This is historical material “frozen in time”. The website is no longer updated and links to external websites and some internal pages may not work.

The White House
Office of the Press Secretary

For Immediate Release September 14, 2015

SHARE THIS:

FACT SHEET: Administration Announces New “Smart Cities” Initiative to Help Communities Tackle Local Challenges and Improve City Services

“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

Amazon EX1057 Page 1
Amazon v. Smart Speaker IPR2026-00145

bring together local government and nonprofits and businesses and teachers and parents around a shared goal." – **President Barack Obama**

Today, the Administration is announcing a new "Smart Cities" Initiative that will invest over $160 million in federal research and leverage more than 25 new technology collaborations to 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. The new initiative is part of this Administration's overall commitment to target federal resources to meet local needs and support community-led solutions.

Over the past six years, the Administration has pursued a place-based approach to working with communities as they tackle a wide range of challenges, from investing in infrastructure and filling open technology jobs to bolstering community policing. Advances in science and technology have the potential to accelerate these efforts. An emerging community of civic leaders, data scientists, technologists, and companies are joining forces to build "Smart Cities" – communities that are building an infrastructure to continuously improve the collection, aggregation, and use of data to improve the life of their residents – by harnessing the growing data revolution, low-cost sensors, and research collaborations, and doing so securely to protect safety and privacy.

As part of the initiative, the Administration is announcing:

- More than $35 million in new grants and over $10 million in proposed investments to build a research infrastructure for Smart Cities by the National Science Foundation and National Institute of Standards and Technology.
- Nearly $70 million in new spending and over $45 million in proposed investments to unlock new solutions in safety, energy, climate preparedness, transportation, health and more, by the Department of Homeland Security, Department of Transportation, Department of Energy, Department of Commerce, and the Environmental Protection Agency.
- More than 20 cities participating in major new multi-city collaborations that will help city leaders effectively collaborate with universities and industry.

Today, the Administration is also hosting a White House Smart Cities Forum, coinciding with Smart Cities Week hosted by the Smart Cities Council, to highlight new steps and brainstorm additional ways that science and technology can support municipal efforts.

The Administration's Smart Cities Initiative will begin with a focus on key strategies:

- *Creating test beds for "Internet of Things" applications and developing new multi-sector collaborative models*: Technological advancements and the diminishing cost of IT infrastructure have created the potential for an "Internet of Things," a ubiquitous network of connected devices, smart sensors, and big data analytics. The United States has the opportunity to be a global leader in this field, and cities represent strong potential test beds for development and deployment of Internet of Things applications. Successfully deploying these and other new approaches often depends on new regional collaborations among a diverse array of public and private actors, including industry, academia, and various public entities.
- *Collaborating with the civic tech movement and forging intercity collaborations*: There is a growing community of individuals, entrepreneurs, and nonprofits interested in harnessing IT to tackle local problems and work directly with city governments. These efforts can help cities leverage their data to develop new capabilities. Collaborations across communities are likewise indispensable for replicating what works in new places.

Amazon EX1057 Page 2
Amazon v. Smart Speaker IPR2026-00145

- *Leveraging existing Federal activity*: From research on sensor networks and cybersecurity to investments in broadband infrastructure and intelligent transportation systems, the Federal government has an existing portfolio of activities that can provide a strong foundation for a Smart Cities effort.
- *Pursuing international collaboration*: Fifty-four percent of the world's population live in urban areas. Continued population growth and urbanization will add 2.5 billion people to the world's urban population by 2050. The associated climate and resource challenges demand innovative approaches. Products and services associated with this market present a significant export opportunity for the U.S., since almost 90 percent of this increase will occur in Africa and Asia.

Complementing this effort, the President's Council of Advisors on Science and Technology is examining how a variety of technologies can enhance the future of cities and the quality of life for urban residents. The Networking and Information Technology Research and Development (NITRD) Program is also announcing the release of a **new framework** to help coordinate Federal agency investments and outside collaborations that will guide foundational research and accelerate the transition into scalable and replicable Smart City approaches. Finally, the Administration's growing work in this area is reflected in the **Science and Technology Priorities Memo**, issued by the Office of Management and Budget and Office of Science and Technology Policy in preparation for the President's 2017 budget proposal, which includes a focus on cyber-physical systems and Smart Cities.

Key Steps by the Administration Being Announced Today

Building a Research Infrastructure for Smart Cities

The National Science Foundation (NSF) is announcing over $35 million in Smart Cities-related grants and planning new investments in FY16. With a new foundation-wide effort devoted to Smart and Connected Communities, NSF will bring academic researchers and community stakeholders together to unlock transformational progress on important challenges — including health and wellness, energy efficiency, building automation, transportation, and public safety — through research to integrate new digital tools and engineering solutions into the physical world. NSF announcements in support of this agenda include:

- $11.5 million in new awards to develop and scale next-generation Internet application prototypes that leverage gigabit speeds to achieve transformative impact in areas ranging from health care to public safety. These investments include new awards to US Ignite, Inc., and the Mozilla Foundation to create "Living Labs," or communities of practice that facilitate the participation of citizens and community organizations, as well as idea and application sharing, across cities and regions. US Ignite is a public-private collaboration spanning over 40 cities and communities across the Nation. The Mozilla Foundation is a nonprofit dedicated to promoting openness, innovation, and participation on the Internet.
- $10 million in new **Cyber-Physical Systems Program** research awards focused on Smart and Connected Communities. These awards support research in the integration of computing, networking, and physical systems, such as in self-driving cars and smart buildings. The research awards being announced today help to establish the foundation for Smart Cities and the "Internet of Things." One such award, to Kansas State University, will fund research on novel approaches to integrate distributed power sources, such as rooftop solar panels and storage batteries, with the existing electric power grid.
- $7.5 million in proposed FY16 spending for urban science that will support research that integrates advanced digital tools with the physical world to improve quality of life, health and wellbeing, and learning in communities.
- $4 million to support academic-industry collaborations to translate innovative research and emerging technologies into smart service systems, such as smart energy services and on-demand transportation.

Amazon EX1057 Page 3
Amazon v. Smart Speaker IPR2026-00145

- $3 million for the University of Chicago to support the creation of the Array of Things in Chicago, the first such network to serve as an infrastructure for researchers to rapidly deploy sensors, embedded systems, computing, and communications systems at scale in an urban environment. Comprised of 500 nodes deployed throughout the city of Chicago, each with power, Internet, and a base set of sensing and embedded information systems capabilities, the Array of Things will continuously measure the physical environment of urban areas at the city block scale and unlock promising new research trajectories.
- $2.5 million for researchers to participate in the 2015 NIST **Global City Teams Challenge**, which supports "high-risk, high-reward" research on the effective integration of networked computing systems and physical systems to meet community challenges.
- $2.5 million in new research awards to support improvements in the design and operation of interdependent critical infrastructure, such as electrical power and transportation systems, ensuring they are resilient to disruptions and failures from any cause.
- $2 million in new **Smart and Connected Health** research awards with a focus on Smart and Connected Communities. The awards being announced today will support the development of next-generation health care solutions that leverage sensor technology, information and machine learning technology, decision support systems, modeling of behavioral and cognitive processes, and more.
- A new Dear Colleague Letter encouraging Early-Concept Grants for Exploratory Research proposals, as well as supplemental proposals to existing grants, to grow a Smart and Connected Communities research community and pilot early-stage efforts.

The National Institute of Standards and Technology (NIST) plans to invest $5 million in Smart Cities in FY16 and is launching a new round of the Global City Teams Challenge. Proposed FY16 investments will foster collaborations with communities and industry to demonstrate the capabilities of Internet of Things technologies to benefit local communities, while developing related performance standards and measurement tools. In addition, NIST is launching the next round of its Global City Teams Challenge (GCTC), using a new approach that will challenge teams of cities to set Smart City goals and then work with innovators to develop, deploy, and evaluate standards-based Smart City technologies that measurably improve residents' quality of life. The private sector is stepping up as well, including:

- IBM is announcing it will organize GCTC 2016 kick off events in an additional 30 cities in Asia Pacific, Latin America, North America, Europe, Middle East, and Africa. It will also provide technology experts to mentor and educate the worldwide participants in agile Internet of Things applications, design, and development throughout the GCTC 2016 challenge.
- AT&T is announcing that it will support Internet of Things and Smart Cities technology adoption by supporting testbeds in cities in the U.S. and globally. AT&T will select 10 U.S. cities to deploy technology for smart metering, lighting, traffic management, parking, and public safety. The company will host a Smart Cities hackathon with NIST participation at the AT&T Developer Summit in January 2016 with participating cities.

Unlocking New Solutions for National Priorities

The Department of Homeland Security (DHS) is announcing plans to invest $50 million over five years to develop cutting-edge emergency response technologies for Smart Cities. Through the **Next Generation First Responder Apex Program**, the DHS Science and Technology Directorate is developing and integrating innovative technologies to ensure first responders are protected, connected, and fully aware – helping to better prepare them for threats and disasters of all sizes. As part of this effort, DHS is also collaborating with

Amazon EX1057 Page 4
Amazon v. Smart Speaker IPR2026-00145

NIST to leverage Smart Cities data, analytics, and predictive modeling to give responders the right information at the right time, increasing responder operational efficiency and safety.

The Department of Transportation (DOT) is announcing over $40 million in new funding to advance transportation for Smart Cities, building on a broad base of existing research and outreach to spur the development of next-generation transportation systems, including:

- DOT is announcing awards today of up to $42 million in its first wave of **Connected Vehicle Pilots**, including $20 million for the installation of this technology in midtown Manhattan, and $17 million to address congestion in downtown Tampa.
- A new funding opportunity of approximately $4 million focused on how mobile telecommunications and travel data integration can make traveling easier and more efficient, as well as how incentives can help promote safer travel. Past research has explored the potential for automated vehicles, dynamic ridesharing, and integration of sensor data to assist navigation for blind and vision impaired pedestrians. This new opportunity from the Federal Highway Administration **Exploratory Advanced Research Program** will build on these results in further areas related to smart cities.
- Gathering input on integrating vehicle data, technologies, and applications with other systems across a city. On November 4, 2015, the **Connected Cities Research Program** will hold a public workshop in Washington, DC, to solicit stakeholder input on the connected cities research program structure and its focus areas.
- Advancing outreach and collaboration on connected and automated vehicles. On November 4-5, 2015, the **University Transportation Centers** (UTC) research program will host a conference on the impact of connected and automated vehicles on transportation – to include, planning, policy, land use, design as well as smart cities areas of interest: operations, freight movements, and transit.

The Department of Energy (DOE) will invest almost $10 million to expand efforts to support the emergence of smart, energy-efficient and low-emission cities that are leveraging Smart Cities technologies. These new steps include:

- Creating a new SMART Mobility consortium, with $5 million in new research funding. DOE will launch a Systems and Modeling for Accelerated Research in Transportation (SMART) Mobility consortium to examine the nexus of energy and mobility for future transportation systems. Initial research will focus on connected and automated vehicles, urban science, decision science, multi-modal transport, and integrated vehicle-fueling infrastructure systems.
- Over $3 million in proposed funding to advance smart building technologies that optimize operational performance, maximize energy savings, and participate in smart communications within buildings, from building to building, and from buildings to the grid. Through the **High Impact Technology Catalyst**, DOE is proposing to spend more than $3 million over the next three years to accelerate the uptake of nascent market-ready technologies and solutions that support self-configuring, self-commissioning and self-learning buildings. The Department will also lead a new collaborative effort with multiple private sector groups to leverage the work of the existing **Better Buildings Energy Data Accelerator** to promote better access to building energy data in new cities across the country.
- A Smart Grid Integration Challenge for Cities, offering at least $1 million in funding. DOE's Office of Electricity Delivery and Energy Reliability will launch a new challenge competition in 2016 to support city efforts to implement sensing, data sharing, and data analytics to achieve city goals for reducing energy consumption. The competition will be open to city governments that have already developed a roadmap or an action plan with clearly defined targets for energy consumption reduction for the entire city.

Amazon EX1057 Page 5
Amazon v. Smart Speaker IPR2026-00145

The Department of Commerce's Economic Development Administration (EDA) is planning a new $10 million round of its Regional Innovation Strategies funding opportunity, with a new focus on catalyzing regionally-grown solutions to communities' most pressing problems. As part of the 2016 **Regional Innovation Strategies** (RIS) program, which helps build regional capacity to support entrepreneurs and growing young companies, EDA will conduct directed outreach to programs that support early-stage companies that use technologies to solve communities' most pressing problems, such as companies in the Smart Cities sector, which can have a significant positive impact on a community's or region's economic growth and resiliency. As part of the 2017 RIS Program, EDA plans, where appropriations allow, to include the i6 Impact Challenge and the Conscious Seed Fund Support (C-SFS) Grants program, which will support high-growth companies that solve these pressing problems to help make cities and communities smarter and more economically resilient.

The Environmental Protection Agency (EPA) is announcing new steps to unlock Smart Cities approaches to environmental monitoring and analysis. These new steps are designed to help communities undertake innovative sensor-based approaches to improve data collection and analysis of environmental condition and risk, including:

- Up to $4.5 million in new grant funding to conduct innovative air quality pilot studies in several cities using low-cost portable air pollution sensors. The grants will empower communities and individuals with new data to help them understand their air pollution exposure at a more granular level, while improving our understanding and management of data quality from distributed sensors.
- Deployment of EPA's **Village Green Project** air monitoring stations to pilot test in three new cities over the next year: Oklahoma City, OK, Hartford, CT, and Chicago, IL. Building on four already successful deployments, the Village Green Project enables researchers and citizens to monitor and analyze local air quality, unlocking a better understanding of local variations and air quality trends.
- A new project to create a software module for scenario planning that helps communities plan for health impacts by evaluating the effects of change in the built environment on local public health. By developing a software module that can integrate with open scenario planning tools and evaluate potential consequences, EPA will help communities grow in more sustainable development patterns.

The U.S. Census Bureau (Census) is announcing new steps to expand the open-source CitySDK project, making valuable data available to communities and civic innovators. To help incubate new apps that are based on open data, including Smart Cities apps with broad civic benefits, Census is launching the following:

- A pilot program of data innovation workshops delivered in close collaboration with city experts to help solve the most pressing local issues. Kicking off this fall in North Carolina, the pilot will help bridge the data gap between Federal, state, and city data, and scale nationally through the Census's network of 50 State Data Centers. A key focus of the pilot will be helping cities break down data silos to enable smarter disaster response.
- Releasing an agile playbook for civic innovators, co-developed by Census and Waffle.io. Launching this fall at the 2015 Code for America Summit, the playbook will enable teams of civic hackers to run lean workshops and build Smart City solutions, using open-source tools like CitySDK, Waffle.io, and Github.

New Steps Being Taken by Cities, Universities, Industry, and Others in Response to the Administration's Call to Action

New Multi-City Collaborations to Support Smart Cities

Amazon EX1057 Page 6
Amazon v. Smart Speaker IPR2026-00145

More than 20 city-university collaborations are launching the MetroLab Network, with more than 60 Smart City projects in the next year. Supported by a newly announced grant of $1 million from the John D. and Catherine T. MacArthur Foundation, the MetroLab Network will leverage university expertise to address challenges facing cities and regions across the country. The Network will provide a platform upon which established and emerging city-university relationships can share successful projects, coordinate multi-city, multi-university research efforts, and compete for research and project funding. The founding members have collectively committed to undertaking more than 60 projects over the next year, which will improve the efficiency and effectiveness of infrastructure and services in our cities and communities and increase the productivity and competitiveness of our regional economies. Communities and their university counterparts signing onto the network with a **joint letter to the President** include:

- Atlanta, with Georgia State University and Georgia Tech
- Boston, with Boston Area Research Initiative
- Chicago, with the University of Chicago
- Cuyahoga County, with Case Western University
- Dallas, with Texas Research Alliance
- Detroit, with Wayne State University
- Houston, with Rice University
- Madison, with University of Wisconsin-Madison
- Memphis, with University of Memphis
- Minneapolis & St. Paul, with University of Minnesota
- Montgomery County, with University of Maryland and Universities at Shady Grove
- New York City, with New York University
- Philadelphia, with Drexel University and University of Pennsylvania
- Pittsburgh, with Carnegie Mellon University
- Portland, with Portland State University
- Providence, with Brown University, College Unbound, and Rhode Island School of Design
- San Diego, with University of California San Diego
- San Jose, with San Jose State University
- Seattle, with University of Washington
- South Bend, with University of Notre Dame
- Washington, DC, with Howard University, Georgetown University, and George Washington University

Envision America, a new nationwide nonprofit, is issuing a challenge to America’s cities to become smarter by accelerating deployment of innovative technologies that tackle energy, water, waste, and air challenges. City leaders from 10 winning communities will participate in Envision America’s workshop in January in Charlotte, NC, where they will work with leading experts from industry and academia to diagnose needs, workshop solutions, and develop new smart initiatives for their community. In addition, they will receive technical assistance throughout the year to support the implementation of their plans. Winners will be selected for participation in the Envision America program on the basis of several criteria, including goals, collaborations among local institutions and other stakeholders, and commitment to developing innovative approaches foundational to a Smart City. This effort builds on the cross-sector collaborative model and local results of Envision Charlotte. The new effort is supported by Accelerated Innovations, Autodesk, Bank of America, Cisco, Duke Energy, GE, Itron, Landis+Gyr, Microsoft, and Qualcomm Technologies, Inc. Complementing the Envision America Challenge, supporters are also taking the following steps:

Amazon EX1057 Page 7
Amazon v. Smart Speaker IPR2026-00145

- Accelerated Innovations will equip winning cities with the Envision America app, a community engagement platform built to facilitate, measure and gamify large-scale sustainability action campaigns.
- GE is sponsoring an Envision America Appathon to engage the civic tech community in a collaborative effort to solve city challenges.
- Microsoft is providing each winning city with one year of access to the Microsoft Azure Government cloud platform, with ongoing assistance to develop smart city solutions.

Additional New Steps by Private and Community Leaders

City Digital, a Chicago-based consortium, will launch two pilots focused on major urban infrastructure challenges. These projects, using Chicago as a testbed for technology and demonstration, focus on deploying a network of sensors to gather data on green infrastructure, and a virtual underground mapping platform to detect and monitor underground infrastructure. The inaugural pilots bring together the city, academia as well as corporate members of the City Digital UI Labs collaboration – Microsoft, Accenture, ComEd, Siemens, Tyco and HBK Engineering.

Dallas is launching the Dallas Innovation Alliance. Initial efforts will center in downtown’s West End district and focus on infrastructure, mobility and connected living. Led by the Dallas Entrepreneur Center, charter members include Mayor Mike Rawlings, AECOM, AT&T, IBM, Microsoft, Schneider Electric, Dallas Regional Chamber, Dallas Area Rapid Transit, Dallas Convention and Visitor’s Bureau, Downtown Dallas Inc., Texas Research Alliance, and The Real Estate Council.

IBM is deploying a Smarter Cities Challenge team in Detroit to help the city and the Detroit Land Bank Authority (DLBA) remove blight and build smarter Detroit neighborhoods. Through this initiative, a team of top IBM experts will spend three weeks helping Mayor Mike Duggan and the DLBA design a strategy for cost-efficient, sustainable removal, recycling and re-use of debris from abandoned and neglected properties, thereby allowing the DLBA to redirect its limited resources to making strategic investments in neighborhoods. The project will also receive a special grant of Twitter data, which will provide analysis of historical and current social media data to help tackle the issue.

The National League of Cities and 25 local governments announce the 2015 winners of the Multi-City Innovation Campaign to support the efforts of civic innovators tackling community challenges**.** The two winners – selected from 10 tech company finalists and voted on by over 20 cities around the country – are Bluelight, a mobile 911 app, and Ride, a tool that helps cities collect and analyze bike data. The winning companies have each agreed to undertake a four-city pilot, which will begin in early 2016.

New York City will create a series of neighborhood innovation labs across the five boroughs. The new labs will accelerate the testing and deployment of new Smart City technologies. Developed by the City’s Chief Technology Officer, the Mayor's Office of Technology and Innovation, the NYU Center for Urban Science and Progress (CUSP), and New York City Economic Development Corporation, the neighborhood innovation labs will build on the CUSP Quantified Community research facility and the Mayor's efforts to expand free public Wi-Fi networks across the city, leveraging this connectivity and the Internet of Things to help improve day-to-day life for community residents and small businesses.

Siemens USA will support the Carbon Neutral Cities Alliance (CNCA), an effort launched earlier this year by mayors of 17 international cities across nine nations. By making the Siemens’ City Performance Tool available to CNCA, alliance members will be able to leverage the software model to evaluate how specific building, transport, and energy technologies can help them achieve their environmental goals.

Amazon EX1057 Page 8
Amazon v. Smart Speaker IPR2026-00145

The San Francisco region is forming a collaboration to enhance public safety in preparation for next Super Bowl. The San Francisco 49ers, Santa Clara Valley Transportation Authority (VTA), City of Santa Clara, Santa Clara Police Department, Arini Geographics, and Allied Telesis are announcing a new collaboration to create a smarter, safer Levi’s Stadium and a smarter, safer public transit system in advance of Super Bowl 50. For the first time, law enforcement, NFL security, transit authority, and city leaders will have access to the same real-time security data in a consolidated visual platform.

HOME BRIEFING ROOM ISSUES THE ADMINISTRATION PARTICIPATE 1600 PENN

En Español | Accessibility | Copyright Information | Privacy Policy | USA.gov

Amazon EX1057 Page 9
Amazon v. Smart Speaker IPR2026-00145