The Problem

The same inequities experienced in our physical world manifest inside the digital sphere. Exasperated by the global pandemic of COVID-19 that has plagued our modern world, the digital divide - meaning inequitable access to technology and technological literacy - have a direct impact on health and wellbeing, especially in underserved communities, and not just local to Pittsburgh, but around the country and around the globe. With everything from food banks, to vaccination appointments and telehealth, to local resources, to proper and up-to-date information being on-line, not having access to technology or having the technology literacy to navigate the digital sphere leaves vulnerable populations struggling to gain access to critical resources they need to survive.

Access to Technology, however, is only half the battle. Even if we had the funding to supply these communities with both wifi and capable devices (which is a challenge in and of itself), that still would not bridge the technological literacy divide. Moreover, returned citizens and elders, especially those in underserved communities - such as in the Hill District, Homewood, and their high rise housing - face compounded challenges when trying to bridge this digital divide.

The Solution:

The Digital Divide exists at the intersection of technology, ethics, and a range of social issues from health and healthcare access, to poverty, to racial, criminal, and economic justice, and more. Bridging the Digital Divide reduces inequity by providing access to technology, technological literacy, and other UN Sustainable Development goals by resolving problems both in the physical world and technological sphere, promoting social inclusion and connectedness, reducing barriers to health and healthcare access and resources, providing and increasing access to opportunities that improve health, wellbeing, and quality of life, creating non-automatable jobs, and creating self-sustaining communities that in turn create new markets. This comprehensive policy that addresses the holistic health and wellbeing of every American is in line with all 17 U.N. Sustainable Development Goals, namely:
● Goal #3: Good Health & Wellbeing
● Goal #8: Decent Work & Economic Growth
● Goal #9: Industry, Innovation, and Infrastructure
● Goal #10: Reduced Inequalities
● Goal #16: Peace, Justice, and Strong Institutions

By increasing the access to technology and technological literacy for vulnerable populations and underserved communities, both rural and urban, we can ensure every individual in the United States can have access to critical resources necessary for their holistic health and well-being. This policy will address (2) main areas of concern that create barriers to bridging the Digital Divide:

1. Access to Technology
2. Technological Literacy

**Initiatives:** This policy will seek to Bridge the Digital Divide by ensuring access to technology and technological literacy for every citizen and resident in the United States in two phases:

1. Access to Technology
   a. Ensure Service to every American Citizen & Resident
      i. **Universal Service Obligation** - Establishment of a new Universal Service Obligation (USO) that ensures all communities, urban and rural, access to at least one reliable and affordable Internet connection. This includes minimum broadband requirements that will guarantee a standard of universal connection speeds and reliability, upwards of 10 Mbps. Such implementation will help to provide all communities with an agreed upon standard of access, which will be of benefit to them regardless of financial or social limitations.
      ii. LifeLine Program Update

2. Technological Literacy
   a. Technological Literacy and Community Investment Program
i. Increasing technological literacy and having ongoing technological training will help underserved communities and populations to gain access to the resources necessary for accessing resources that improve health and wellbeing and reduce inequity throughout a stratification of social issues. This program allows individuals to become acquainted with Internet services, websites, devices, and their capabilities. This will be most impactful for elders and returned citizens who may have been estranged or alienated from technological advances. Learning basic functions and technological terminology is necessary for navigation in the digital sphere. Eliminate barriers to technological access.

b. Universal Service Obligation
   i. Municipal Wireless Network
      1. Strengthening of infrastructure via creation of Municipal Wireless Networks, FTTX expansion, or telephone line expansion are the means by which communities will be capable of receiving internet connections, either at community-wide or individual household/building levels.
      2. Update LifeLine Program
   ii. The Lifeline Program was originally created by Ronald Reagan in 1985 (landline) to address the Communications Evolution. He understood that it was vital for every American to have access to communication technology. Under George W. Bush in 2005, the program was updated to cover cell phone service, and it was updated again under Obama to include cellular device access in 2013.
   iii. This policy will update that again to include a smart device, such as a tablet.

3. Technological Literacy and Community Investment Program
   a. Provide equitably distributed Federal funding to States and Localities with mandated stipulations on spending
      i. Technological Literacy and Community Investment Program
         This will begin with Public Funding, followed up by public/private
partnerships for funding of pre-existing community resources. This incentivizes community investment and stimulates local economies.

ii. These will create self-sustaining programs by using people already best situated in the community and most familiar with the problems.

Program Phases

Funding for specific communities is to be allocated at the federal level, and is determined based on the needs of that community relating to accessibility and underserved populations. Funds are then passed on to state or local governments, who will utilize them for the infrastructure that they deem most fit based on existing infrastructure and the technological literacy needs of their communities.

1. Governmental Phases - Federal to State to Local
   a. State governments MUST use this money to be reinvested into the local economies via organizations already operating in these spaces within the communities.
   b. States must equitably distribute funding based on % of population in need

2. Community Phase
   a. Local governments must use this money to stimulate local economies via organizations already operating in these spaces within the communities. They will then be able to train these trusted community leaders to give tech literacy training programs, in turn creating sustainable jobs that won’t be able to be automated. This will help build community relationships.
   b. By use of some of the funding all considered organizations MUST pay their employees at least $15 minimum wage (tied to inflation) and provide healthcare (including mental health care) benefits to full and part-time employees unless & until universal healthcare is instilled
c. Employees who work over 20 hours a week are to be considered part-time, or otherwise must be volunteers earning hours or credits.

**Scope → Who is affected and impacted by the policy**

a) Elders  
   i) The elderly, particularly those in underserved communities and those without family nearby, are more likely to be technologically illiterate. It puts them at a distinct disadvantage when it comes to accessing available resources, such as telehealth, shopping and delivery services, senior transportation, food banks, vaccines, etc., as well as missing the socialization benefits of things like Zooming with family and friends or joining an online group with shared interests.

b) Returning citizens  
   i) Citizens returning to society after incarceration lack the technological literacy required for successful reintegration, especially those who have been incarcerated for a long time. They need help adapting to the technological advances that changed the world while they were away. Without it, they will not be able to function in the modern world, let alone prosper in it.

c) Veterans  
   i) Veterans face a greater likelihood of struggling with homelessness, substance abuse, mental health issues, and the criminal justice system than average americans and are a large subset of the vulnerable populations and communities this policy seeks to help.

d) Homeless populations  
   i) It is impossible for the homeless to find and utilize economic and employment opportunities without access to job search markets, application processes, places to create resumes, to look for food banks, local resources, housing, etc.

e) People in underserved communities
i) Rural communities often lack the infrastructure to join the modern technological world. They also lack the necessary economic capital to invest in that infrastructure, and private capital is more difficult to attract, since servicing these areas is not profitable.

ii) Urban

(1) Urban communities, and low income urban communities in particular, often lack broadband access, whether it be not being able to afford a device and service, or the building in which they live not being wired for broadband.

f) A policy that includes universal broadband will not only benefit those in the aforementioned groups, but also individuals outside those groups being disadvantaged by the digital divide, who might otherwise have fallen through the cracks.

g) The policy benefits society as a whole, because uplifting these communities creates a better and more prosperous society for all.

2) Definitions → Terms specific to the policy

a) Underserved communities - decreased level of service or access to health care.

b) Wellbeing

i) Mental Health - a person’s condition with regard to their psychological and emotional well-being.

ii) Psychological - of, affecting, or arising in the mind; related to the mental and emotional state of a person.

iii) Spiritual - relating to or affecting the human spirit or soul as opposed to material or physical things.

c) Healthcare

i) Mental health - a person’s condition with regard to their psychological and emotional well-being.

ii) Physical health - one dimension of total well-being, referring to the state of your physical body and how well it’s operating
iii) **Physiological Health** - refers to the body’s capacity to increase certain functions of the body

d) Internet

i) **Broadband** - a high-capacity transmission technique using a wide range of frequencies, which enables a large number of messages to be communicated simultaneously.

ii) **Wifi** - a wireless networking technology that allows devices such as computers (laptops and desktops), mobile devices (smartphones and wearables), and other equipment (printers and video cameras) to interface with the Internet

iii) **Modem** - a combined device for modulation and demodulation, for example, between the digital data of a computer and the analog signal of a phone line.

e) **Technological literacy** - a term used to describe an individual’s ability to assess, acquire and communicate information in a fully digital environment. Access requires more than just physical access to broadband, it also requires an understanding of how to utilize that access from knowing the terms and basic functions as simple as what a cursor is and how to use it, how to copy and paste for job searching, accessibility to social programs.

f) **Infrastructure** - the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise.

i) **Municipal Wireless Network** - a citywide wireless network; provides municipal broadband via Wi-Fi to large parts or all of a municipal area by deploying a wireless mesh network.

ii) **Universal Service Obligation (USO)** - a long-standing consumer protection that ensures everyone has access to landline telephones and payphones regardless of where they live or work.

(1) **Specific to USPS**

iii) **FTTX** - a collective term for various optical fiber delivery topologies that are categorized according to where the fiber terminates.
iv) **US Telecommunications Act of 1996**

3) **Frequently Asked Questions** → Common questions about policy and procedures

**a) What is the Digital Divide?**
   i) The Digital Divide is the gap among those who are able to benefit from access to technology and those who don’t. This gap in the digital divide often exists in underserved communities struggling with socio-economic inequality.

**b) How is the Digital Divide connected to Health?**
   i) Today’s society relies heavily on the use of technology to carry out its day to day functions. Through both mobile apps and electronic systems, digitized health care systems are becoming an increasing part of the health and medical industry.

**c) Why is tech and ethics at the forefront of health, healthcare, and equality?**
   i) As the progressing intersection between the fields of technology and medicine continues, many have found lucrative opportunities in medical technology. Numerous issues stem from the use of AI and data gathering and analysis, specifically like biases within technology, increasing power as well as wealth inequalities, and the inability to safely and efficiently share electronic health information among providers.
   ii) Trust between staff or providers and the patient and family is strained by technology when removing the human aspect of patient-staff interaction.

**d) What is technological literacy? Why is it important?**
   i) Technological literacy refers to one’s ability to use, manage, evaluate, and understand technology. The majority of society relies on using some form of technology for transportation services, finance and banking, health care, working, and more. In order to be well-informed and navigate the world, a person needs to understand what technology is, how it works, and how it affects both them and society.

**e) How has COVID-19 made the situation worse?**
i) COVID-19 public health policies forced us into isolation and quarantine. The best and safest way to proceed from there is to shop online, utilize technology to work from home, access services, visit a doctor via telehealth, socialize via remote access, or get an appointment for the vaccine. Broadband access is necessary for all of that. While COVID-19 did not create the Digital Divide, it certainly highlighted it, laying bare what presently inadequate policies have wrought.

f) How does bridging the digital divide align with UN sustainable development goals?

g) What avenues does someone have to access these services?

h) How will it improve today’s world?

i) Providing technological access and technological literacy to underserved communities and individuals will address and mitigate the economic, health, political, and social disparities resulting from the disconnection. It in turn contributes to bringing equality of access to services and goods provided by technology. More equitable access and tools provides people with improved education which can lead to better wages and economic opportunities.

i) Why is tech access not a luxury?

i) Within a highly technologically saturated society, lack of access poses substantial barriers to almost every aspect of a quality daily life, including employment and healthcare.

j) Why is policy the best avenue of approach to this problem?

i) Any time something needs to be universal, policy is required to be part of the solution. Since the profit motive for private broadband providers is virtually zero in many rural areas, for example, policy is required to either incentivize or compel that investment. Once the investment is made, however, underserved communities will become thriving new markets. This will attract private capital, allowing these communities to become self-sustaining.

Related Policies, Information, and References:
1. Obama phones
2. Radio
3. Television
4. Landline
5. Cellphone
6. National Broadband Plan
7. UN Sustainable Development Goals