ANNUAL IMPACT REPORT





OUR MISSION

US Ignite works closely with communities, military bases, startups, and researchers to solve their toughest economic development and technology innovation challenges. Operating like a high-tech startup, our nonprofit organization delivers customized results through stakeholder engagement, technical expertise, and targeted tools.

In collaboration with our partners, we deliver project outcomes that include breakthrough technologies while creating innovative new jobs, startups, and services.

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A MESSAGE FROM OUR CEO, NICK MAYNARD

As we look ahead to 2025, I am proud and excited to build on the accomplishments of our team in 2024. Together with our community, industry, and entrepreneurial partners, we have made incredible progress in advancing connectivity, innovation, and collaboration all around.

We have continued to build bridges between new technologies and economic development opportunities, effectively transforming ideas into solutions. From expanding digital access to fostering startups, our efforts have empowered communities to embrace innovation in ways that shape a brighter future for all.

We have also focused our attention on improving operations at military installations, boosting both quality of life and site performance. Our software applications are driving advancements in energy management, building efficiency, and heat risk mitigation.

In the wireless arena, we have enabled expanded research opportunities across multiple network testbeds. Researchers are taking advantage of these platforms to experiment with heterogeneous networks, develop new spectrum management systems, and marry wireless capabilities with unmanned aerial vehicles.

As we move forward, our team remains committed to leveraging the power of collaboration and creativity, helping all types of communities pave sustainable pathways for innovative growth. We hope you join us as we continue the work in 2025. Here's to a productive and fulfilling new year, and as always, thank you for your support.

my

2024 HIGHLIGHTS



US Ignite secured a new \$7 million contract from the U.S. Army Engineer Research and Development Center to continue and advance the Smart Installation and Community Dashboard Program at Fort Moore, Georgia.



The Platforms for Advanced Wireless Research
Project Office unveiled a significant expansion of the
AERPAW platform and announced new network
resources and research capabilities at the ARA
Platform.



US Ignite published "The Middle Mile as a Catalyst: Municipal Investments for Broadband Equity," providing a blueprint for cities and counties to expand Internet access using middle-mile infrastructure to address the digital divide.



OUR TEAM



Hani Almasoud



Praveen Ashok



Lizzette Arias



Jonathan Beam



Kyle Compton



Aloizio Da Silva



Lee Davenport



Sayed Elham Zewari



Catherine Forrest



Ryan Guild



Erin Hill



Nancy Jemison



Daniel Kawah



Domenick Lasorsa



Arnold Liyai



Mojdeh Mahdavi



Nick Maynard



Glenn Ricart



Ram Rohan



Mari Silbey



William Wallace



Eric Werner

OUR PROGRAMS



US Ignite Communities - We support communities by empowering leaders with resources to develop resilient strategies and engage different sectors to foster innovation for economic growth.

Smart Bases - We work with DoD bases and installations to develop, test, and implement smart technology solutions that meet operational needs. These Smart Base Programs bring together government, academia, and industry experts.





Platforms for Advanced Wireless Research (PAWR) -

Four platforms make up our PAWR program. The sites offer large-scale wireless testbeds in a public-private partnership that drives network innovation and boosts US economic competitiveness.

Entrepreneur Support - We connect startups and small businesses to the larger smart city ecosystem in pursuit of new economic growth opportunities, sparking collaborations between communities and entrepreneurs.





Smart Communities Data - We offer unbiased customizable support to municipal leaders so that they can leverage and capitalize on their datasets. Our data experts help communities accomplish everything from forming data policies to building custom dashboards.



SMART BASES

Over the past year, the Smart Bases team made great strides in the mission of advancing Army modernization and technological innovation in collaboration with the U.S. Army Engineer Research and Development Center (ERDC) and Fort Moore through the Smart Installations and Community Dashboard (SICD) Program at Fort Moore, GA.



This graphic illustrates how the different tools within the SICD, whether built inhouse by US Ignite's team of innovation specialists or secured from a commercial provider, enhance Fort Moore's operational capabilities.

FEATURED PROJECT: IOT

The Installation Operation Tool (IOT) provides a system-of-systems dashboard to enable an installation-wide Common Operating Picture (COP) for Fort Moore leaders. The IOT automates workflows and processes to streamline operations, uses business intelligence (BI) and GIS capabilities, and overlays analytics and flexible anomaly detection to the installation's data feeds for proactive issue detection and alerting. After a successful demonstration in the fall of 2024, an operational exercise for the tool is scheduled for the summer of 2025.

PAWR



The Platforms for Advanced Wireless Research (PAWR) program was created by the National Science Foundation and managed by US Ignite and Northeastern University team. Its four large-scale testbeds enable advanced network research with a focus on open and programmable networks, dynamic spectrum management, wireless experimentation at altitude, and rural connectivity.

PAWR Platforms Drive Development in Open Interfaces and Open Source Software

Among the achievements of the PAWR testbeds in 2024, ARA expanded the scale of its end-to-end open source 5G platform with the only known implementation of open source OAI 5G code deployed on end-user radios across a wide geographic footprint. Hand in hand with the srsRAN project team, POWDER demonstrated mobile handover capabilities using an open source 5G stack. And COSMOS joined the \$42 million Acceleration of Compatibility and Commercialization for Open RAN Deployments (ACCoRD) project to support ultra-high bandwidth and low latency wireless communications research.

POWDER Debuts Prototype Radio Dynamic Zone

For their work on prototyping a Radio Dynamic Zone (RDZ), the POWDER team won Best Paper Award at the 2024 DySPAN conference. Subsequently, the team released its Open Zone Management System (OpenZMS) to the research community as a software base for broader efforts in spectrum management. OpenZMS is available as a test profile for researchers on the POWDER network.

AERPAW and ARA Triple and Quadruple their Size

AERPAW launched its second phase of operations in 2024 with four new wireless towers, a total of eight unmanned aerial vehicles (UAVs), and a significantly expanded flight field including a link reaching beyond 2,000 meters. ARA quadrupled its geographic reach with a multi-modal platform that now boasts seven rural base station sites, dozens of programmable radios, and a multi-hop mesh network for wireless backhaul.





US IGNITE COMMUNITIES



Following the success of our gathering in Denver, US Ignite hosted an invite-only Communities Convening for US Ignite Community leaders alongside the Smart Cities Connect Conference and Expo in Raleigh, NC. This full-day event featured dynamic networking opportunities with peers and industry experts, complemented by innovation-focused activities facilitated by US Ignite. Attendees participated in thought-provoking group discussions, collaborative problem-solving sessions, and interactive workshops we designed to inspire actionable ideas for advancing smart city initiatives.

A key highlight of the convening was a fireside chat with Dr. Dedric A. Carter, Vice Chancellor for Innovation, Entrepreneurship, and Economic Development and Chief Innovation Officer at the University of North Carolina at Chapel Hill. Moderated by Program Manager Arnold Liyai, the engaging conversation invited participants to collaboratively craft insightful questions for Dr. Carter, leading to vibrant discussions on innovation ecosystems and regional economic development. Dr. Carter's reflections offered attendees invaluable insights into leveraging strategic innovation to drive community growth.





US IGNITE COMMUNITIES

FEATURED PROJECTS

Toyota Mobility Foundation Awards \$260K to San José to Make City Streets Safer

In 2024, the Toyota Mobility Foundation awarded \$260,000 to the City of San José to enhance safety and accessibility for cyclists and other vulnerable road users. This grant, supported by US Ignite, champions an innovative project utilizing AI and computer vision technologies to address illegal parking and dumping in bike lanes. The initiative aims to create safer streets by leveraging cutting-edge technology while setting a national precedent for smart city solutions.





US Ignite played a critical role in developing San José's vision for this project, aligning with our mission to drive technology innovation for the public good. This achievement underscores the power of collaboration among communities, private partners, and advanced technology to solve complex urban challenges.

Brightening Connected Communities Pilot Project with Signify

With Signify, US Ignite designed and launched the "Brightening Connected Communities Pilot Project." The program presented a unique opportunity for municipalities to expand wireless connectivity by using their existing lighting infrastructure to form a mesh wireless network, connecting a network of sensors to solve problems related to public health, public safety, transportation, and connectivity. To participate, communities submitted a proposal for innovative use cases that used Signify's BrightSites technology to help them solve pressing city challenges. Five communities were selected to obtain the BrightSites Luminaire equipment at no charge to deploy a six-month pilot of their proposed idea. Each selected community receives technical and project support from US Ignite and Signify. Progress and lessons learned from the pilots will be shared in 2025.



SMART COMMUNITIES DATA

Working with both communities and student innovators, US Ignite completed the initial development phase of the National Socioeconomic Impact Broadband Tool in 2024.

The tool is designed to assist decision-makers with visualizing the impact of broadband on a range of socioeconomic factors. By leveraging the software to understand the effects of connectivity on issues such as workplace accessibility, education attainment, and employment status, users can better tailor their network strategies and allocate broadband investments.

Currently, the tool is only available to a select group of community stakeholders who are testing features and capabilities. Additional leaders interested in testing the tool and providing critical feedback for improvements can email data@us-ignite.org for more information.



The National Socioeconomic Impact Broadband tool provides:

- State and community leaders a needed end-to-end solution to make data-driven decisions on their broadband investments.
- Promotion of economic innovation while supporting broadband equity and inclusion in communities.
- Details on broadband disparities and information on the likely impact of future broadband expansion on social and economic variables.
- Easy-to-understand data analysis that uses a range of approaches, such as clustering and supervised machine learning.



ENTREPRENEUR SUPPORT



Highlights from InnovateSLC

In the final year of the InnovateSLC program, US Ignite once again sponsored an accelerator program and small business training workshop for Salt Lake City area entrepreneurs and small businesses. This year's accelerator supported 12 women founders from the Salt Lake City region. Participants received meaningful networking opportunities, mentorship, startup educational resources, and direct access to investors through Kinect Capital, the program partner. The cohort culminated in a pitch event as part of the 2024 WeROC Demo Day.

InnovateSLC also hosted a unique event during Utah Tech Week focused on techniques for tracking and mitigating air quality issues. The panels featured local startup founders, academic experts, and community leaders like State Senator Nate Blouin (D) and garnered media coverage. The event underscored that although the challenges caused by poor air quality are significant, Salt Lake City community members are eager to use their entrepreneurial capacities to attack the problem.



ENTREPRENEUR SUPPORT

Highlights from InnovateDMV

Through a series of dynamic events and workshops InnovateDMV continued to provide founders and entrepreneurs with the skills, resources, and connections they need to thrive in an increasingly competitive landscape.

InnovateDMV hosted several regional workshops, including presentations at the University of Maryland and K Street Capital. InnovateDMV focused on female founders and funders for DC Startup and Tech Week. Our trainer provided tailored guidance and networking opportunities for women entrepreneurs. At the DMV Tech Nexus Cyber & Al Salon, another DC Startup and Tech Week event, we brought together university researchers, startups, and government officials to explore cutting-edge applications of Al and cybersecurity.

This year, InnovateDMV partnered with Black Meta Agency to present "Supercharge Your Startup with AI," a hands-on workshop designed to help startups leverage AI for business development, customer adoption, and operational efficiency. Together, these events served a diverse group of startups and small businesses, impacting over 400 founders who received training in technology and business fundamentals.





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Chairman of the
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Co-Founder, US Ignite and CEO, National Spectrum Consortium

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Executive Director, Quantum Economic Development Consortium SRI International



Rawlings-Goss
Executive Director,
South Big Data
Innovation Hub

Renata Afi



Former Deputy Undersecretary of Defense



Glenn Ricart
Co-Founder and
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