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APPLY TO JOIN US IGNITE'S SMART GIGABIT COMMUNITIES PROGRAM

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US Ignite is seeking additional communities to join its Smart Gigabit Communities program (SGC), a program for local governments and universities - and their partners – designed to foster a gigabit application ecosystem and to accelerate the development and deployment of next generation, gigabit applications.

US Ignite, an independent, 501(c)(3) nonprofit, was created with inspiration from the National Science Foundation (NSF). Among other programs, US Ignite organizes and convenes the SGC program. Founded in 2012, US Ignite's mission is to foster the creation of next-generation Internet applications that provide transformative public benefit in six sectors of the economy: healthcare, education, public safety, energy, transportation and advanced manufacturing.

THE SGC PROGRAM: Gigabit Capability + Community Engagement

As part of their participation, communities convene and leverage a steering group to coordinate local innovation champions and organizations including city governments, civic groups, universities, foundations, developers and entrepreneurs, accelerators and incubators, corporations, and investors interested in the welfare of the community. The steering group coordinates cooperative relationships and activities to identify community priorities, infrastructure and resources to enhance the local innovation ecosystem and support the

development and deployment of next generation applications and services. Communities also work with other SGC's to share applications, resources and best practices. Examples of local community needs include education, workforce development, public safety, smart transportation and community health. These applications will be shared among the larger, ecosystem of SGC communities. Communities will also have access to applications developed by other SGC communities on the Internet2 network. The benefits of each community's program will be amplified by this network of SGCs.

SGC communities leverage installed gigabit capacity provided by organizations like Cox Communications, Google Fiber, AT&T, Comcast, Centurylink, or a municipal or other gigabit provider. The gigabit connectivity can come from a state network, a fiber provider, gigabit wireless, or any other means of providing widespread gigabit-class connectivity.

SGC communities work with US Ignite's assistance to interconnect all of the local gigabit-class network providers with each other and major gigabit users such as educational institutions, hospitals and healthcare organizations, big employers, local governments, and any other organizations operating gigabit networks. The interconnection point for gigabit in the community is called the Digital Town Square (DTS), that may already exist, or US Ignite will provide assistance to create one. The advantage of the DTS is that applications and services in this environment appear to respond instantaneously, quickly stream extremely high quality immersive video including 3D and virtual reality, and form a backbone to support such complex tasks as uniting multiple computing capabilities within the community to find drugs to cure cancer or support deep brain stimulation therapy. All of these are impossible without highly responsive gigabit-class connections and the edge infrastructure present at the Digital Town Square.

Below are two examples of applications developed by SGCs:

- Education: STEM students in Chattanooga are experiencing biology and STEM like never before. Researchers at University of Southern California place live biological specimens under a Digital Cinema Microscope and capture ultra-high resolution (4K) movies of the microorganisms while simultaneously transmitting live, HD images from the microscope to students in the STEM class. Students in turn are able to manipulate the microscope in near real time and interact with world-class professors from 2,000 miles away.
- Health: An application offers patients the opportunity to receive physical therapy in the home with more frequent assessment and adjustment of prescribed exercises, resulting in more effective rehabilitation and health outcomes. The interactive interface leverages Google Fiber grade high-speed networking and low-latency network paths.

To enable near real-time interaction for applications, each SGC will have a local edge computing resource available to incubate gigabit applications. Hosting is typically handled by metro partner anchor institutions or some other identified organization. Additional storage or

compute hosting may be connected to a Digital Town Square as determined by the local architecture. The co-location of compute resources in community-area gigabit networks is at the heart of the SGC concept. With these technical elements in place, SGC communities are prepared to become leaders in the development and sharing of gigabit applications and are extremely well-positioned for the deployment of Internet of Things (IoT) technologies and cutting-edge “smart city” applications.

SPONSORED AND SELF-FUNDED COMMUNITIES

Any and all communities are welcome to use their own resources or sponsors to join the SGC program and its network of cities. Sponsorship or self-funding consists of a \$25K commitment for three years plus an in-community in-kind or in-cash commitment of an additional \$75K per year. Portions or all of the in-community commitment may already be present in a well-prepared community.. Please contact info@us-ignite.org to get more information.

SEEKING DIVERSE COMMUNITIES

In addition, US Ignite with the support of the National Science Foundation is seeking to sponsor two communities to join that will add synergy and substantial diversity to the SGC program. We are seeking synergy with the [Mozilla Gigabit Community Fund](#) cities and increasing diversity among communities comprising the SGC and Mozilla ecosystems with respect to geography, density, economics, cultural factors, or other relevant metrics. Diversity communities will receive, in addition to the benefits listed below, partial financial support for the community technical leader for one year, start-up funds for community building activities, and support for travel to specific US Ignite meetings during the first year.

BENEFITS OF SGC PARTICIPATION

- **Membership in a nationwide ecosystem of gigabit cities** with expertise and best practices to develop local innovation ecosystems and activities to sustainably support next generation applications and services for community benefit.
- **Access to 30+ next generation applications per year starting in 2017**—applications developed by the network of SGC’s that will deliver important advances in healthcare, education, public safety, and other national priority areas.
- **Access to a low-latency and ultra fast network** with *Digital Town Square* compute and storage capabilities that facilitate the development, sharing and replication of applications via a direct connect to a national backbone network.
- **Opportunity to establish in a community the key building blocks** necessary for cities seeking to be a leaders in *Smart City IoT* deployments.
- **Community building and technical assistance** as well as best practices and community frameworks from US Ignite staff and partners.
- **National visibility** for the participating community and its leadership.

TYPICAL ACTIVITIES EXPECTED OF SGC PARTICIPANTS

1. Lead and coordinate an SGC steering group.
2. Hold monthly meeting programs and incentive events for active Ignite participants including in particular application development teams.
3. Explore the feasibility of an “Ignite” space within an existing or new innovation accelerator space where monthly innovation events can be held.
4. Work with local accelerators, tech entrepreneurs, and universities to support new application developers from ideation through seed financial support for scaling and/or commercialization of applications and services.
5. Work with local corporate, venture, and foundation organizations to help transition and sustain this program to self-funding/sponsorship beginning the second half of 2019 based on public benefits delivered.
6. Share the applications your community develops with other SGC communities and support their use in the other communities.

HOW TO APPLY

To apply, e-mail a PDF document with the following information to new-communities@us-ignite.org by September 15, 2017. Those submitting the best proposals will be interviewed by video during September and early October. We expect to announce the new communities by October 15, 2017.

Please provide a PDF document which:

1. Identifies and describes your community and its uniqueness.
2. For sponsored and self-funded applications, identifies the proposed source(s) of funding. For communities seeking US Ignite sponsorship supported by the National Science Foundation, explains how your community would add synergy and diversity to the SGC ecosystem and the expected impact of that diversity.
3. Describes organizations and people committed to providing community support and organization for your potential SGC. Those people should form your Steering Group. Members typically include representatives from city government, local universities, technology companies, libraries, accelerators, investors, schools, foundations, and/or medical facilities. Where possible, please name your community leader and the specific members of the Steering Group. Letters of support signed by those members are welcome.
4. Describes the availability of gigabit-class networking in the community and names the providers. (US Ignite does not fund or install the gigabit-class networking.)
5. Discusses potential community priorities and the types of gigabit applications and services that might add significant value to the community.
6. Describes the SGC activities you expect will add value to your community. (Examples are listed above.)

7. Explains help and assistance you would like US Ignite to provide in addition to the benefits listed above.
8. Describes any broader impacts that may arise from becoming a member of the SGC ecosystem; these may include such things as impacts on underserved community members, anchoring economic development plans, improving town-gown relationships, providing an avenue for corporate civic responsibility, partnering with another SGC community, etc.
9. Names your technical leader, who will spend at least 20% of his or her time supporting the technical needs of the application development and deployment ecosystem.
10. Describes a potential apps and services development and deployment pipeline from ideation to deployment/commercialization. Please name the local tech entrepreneur organizations you plan to work with to support new application developers through developer support groups through financial support for commercialization/scaling as appropriate.

Responses will be evaluated with respect to three factors:

1. Value of the proposed additional diversity to the SGC ecosystem.
2. Degree of local engagement and support.
3. Expected broader impacts and contributions to the SGC ecosystem.

For more information, guides and resources on the SGC Program please visit:

<https://us-ignite.org/resource/sgc-resources/>.