interconnected solutions to provide tangible benefits to end users.

- Current deployments of IoT are fragmented lacking interoperability and standards.

- Many smart community efforts are one-off projects with heavy emphasis on customization and inadequate consideration for future upgradability and extensibility, which end up causing increased cost and inefficiency. As a result, many Smart Cities/Communities deployments are isolated and do not enjoy the economy of scale.

The Strategy

- Establish and demonstrate scalable and reproducible models for incubation and deployment of interoperable, adaptable and configurable IoT technologies and solutions in Smart Communities/Cities.
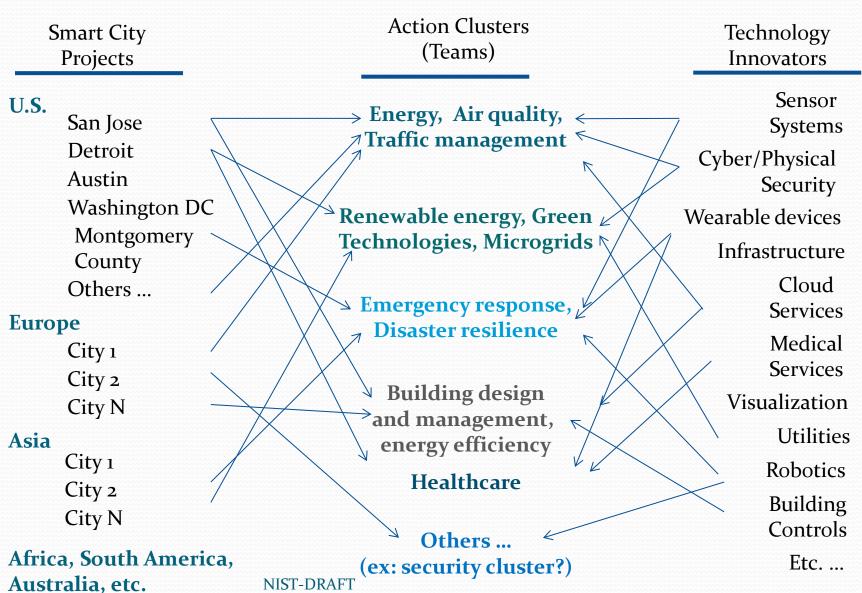
The Approach

- Facilitate partnerships and interconnections among cities/communities, planners, and project managers
  - Identify common issues
- Facilitate partnerships and interconnections among innovators
  - Form/incubate teams to address specific issues and provide tangible benefits – transportation, disaster response, energy, healthcare, environment, others, or any combination of the above.
- Facilitate partnerships between the cities/communities and innovators through "Action Clusters"
  - Each Action Cluster functions as a "matchmaking table" that cities and innovators can coalesce based on the issues to be addressed.
  - Jointly identify solutions that are scalable and reproducible

Technical Outcome

- NIST Smart Cities Framework
  - Address standards and measurement challenges in deploying IoT and Cyber-Physical Systems (CPS) in Smart Cities/Communities to serve as the basis for framework
- IoT Global Connectivity Fabric Strategy
  - Based on the inputs from the participants and the outcome of the Challenge, initiate architectures guidelines of interconnected "systems of systems" and a common data exchange/data analytics model for large scale IoT deployments.

Overview

Smart City Projects	Action Clusters (Teams)	Technology Innovators
U.S. San Jose Detroit Austin Washington DC Montgomery County Others … **Europe** City 1 City 2 City N **Asia** City 1 City 2 City N **Africa, South America, Australia, etc.**	**Energy, Air quality, Traffic management** **Renewable energy, Green Technologies, Microgrids** **Emergency response, Disaster resilience** **Building design and management, energy efficiency** **Healthcare** **Others … (ex: security cluster?)**	Sensor Systems Cyber/Physical Security Wearable devices Infrastructure Cloud Services Medical Services Visualization Utilities Robotics Building Controls Etc. …

Benefits

- All participants will be recognized and highlighted as the leaders in IoT/Smart Cities. Additional benefits include:

- Community, City, and Regional Leaders and Planners
  - Reduce time and costs of IoT deployments
    - Leverage investments with other cities
    - Jointly identify solutions with other cities
    - Access to rich set of solutions from broad range of innovators
- Innovators
  - Advance their technologies and connect to customers
    - Identify the opportunities to provide common solutions to multiple cities
    - Provide more complete solutions to the cities by partnering with other innovators
    - Demonstrate agility of solutions and test technologies at scale
- Government
  - Promote economic and social benefits of IoT and Smart Cities
    - Enhance quality of life by promoting affordable IoT solutions to broader communities/cities
    - Improve the economy and boost industry competitiveness by encouraging innovations and adoption of IoT
    - Enabling interoperability and shared solutions
- Residents
  - Access to improved services and better quality of life

Stakeholders

- SmartAmerica Round One participants
- Innovators in the US and worldwide
  - Additional corporations
  - Additional academic institutions/non-profits
  - Additional government organizations
- Cities/Communities, Planners, Project Managers

Process

- Build partnerships with government agencies and corporations for the Challenge
  - Sponsorship (logo, announcements, resources, etc)
  - Explore deeper partnership (e.g. participation in the execution of the Challenge)
- Recruit the participants – cities/communities/planners/innovators
  - SmartAmerica Round One teams and their partnering cities/communities
  - "Call for participation"
  - Collaboration/partnership with other organizations (both US and non-US)
- Kick-off meeting: Sep-Oct 2014
  - Cities/planners will present opportunities and innovators will present their innovation concepts
  - Form Action Clusters via "Jam", elect team leader(s) of each cluster and establish matrix partnerships between cities and clusters
- Intermediate meeting: Winter 2015
- Culminating event(s) – SmartAmerica/Global City Teams Festival(s): June 2015

Timeline

- July-August 2014
  - Public announcement of Global City Teams Challenge/SmartAmerica Round Two (includes partnering organizations)
  - Launch/update web site
  - Build partnerships with corporations and government agencies
  - "Call for participation" (for both cities/communities/planners and innovators)
  - Marketing (media outreach, talks/presentations, meetings..)
  - Start listing participants (cities and innovators)
  - Send invites for the kick-off event in September
- September-October 2014
  - Kick-off event
  - Form teams/clusters and partnerships
  - Lay out the process of the Challenge to the participants
  - State and announce the technical goals (Smart Cities Framework, IoT Global Connectivity Fabric Strategy)

Timeline

- Winter 2015
  - Intermediate event (Tech-Jam or Framework workshop)
    - Present the progress of the teams/clusters
    - Collect the needs on standardization and metrics
    - Discuss Smart Cities Framework, IoT Global Connectivity Fabric Strategy
- June 2015
  - SmartAmerica/Global City Teams Festival(s)

Outcome

- SmartAmerica/Global City Teams Festival(s)
  - Details TBD
- NIST Smart Cities Framework
- IoT Global Connectivity Fabric Strategy

Contact Information

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- Global City Teams Challenge/SmartAmerica Round Two web site
  - http://nist.gov/cps/sagc.cfm

- SmartAmerica Round One web site
  - http://www.smartamerica.org/
  - http://www.nist.gov/el/smartamerica.cfm