February 28, 2017

The Networking and Information Technology Research and Development Program

On behalf of the Center for Data Innovation (datainnovation.org), we are pleased to submit these comments in response to the Networking and Information Technology Research and Development Program's (NITRD's) request for comments on its draft Smart Cities and Communities Federal Strategic Plan.[1]

The Center for Data Innovation is the leading think tank studying the intersection of data, technology, and public policy. With staff in Washington, DC and Brussels, the Center formulates and promotes pragmatic public policies designed to maximize the benefits of data-driven innovation in the public and private sectors. It educates policymakers and the public about the opportunities and challenges associated with data, as well as technology trends such as predictive analytics, open data, cloud computing, and the Internet of Things. The Center is a non-profit, non-partisan research institute affiliated with the Information Technology and Innovation Foundation.

Sincerely,

Daniel Castro
Director
Center for Data Innovation
dcastro@datainnovation.org

Joshua New
Policy Analyst
Center for Data Innovation
jnew@datainnovation.org

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[1] "Smart Cities and Communities Federal Strategic Plan: Exploring Innovation Together," National Science Foundation, January 12, 2017, https://www.nitrd.gov/news/RFI-SCC-Federal-Strategic-Plan.aspx.

ARE THE CENTRAL GOALS APPROPRIATE AND/OR ARE THERE OTHER GOALS THAT SHOULD BE CONSIDERED?

NITRD outlines five goals in the Smart Cities and Communities Plan: 1) understand local needs and local goals; 2) accelerate smart city/community innovation and infrastructure development; 3) facilitate cross-sector collaboration and bridge existing silos; 4) boost exports and promote U.S. global leadership; and 5) focus on people-centered solutions that support job growth and economic competitiveness.[2] These are worthy goals to advance the development of smart cities in the United States. However, NITRD should refine its fifth goal ("focus on people-centered solutions that support job growth and economic competitiveness") to focus on productivity rather than job growth. Embracing automation and other data-driven efficiencies in pursuit of greater productivity can result in short-term job disruptions, and NITRD's goals should allow for that since reaping the benefits to productivity is crucial for both job growth and increased economic competitiveness.[3]

NITRD should add a sixth goal of creating a global smart city community. U.S. cities will be significantly more successful in their own transformation to smart cities if they do so in concert with cities abroad as this will allow them to share best practices and benefit from greater scale. By encouraging interoperability and industry-led standards development on a global level, the federal government can also play a valuable role in preventing the balkanization of the Internet of Things, which is the technological backbone of smart cities.[4] NITRD can also develop global best practices and facilitate inter-city data sharing to encourage cities to not only improve performance relative to their internal benchmarks but also relative to their global peers. Finally, by developing a global smart city community, NITRD can lay the groundwork for a network of voices who will support data-friendly regulations and oppose efforts to limit the free flow of data across borders, since data-friendly policies are necessary to maximize the value and usefulness of smart city applications.[5]

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[2] "Smart Cities and Communities Federal Strategic Plan: Exploring Innovation Together," Networking and Information Technology Research and Development Program, January 2017, https://www.nitrd.gov/drafts/SCC_StrategicPlan_Draft.pdf,

[3] Robert D. Atkinson, "Bring on the Robots, Please!," *Huffington Post*, February 1, 2016, http://www.huffingtonpost.com/robert-d-atkinson-phd/bring-on-the-robots-pleas_b_9130652.html.

[4] Joshua New and Daniel Castro, "Why Countries Need National Strategies for the Internet of Things," Center for Data innovation, December 16, 2015, http://www2.datainnovation.org/2015-national-iot-strategies.pdf.

[5] Ibid; Daniel Castro, "The False Promise of Data Nationalism," Information Technology and Innovation Foundation, December 2013, http://www2.itif.org/2013-false-promise-data-nationalism.pdf.

ARE THE STRATEGIC PRIORITIES APPROPRIATE AND/OR ARE THERE OTHER PRIORITIES THAT SHOULD BE CONSIDERED?

Smart cities will produce a substantial amount of data that will help communities learn how to be more productive, sustainable, and resilient. It is important that smart cities do not only benefit certain types of cities or neighborhoods, but are integrated into a wide array of diverse communities. This will avoid unnecessarily exacerbating digital divides or contributing to the problem of "data poverty."[6] Moreover, including people of varying socioeconomic backgrounds is a way to ensure that projects properly understand a community's goals and needs and helps create more user-centric services.[7] To that end, NITRD should make diversity a strategic priority. For example, it could work with civic leaders in low-income neighborhoods to ensure they fully understand the benefits of smart cities. In addition, it could prioritize proposals that integrate a community's diverse population into the planning and testing stages of a smart city initiative.

ARE THE NEXT STEPS IDENTIFIED IN THE DRAFT PLAN APPROPRIATE AND/OR ARE THERE OTHERS THAT SHOULD BE CONSIDERED?

As NITRD's Smart Cities and Communities Task Force works to execute the strategies detailed in this plan and focuses on its plans to promote interagency coordination, it should be aware and supportive of proposals for the federal government to develop a national strategy to support the Internet of Things.[8] A national strategy for the Internet of Things would have a heavy focus on both accelerating the development of smart cities as well as organizing federal agency efforts to promote the development and adoption of the Internet of Things.[9] Increased federal agency collaboration could substantially advance the goals of the task force, particularly because the federal government already carries out a vast array of different initiatives to both use and support the development of the Internet of Things, many of which relate directly to smart cities.[10]

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[6] Daniel Castro, "The Rise of Data Poverty in America," Center for Data Innovation, September 10, 2014, http://www2.datainnovation.org/2014-data-poverty.pdf.

[7] See "Play 1" in "Digital Services Playbook," U.S. Digital Services, n.d., https://playbook.cio.gov/#play1.

[8] S.Res 110, 114th Congress. (2015); DIGIT Act, S. 88, 114th Congress. (2017).

[9] Joshua New and Daniel Castro, "Why Countries Need National Strategies for the Internet of Things," Center for Data innovation, December 16, 2015, http://www2.datainnovation.org/2015-national-iot-strategies.pdf.

[10] Daniel Castro and Joshua New, "Everything the U.S. Government is Doing to Help the Private Sector Build the Internet of Things," Center for Data Innovation, December 12, 2016,

Though it is not the responsibility of the Smart Cities and Communities Task Force to develop a national strategy for the Internet of Things, it should ensure that its work compliments and aids in the development of a national strategy.

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http://www2.datainnovation.org/2016-federal-support-iot.pdf; Daniel Castro, Joshua New, and Alan McQuinn, "How Is the Federal Government Using the Internet of Things?," Center for Data Innovation, July 25, 2016, http://www2.datainnovation.org/2016-federal-iot.pdf.