everyoneon

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Department of Commerce, National Telecommunications and Information Administration, National Science Foundation
Docket No. 160831803–6803–01

Notice and Request for Comments: National Broadband Research Agenda

EveryoneOn respectfully submits these comments in response to the National Telecommunications and Information Administration (NTIA) and National Science Foundation's (NSF) request for public comments on the National Broadband Research Agenda.

About EveryoneOn

EveryoneOn is a national nonprofit working to eliminate the digital divide by making high-speed, low-cost Internet service and computers, as well as free digital literacy training, accessible to all unconnected people in the United States. We have connected more than 340,000 low-income people in 48 states since 2012. We aim to leverage the democratizing power of the Internet to provide opportunity to all people in America—using connectivity to create social mobility for all.

Our organization has been able to attain national scale while maintaining impact on a community level due to our three-part approach: 1) working with Internet service providers to create and deploy low-cost offers; 2) creating a best-in-class digital platform, which is best described as a "TurboTax for digital inclusion" that families can use to access affordable Internet service, devices, and digital literacy education; 3) and maintaining a nationwide network of partners across sectors who are driving adoptions on the ground directly in communities. No other organization has brought together such a collection of assets to bridge the digital divide.

Serving as an intermediary facilitator between low-income households and Internet service providers, device refurbishers, digital literacy trainers, and more, we also work with enrollment partners (nonprofits, schools, and other community-based organizations) across the country to better reach eligible populations. Additionally, we help organizations by subsidizing service and devices for their beneficiaries. Through our digital platform, partner platforms, and relationships with Internet service providers and device refurbishers, we are able to market these offers and collect data in order to help people adopt the Internet and end the digital divide once and for all.

Executive Summary: Recommendations

Towards that end, EveryoneOn recommends the following as part of the National Broadband Research Agenda:

- *Dramatically Increased Funding to Study New Means of Broadband Deployment:* The Agenda should increase funding to study new means of broadband deployment and decrease the risk and cost of public and private innovation. By removing barriers to innovation and contributing financial resources, the Agenda can foster sustainable solutions to the debilitating costliness of increasing broadband infrastructure. This will have particular power in closing the digital divide in rural areas.

- *X Prize for Digital Inclusion:* The Agenda should openly source the best solutions to digital inclusion problems by calling on proposals from the public and private sectors and offering funded prizes for exceptional and innovative answers. Such prizes have been used in other fields such as aerospace and defense.

- *Creation of Advanced Research Entity Dedicated to Digital Inclusion:* The Agenda should establish a protected space for innovation and moonshots within the federal call for broadband research.

- *Research Into the Causal Links Between Digital Inclusion and Improved Social Outcomes:* The Agenda should commission federal research studies to investigate the causal links between digital inclusion and improved social outcomes. Proof points linking positive social outcomes as a result of higher broadband connectivity would help secure support for digital inclusion and carry the movement forward. We suggest the following focus: 1) educational attainment, 2) financial literacy, and 3) social mobility.

- *Dedicated Funding for Pilots for How Digital Inclusion Increases Commercial Success:* The Agenda should aim to provide data-driven proof points on the benefits of connectivity for commercial success. The Agenda should therefore call for research-oriented pilot programs, either providing federal funding for or incentivizing private participation in public-private partnerships.

- *Increase Specificity, Standardization, and Openness of Data Collected*: The Agenda should call for data collection at more granular levels and across all geographies and for standardization of collected data, open data, and the contribution of external stakeholder data to the overall federal project.

Comments

Below, please find comments labeled with a number indicating the corresponding question from the request for comments.

Broadband Technology

3. Many individuals lacking broadband access live in rural areas, where the cost to build out infrastructure is astronomical compared to the installing company's return on investment. At EveryoneOn, we believe that new methods of broadband infrastructure deployment should be invented in order to solve the problem of access at scale. Examples of pioneering work in this vein includes AT&T's Project AirGig, which will provide multi-gigabit wireless service across power lines, and Google's Project Loon, which will use balloons to provide an aerial wireless network in otherwise-unconnected areas.[1] We support basic research into moonshot challenges. Furthermore, inventive solutions will not naturally come to fruition under current market circumstances. Rather, the cost of innovation for both private companies and public entities must be dramatically reduced, thereby incentivizing and making innovation possible. Suggestions for enacting this change include creating an X Prize model, in which these critical questions on digital inclusion tipping points are posed and competitive solutions elicited. To solve social challenges of digital equity, an open call for proposed solutions should be issued, and the best proposal should be funded and executed. Recognizing that solutions may come from field and industry experts rather than government bodies, open-source problem solving will generate cross-sector collaboration and produce optimal results.

Broadband Access and Adoption

4. Regarding broadband deployment and access, data must be collected at more granular levels. Vital nationwide datasets such as the American Community Survey should be collected at the census tract level.[2] Data must also be collected across all geographies, especially in rural areas with lower population densities. There is a critical need for relevant tools that demonstrate that connectivity can help solve social problems, such as the Federal Communications Commission's (FCC) versatile Connect2Health suite.[3]

5. Just as the U.S. Departments of Homeland Security, Defense, and Energy, among others, have advanced research project agencies to pursue emerging technologies and experimental paths, so should the causes of broadband technology development and digital inclusion.[4] This agency or entity would be devoted to pushing boundaries and driving solutions in this field. Creating such an agency, entity, or committee within NTIA would protect innovation at the fringe.

6. We outline below four key industries we see as critical actors in scaling broadband deployment. Case studies, business models, and examples that prove the advantages and benefits of increased connectivity to specific industries are critical in building

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[1]http://about.att.com/newsroom/att_to_test_delivering_multi_gigabit_wireless_internet_speeds_using_power_lines.html; https://www.solveforx.com/loon/

[2] http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml, American Community Survey.

[3] https://www.fcc.gov/about-fcc/fcc-initiatives/connect2healthfcc

[4] https://www.dhs.gov/science-and-technology/hsarpa; http://www.darpa.mil/; https://arpa-e.energy.gov/

partnerships with the private sector to expand digital equity. Developing the aforementioned tools (Question 4) alongside studies of the industries below would elucidate the potential for public-private partnerships. For example, the FCC's Connect2Health Broadband Mapping tool clearly demonstrates the value of a partnership between hospitals and digital inclusion proponents.[5] We recommend looking to the following industries to answer the related questions:

Finance
- How can banks and credit unions benefit from increased connectivity among their constituents, as online banking is the future of financial transactions? How can connectivity impact financial literacy?

Health
- How can connectivity lead to better health outcomes while driving down health-related costs for the municipality or other payers?

Retail
- How can local businesses use the Internet to engage with their consumer base? How can broader Internet adoption in a specific place foster entrepreneurial investment by attracting the bulk relocation of business sectors and communities?

Civic Engagement
- How can higher levels of Internet adoption enable city governments to communicate with their electorate? (i.e. talking about emergency weather service, spreading the word about town halls, school district news, etc.)

Additionally, the Agenda should commission studies that review the effects of state restrictions on municipal broadband networks and provide policy recommendations to the federal government and FCC based on their findings.

Socioeconomic Impacts

12. We suggest testing a causal link between Internet adoption and each of the following social change outcomes: 1) educational attainment, 2) financial literacy, and 3) social mobility. The U.S. Department of Commerce should study how Internet adoption affects a local economy, much in the same way that housing redevelopment or land development incentives have been studied for their economic effects. If the Agenda could generate positive proof points for these outcomes, the toolkit for measuring the success of digital inclusion would be meaningfully expanded.

Opportunities for Federal Leadership in Data Collection and Research

The following three recommendations answer Questions **13, 14, and 15** under *Opportunities for Federal Leadership in Data Collection and Research* in concert with one another.

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[5]https://www.fcc.gov/reports-research/maps/connect2health/#ll=40,-95&z=4&t=insights&inb=in_bb_access&inh=in_diabetes_rate&dmf=none&inc=none&slb=90,100&slh=10,22

Data Standards
- In order to best facilitate cross-sector and cross-partner comparison and collaboration, a standard for data reporting must be established. We suggest that this must come either directly from the federal government or be developed in partnership with the federal government in order to be effective. We suggest that the question of data standards be addressed as an agenda objective.

Open Data
- Data about broadband access and adoption, as well as related social factors, should be open and accessible for further use. Raw data (csv) should be available for download. We commend the Connect2HealthFCC program for their commitment to open data and for the functionality of their program, which allows for further comparison with outside data sets. We recommend that this treatment of data serve as a model for future tools and suggest that the Agenda advocate for open data in all of its studies and the field at large.

Role of External Stakeholders
- Given limited federal research funding, we recommend that the Agenda seek to leverage the work that academic institutions and universities are doing on related social questions and to lift up the academic study of broadband issues by hosting conferences and convenings. We recommend that federal attention elevate these questions and call for solutions; enable non-governmental entities to submit findings and briefs to the federal government; and highlight and recognize these valued contributors.

Conclusion

EveryoneOn recommends the following as part of the National Broadband Research Agenda:

- *Dramatically Increased Funding and Decreased Risk to Study New Means of Broadband Deployment*
- *X Prize for Digital Inclusion*
- *Creation of Advanced Research Entity Dedicated to Digital Inclusion*
- *Research Into the Causal Links Between Digital Inclusion and Improved Social Outcomes*
- *Dedicated Funding for Pilots for How Digital Inclusion Increases Commercial Success*
- *Increase Specificity, Standardization, and Openness of Data Collected*

We at EveryoneOn advocate for a National Broadband Research Agenda that aims to decrease the risk and cost of public and private innovation in order to find sustainable solutions to the debilitating costliness of increasing broadband infrastructure. We ask that the Agenda call for protected innovation in the model of an advanced research project agency and for open sourced solutions to digital equity problems. On the issue of data, we hope the Agenda will call for data collection at more granular levels and across

all geographies and for data standards, open data, and the contribution of external stakeholder data to the overall federal project. We hope the Agenda will call for federal research studies to provide data-driven proof points of the benefits of connectivity for public and private sectors, leading to public-private collaboration.

Respectfully submitted,
Chike Aguh
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